

Madras Information

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In 1953 the Indian Railways will complete a hundred years of operations and continuous celebrate the occasion the Ministry of Railways (Railway Board) are organising, activities, a Centenary Exhibition of Indian Railways at New Delhi, from February 28 to portray a century of progress on Indian Railways.

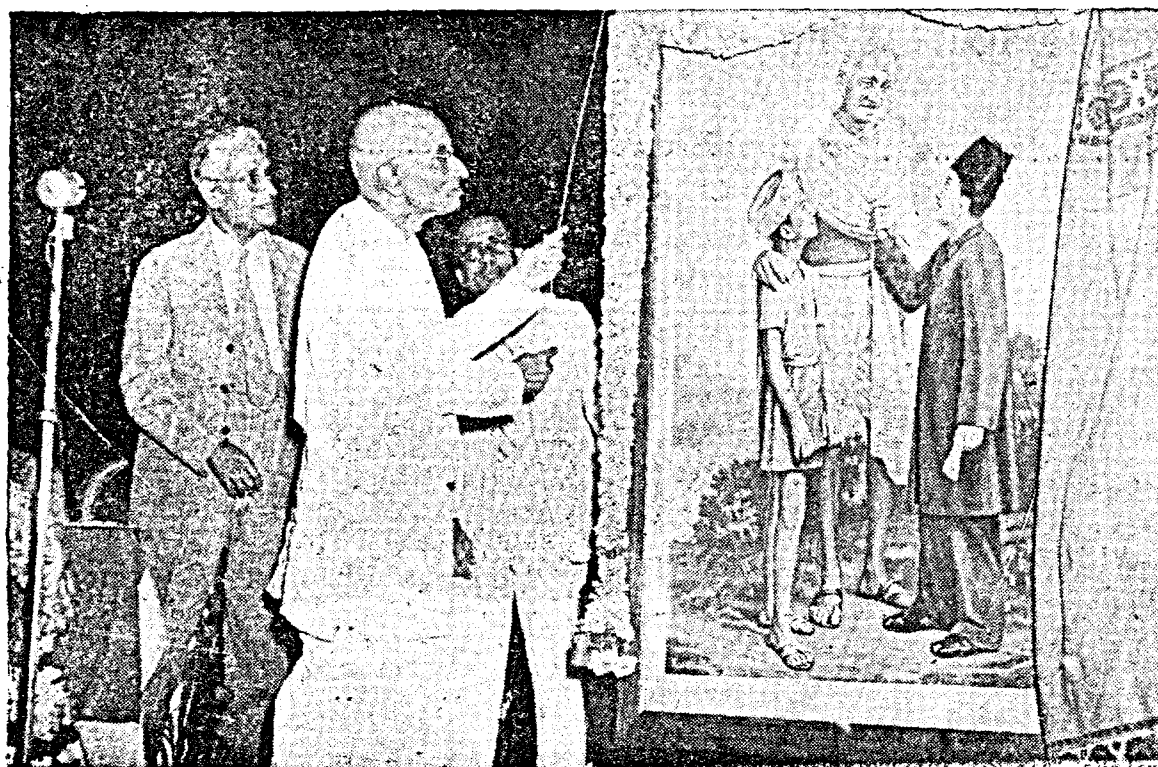
ing view of the Madras Central Station, one of the two termini of the Southern City, appears on the cover page.

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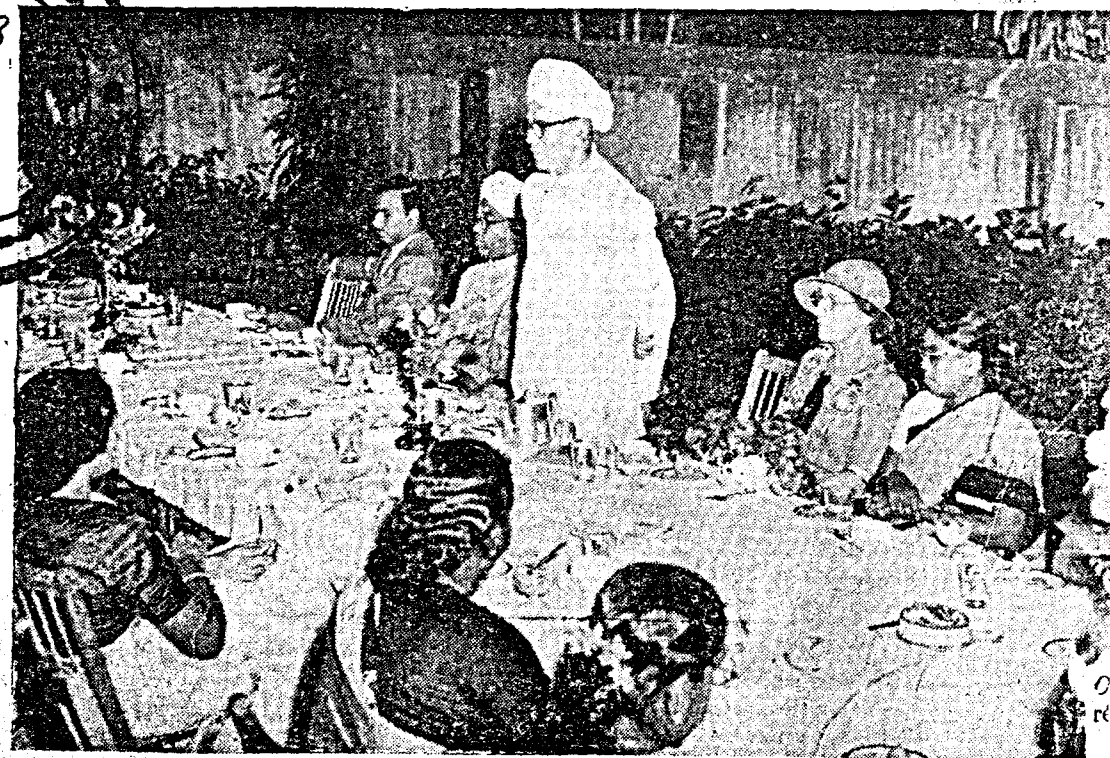
The Silver Jubilee Convocation of the Andhra University was held on January 5, 1953. Pictures show the front view of the Jeypore Vikrama Deo College of Science and Technology, the gathering assembled at the University campus, Waltair, the Governor of Madras, who is also Chancellor, addressing the gathering, Dr. S. Radhakrishnan delivering the Convocation address in the absence of Dr. Rajendra Prasad, bestowal of honorary degrees, and review of cadet corps.

Shri Sri Prakasa, Governor of Madras, also visited the ship-building yard, and the naval establishment at Visakhapatnam.





FATHER OF THE NATION: A portrait of Mahatma Gandhi embracing two boys, one Hindu and the other Muslim, unveiled by Sri C. Rajagopalachari, Chief Minister, at the Government Arts College, Madras City, recently.



PARTY TO SCOUTER: In honour of Dame Leslie Wheatley, Director of World Bureau and Ass't of Girl Guides and Girl Scouts, Sri K. Venkataswamy Naidu, Minister for Religious Endowments, &c, party recently. Here the Minister who is Chief State Scout Commissioner, is seen addressing the gathering, the guest of honour at his left.

Governor's Appeal

Formation of the Madras State Cyclone Relief Fund

We are all by now painfully aware of the cyclone which, with unprecedented violence, hit the coast at Nagapattinam, destroyed the dwellings on the coast-line and swept through Tanjore and Tiruchirappalli Districts on the 30th November 1952. The storm raged from early morning till late at night. Houses, coconut and casuarina plantations, banana, betel gardens and sugarcane fields were all devastated, and communications destroyed. The full extent of the damage may come to be realised only some time later; but what we have learned so far is enough to cause consternation.

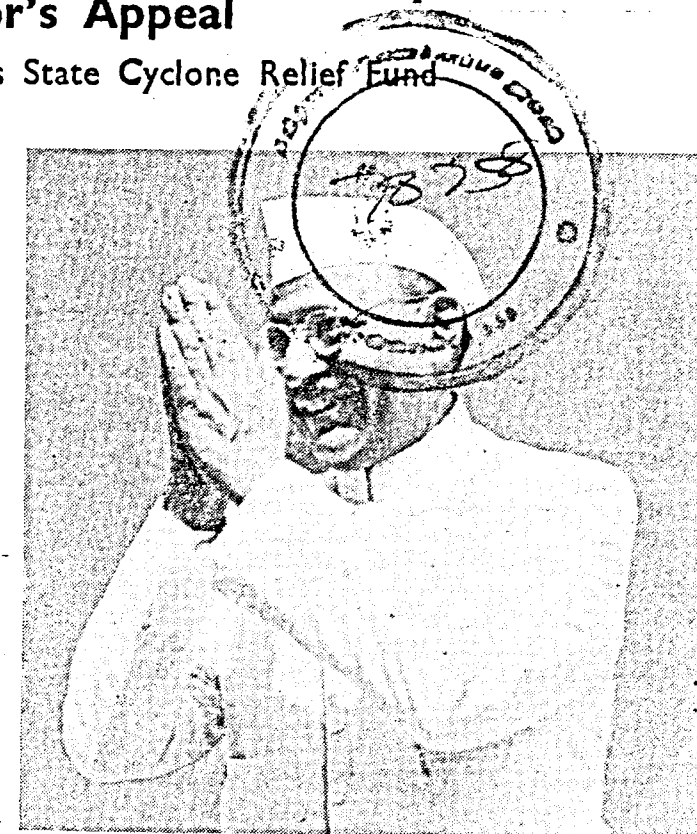
At Nagapattinam and other coastal areas the gale swept the sea into the interior to a distance of five miles. Many thousands of poor families have lost their all and been driven shelterless into the open. The need for immediate relief is paramount and though every effort is being made to reduce the distress, there is still very much more to do. The intensity of the cyclone was such that in the Tanjore District the roofs of even pucca houses were blown off. In the interior taluk of Tanjore alone, it is reported that about 19,300 huts were destroyed.

I venture confidently to appeal to the generous-hearted all over the land to come to the rescue of the afflicted people. I hope that by their prompt response, the men, women and children of the unfortunate districts hit by this great calamity, will be enabled to feel in a very concrete manner that the people of the country—rich and poor alike—wherever they may be, are one family, and that misfortune brings all God's children more intimately together. In furtherance of this appeal, I am inaugurating a State Cyclone Relief Fund, and for the proper administration of this Fund, I am requesting the following to constitute themselves into a committee with power to co-opt to their number:—

- (1) The Revenue Minister to Government, Chairman; (2) The Finance Minister to Government;
- (3) The Chief Secretary; (4) The Revenue Secretary; (5) The Finance Secretary; (6) The Governor's Secretary;
- (7) Rajah Muthiah Chettiar of Chettinad; (8) Sri P. Ramamurthi, M.L.A.; (9) Sri S. Swayamprakasam, M.L.A.;
- (10) Sri Raja Chidambaram, M.L.A.; (11) Sri S. Venkatarama Iyer, M.L.A.; (12) Sri K. Balasubramania Iyer, B.;
- (13) Mr. Castell; (14) Sri. Khanna, Secretary-Treasurer of Imperial Bank of India, Honorary Treasurer; Deputy Secretary, Revenue Department, Secretary of the Fund.

Cheques and remittances may kindly be sent to the Honorary Treasurer of the Fund at the Imperial Bank of India, Madras, for the Madras State Cyclone Relief Fund. The Deputy Secretary to the Government of the Revenue Department, will be the Secretary of the Fund, to whom all other communications may be sent.

S. Swayamprakasa
Governor.



Chief Minister Tours Cyclone Affected Areas

Misfortunes never come single, they say. Madras State has had enough of them in recent times. First it was drought and failure of rains; then came the welcome downpour, but before the people had time to heave a sigh of relief came the cyclone all on a sudden, and hit the coast on the night of November 29th and during its brief but tremendous fury left a terrific devastation in its wake in two of the most prosperous districts of the State.

The Chief Minister, Sri C. Rajagopalachari, took the earliest opportunity to hasten to the spot and see for himself the havoc done and offer such consolation as he could to the stricken people of Tanjore and Tiruchirappalli. Scenes of uprooted gigantic trees, devastated banana plantations, destroyed betel vines, wrecked heaps of buildings with blown off roofs were witnessed by the Chief Minister during his 400-mile, four-day-tour of the cyclone hit Districts of Tiruchirappalli and Tanjore. He saw and heard first-hand from the suffering people the extent of the havoc caused, the nature of the losses inflicted and the dire poverty to which the industrious people of the land of plenty—Tiruchirappalli and Tanjore—have been reduced to.

Appeal for Aid to Homeless Thousands

Rajaji, during these four days, discussed with officials and non-officials the relief measures taken, counselled the unfortunates to face the calamity with a brave heart, appealed to the more fortunate to give all aid to the homeless thousands. Having satisfied himself with the relief work that is being done "speedily and in a spirit of patriotism", he returned to the capital to plunge himself deeper into the various other problems confronting the State.

"This cyclone has come on us only to remind us that this country is after all one. We have for some time past come to look upon ourselves more in a spirit of division and separateness. We have come to feel as though we are unconcerned with our own sorrows and happiness and that we need not worry ourselves with what happens to people outside our own village, taluk and district. It is perhaps to rekindle in us that essential and inseparable oneness of our country that this furious cyclone has now visited us. It is quite common that even from misfortunes and adversities, we could receive certain very essential training for sharing with our fellowmen their grief and loss so that, ultimately, we might all develop that fellow feeling and sympathy so essential for all of us if we were to progress." In these words, the Chief Minister made a moving appeal which has gone home.

Out came annas, rupee notes and even gold rings and ornaments from among those assembled at that place. The offer of coins and ornaments, though small, was spontaneous. This happened at Karur.

Picture of Devastation

He drove along the strip, sandwiched between the Cauvery and the South bank channel, noted in the pre-cyclone days for its scenic beauty and rich crops. But it is all a different story now. The glorious splendour of the avenue trees, the luxuriant growth of the banana

plantations are no more. We saw the shattered trees, fallen with roots up in the air and cut across to make way for the traffic and the damaged plantain gardens. The picture is not without relief. It is not one long stretch of damage that he saw. The sight of the green carpet-like crops of paddy stretching all along the road would have given a peculiar pleasure mingled with sorrow. These crops, if the rain that followed the cyclone had not come, would have perished. Now the river Amaravathi is full and the ryots are not very sorry for they are assured of a second crop.

All along the 45-mile route, the villagers—men, women and children—gathered and lined the roadside to catch a glimpse of their 73-year old Chief Minister who, in spite of his poor health, had undertaken this strenuous tour to meet the people and get from them first-hand an account of their sufferings and losses.

At Tiruchirappalli, the Chief Minister received representations from the people. The local citizens had formed themselves into a Relief Committee and they handed over a purse to Rajaji.

Meeting with the Ryots

While the Chief Minister was preparing to leave for Pudukottai, it was announced that a few ryots from the neighbouring place had come to see him personally. Rajaji readily consented, for it was to hear the grief of these cyclone-stricken poor people that he had undertaken this strenuous tour.

Rajaji came out to the place where they were congregated. He saluted them with folded hands. He made kind enquiries of them as to the place from which they came, their sufferings. Hearing that they had come from places which were even ten miles away, he asked how they would return home since it was already four in the afternoon and the sun was hiding himself behind the horizon. He went in and came out with fifteen rupees. He gave them some money for their food.

In Tiruchirappalli, the cyclone had done considerable damage to money crops and avenue trees, but in Pudukottai, which is a dry area, there were not much of either avenue trees or plantations for the cyclone to vent its wrath on. What it did was to destroy the poor man's dwelling. It is estimated that nearly 15,000 dwellings of the poor were destroyed by the cyclone.

Havoc at Keeranur

Among the three taluks of Pudukottai subdivision, it was Keeranur Taluk that experienced the severity of the cyclone. The Chief Minister hearing of this alighted at the Taluk Office. Noticing the Chief Minister's car swerving from the main road and entering the Taluk Office compound the people who were in the *indai* (market place) nearby came rushing in. They wanted to sit down quietly.

Addressing the gathering of poor peasants the precincts of the Taluk Office, Rajaji admired their strength in withstanding the calamity brought about by the cyclone.

Cyclone Havoc in Tanjore

Chief Minister's Appeal for Aid

Sri C. Rajagopalachari, Chief Minister, has issued the following appeal:—

Hundreds of men, women and children have been rendered homeless as a result of the tidal devastation in the coastal area of Tanjore. All the little belongings have been destroyed and little is much for them. May I appeal to the manufacturers and dealers in cloth to come to the rescue and despatch a few bales of cloth suitable for grown-up and young people of both sexes for distribution to the Collector of Tanjore. It is

hardly necessary for me to say that neighbourly charity is being organised in the shape of food for the distressed people and I appeal to holders of grain to help the authorities in tiding over the situation. We are tried in every way. Let us hope we will come out of these trials unscathed. All contributions in kind or money may be sent to the Collector of Tanjore or Tiruchirappalli. The roll of casualties is large; apart from death, the distress is great for many poor survivors.

By the time Rajaji finished his address, a number of people came near him and presented him petitions. He collected all of them and handed them over to the Sub-Collector of the division for careful scrutiny and for taking necessary action on them.

The sun was well up in the horizon, when Rajaji commenced the second day of the four-day tour of the affected areas. Alangudi, the third taluk in the Pudukottai division, was the first to be visited. Motoring through Pattukottai, Adirampattinam and Muthupettai, Rajaji reached Tiruvarur by noon.

Avenue Trees Uprooted

Although a couple of weeks had passed since the cyclone swept these places, yet one could see the trail of havoc it has left behind. All along the road, Rajaji saw huge avenue trees uprooted, and vast stretches of fruit trees reduced to smithereens. People were rehabilitating themselves. While passing, we could see people busy building their shattered huts, collecting firewood from the fallen trees, or cutting off fallen branches that obstruct the roads.

Throughout the tour, as has been mentioned earlier, people thronged to both the sides of the road to have a glimpse of the Chief Minister, who obliged them by stopping the car here and there and hearing their representations.

At Vamban, when the Chief Minister's car stopped, an old lady narrated her tale of woe with tears in her eyes. Everybody was visibly moved. She narrated how a huge tree fell on her dwelling and brought down the roof and hurt the inmates who were now sheltered by the kind neighbours. Rajaji gave a patient hearing and assured her all help from the officers of the Government.

Motoring along the dusty road, the Chief Minister entered the Tanjore District. The change in the scenery, the vast stretch of paddy fields and cloistered groups of palms are indications enough that one has entered Tanjore.

Loss of Life and Cattle

Tragic tales were narrated about the cyclone, whose effect could still be seen along the road and as far as the eyes could see. Loss of cattle appeared to be considerable. On the outskirts of the Vedaranyam forests, one could see carcasses of deer, goats and other animals.

A poor shepherd boy grazing in the forest was, it appears, lost in the storm. His parents sent his brother to search for him. In the search, he was lost in the storm and due to exposure lost his life too. Next day only the dead bodies of both the boys were found strewn among the goats taken out for grazing.

Rajaji halted for a while at Pattukkottai. In his address at the public meeting Rajaji asked the victims of the cyclone to bear the calamity cheerfully; it was to cheer them that he undertook this trip. He said that such calamities came to bring men together.

Reaching Tiruthuraiyandi at noon, Rajaji later left for Vedaranyam. On the way he halted at Adhiramapattinam and Muthupet. At Adhiramapattinam, he addressed a small gathering at a Muslim school. He commended the spirit of goodwill and mutual help in which the Hindus and Muslims carried on the rehabilitation activities.

Damage at Vedaranyam

Vedaranyam was another seacoast village which had suffered terribly not only by the cyclone but also by the tidal wave. It was a pathetic sight to see the school buildings of the Kasthuba Gandhi Kanya Ashram razed to ground and the trees reduced to faggot. Sardar Vedaratnam, the founder of the school, which had been a famous residential school for poor girls in South India, conducted Rajaji round the compound. Pointing out heaps of casuarina poles, scrambled bits of dry leaves, wreck of plasters, Sardar Vedaratnam and the Headmistress said that what were once the prayer hall, dining room, kitchen room, were all now shambles, etc., of casuarina posts and scrambled bits of palmyra trees. Rajaji was visibly moved at this sight.

The Headmistress told the story how the children were saved miraculously by the teachers. When the storm was raging, the teachers rushed into the huts and each one of them tried to remove as many children as possible to places of safety and it was only after the last child was saved that the hut collapsed. Rajaji asked the children to sing some devotional songs.

A public meeting was held at Vedaranyam and Rajaji referred to the place as the place where he started the Salt Satyagraha twenty-one years ago. The country had now become free. He said that dealing with the British Government was found easier than dealing with the suffering wrought by Nature.

Warning against Opportunists

Leaving Vedaranyam as the sun was setting Rajaji reached Tiruthuraiyandi again. In the lawns of the local school people in thousands gathered to hear him. Addressing the gathering he warned the people that political opportunists might try to mislead them, and they should not allow themselves to be misled.

Rajaji, referring to the storm, said that it had done a great havoc, and it was lucky that it came during the daytime and was over the same day. He thought that the cyclone itself was intended for a great purpose, testing their unity and neighbourly sympathy. He appealed to the people to carry on with courage in the face of adversity. As soon as the public meeting was over, Rajaji left for Tiruvarur, 18 miles away, and reached there at 8 p.m. an hour behind schedule. The day dawned and the third day of the tour commenced when Rajaji stepped out of the Inspection Bungalow for Nagapattinam.

Nagapattinam Battered

In no other place Rajaji saw the severity of the cyclone as at Nagapattinam. Evidence was not wanting to show

Republic Day Special

A special issue of MADRAS INFORMATION and its language counterparts will be brought out on January 26, 1953, Republic Day. This bumper number will contain special articles with more pages and photographs, and an attractive three-colour cover page. There is no increase in the price of the issue. Agents are advised to book for extra copies early. There will be no issue of the journals bearing the date February 1953.

the intensity with which the cyclone hit Nagapattinam and its neighbourhood.

Nagapattinam bore the frontal attack of the cyclone and it was at this point that the storm crossed the shore. For eight hours, the storm raged sweeping away the roofs of huts, and even bringing down the buildings. Adding to the havoc there was a tidal wave which took the sea water right into the interior for about a mile. The harbour was in ruins, the hospital wrecked, the railway station roofless, the bus-stand razed to the ground. The town wore an appearance of a bombed city battered with fallen trees and ruined buildings.

The hospital was in complete wreck with dilapidated walls and roofless wards. Driving through all this Rajaji went to the harbour. The damage here was considerable. He stood on the wall bordering the harbour and gazed at the sea for a few minutes. The sea was calm, and what a contrast, for it was the very waters of this quiet sea that perpetrated untold havoc some three weeks ago. He walked through the ruins, passed by the Railway station, bus-stand and the main street witnessing the change that had been wrought by the furious cyclone. Reaching the Inspection Bungalow he changed over to a jeep and passed along the sandy route to the fishermen's colony.

At first the fisherfolk were taken by surprise to see a long line of jeeps and cars entering their area. Soon they found out who their distinguished visitor was. Rajaji went to the shore and saw for himself the area swept away by the sea. About ten feet of land with hundreds of huts was swept away, leaving no evidence for one to guess that such a thing had ever happened at all. He met the villagers and heard their representations.

Courage and Fortitude Commended

Rajaji addressed a public meeting in the spacious lawns opposite the hospital. The lawn still had indications of the sea water entering the land. It fell on the citizens of Nagapattinam, Rajaji said, in his public address, to bear and suffer from the severe attack of the cyclone while the other districts had the advantage of rain that followed the storm. After visiting the ruins he really felt proud of the courage and fortitude with which the people of Nagapattinam had withstood this grave trial of Nature.

The Chief Minister took the opportunity of paying a visit to Nagore—well known for its large mosque built by the Rajas of Tanjore. But for the falling down of one of the gold kalasams on the top of the tower, there was no visible damage to the mosque.

Driving through the dusty roads of Nagore and Nagapattinam, Rajaji reached Tiruvarur. Snatching a quiet rest for an hour or so, he started on his journey to Kumbakonam.

The paddy fields extended endlessly on both sides of the road leading to Kumbakonam. Rajaji would have been pleased at the prospect of a rich harvest. It has been computed that less than ten per cent of paddy would have been ruined.

Citizens Asked to Extend all Help

Addressing a public meeting in Kumbakonam, Rajaji appealed to the citizens to extend their unstinted help to the suffering people.

In the morning of Thursday, December 18, Rajaji left Kumbakonam on the last lap of his four-day tour. He passed through Papanasam, Thirukattupalli and Tiruvaiyur and reached Tanjore in the afternoon. He met officials and non-officials and discussed with them the situation. In the afternoon he appealed to the Mirasdars to extend their liberal aid to the cyclone stricken people of Tanjore.

In the evening he addressed a public meeting where he stressed the need for them to go to the aid of the suffering people. He said that heavy losses had been sustained by the people both in Tanjore and Tiruchirappalli but the losses suffered by the people in Tanjore were at least ten times of those inflicted on the people in Tiruchirappalli by the cyclone. He appealed to them to contribute liberally to the relief work as they had always done on such occasions.

Impressions of the Four-Day Tour

Before leaving Tanjore the Chief Minister gave his impressions to the pressmen who covered his tour. Rajaji said:

"Nearly about 1,62,000 huts have been damaged either wholly or in part and it was calculated that about 35,000 families had to be given Government relief for rehabilitating themselves. It is now feared that this number would be higher. The district establishment has shown commendable speed in meeting the distress. About 19,654 families have already received relief and Rs. 2,62,866 have been distributed already to these families.

"The lower grade revenue officials have been eliminated and officers of the grade of Deputy Tahsildar and above have been deputed for handling money.

"From what I have seen in my brief tour I am satisfied that the work is being done speedily and in a patriotic spirit. Complaints usual on such occasions are generally absent.

"There is still a lot of work to be done. Probably as much as has been done already. Poor people in the coastal area have been hit very hard. But they are showing commendable fortitude. I have not seen any signs of breakdown in this respect, as I had feared. Luckily the cyclone came during the daytime and sunlight makes all the difference. The devastation of trees is something for which I cannot find words. The highways have suffered terribly. Even old tamarind trees

have been uprooted. There is a glut of firewood in the district. Everybody has stored enough to last quite a long time. This may seem to be unimportant but I can see that it would keep good cheer of the poor people in a peculiar manner. More than 50,000 acres of paddy lands have been affected to some extent by salt water and to a similar extent the land has been affected, some by sea water and some by mere force of the storm. People fear that in all these 50,000 acres the yield will be considerably less than normal. I hope that this may not happen.

Plantain Crops and Betel Vines Destroyed

"13,000 acres of most valuable plantain crops and 2,500 acres of betel vine plantations have been destroyed. It means a loss to those who took the lands on lease often on very high terms. Many lakhs of coconut trees have been destroyed. All of them are over 10 years of age and fruit bearing. Some of them are even as old as 20 years. It will take many many years for replantations to begin yielding. By reason of the need to repair communications as quickly as possible all the avenue trees have been sold off for a song to local purchasers. Government have lost a great deal in this; but it could not be helped. It is really creditable that communications have been set right and road blocks cleared so quickly as has been done without any extra assistance. Telegraph wires on some roads have not been restored. From that point of view probably we have made a good bargain by selling off the trees by auction at once.

"Large amount of remission of land revenue will necessarily have to be faced. We will have to give loans for rehabilitation of small farmers who have suffered. Numerous public buildings have been damaged, including aided schools. Government have to spend a fairly large amount on these items.

"Apart from these matters of money, I can say people have got over the shock in a remarkable manner. Tanjore has suffered but the rains that came to so many districts over the frontiers of Tanjore have benefited the people at large. When the last week of November began without any sign of monsoon, I gave up all hope but this cyclone came and everything was changed.

New Hope and Cheer

"I can say that, in the balance, the State has gained a great deal, though it caused suffering to the people of Tanjore to whom sympathy and help must go from other parts of the country in a generous measure.

"I have not included Tiruchirappalli in these figures. Tiruchirappalli District has perhaps even larger acreage of plantain and betel cultivation than Tanjore. A length of about 10 miles on both sides of the Cauvery have suffered destruction considerably in plantains and betel vines. Pudukkottai has lost many trees and many roofs have been damaged. But tanks are full and the people are happy."

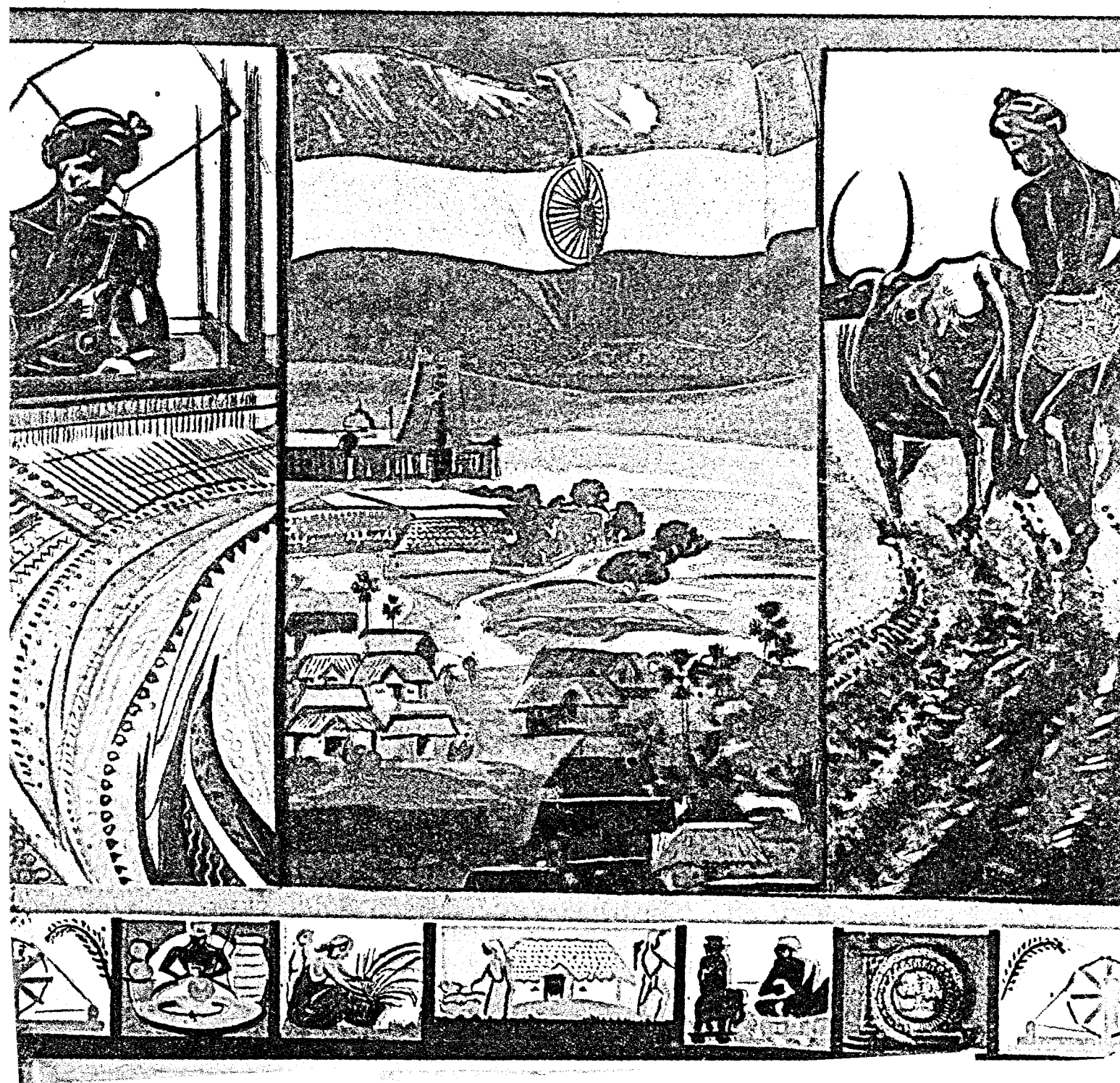
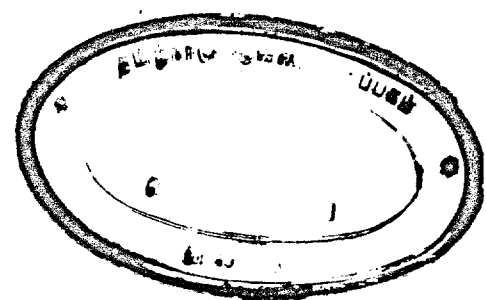
The visit of the Chief Minister to the distressed areas brought indeed new hope and cheer to the people in distress.



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JANUARY 26, 1953
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Information



Planned Approach to the Problem of Slums

By SRI J. M. LOBO PRABHU, I.C.S., Secretary, Development Department

Slums, like the poor, are always with us, but the awareness which has come to the country with independence has made them a problem of urgency. Two other factors have contributed: first, the large drift of population to towns in recent years; and second, the inability of the health and water-supply services to expand further in many towns. In consequence, there is not only the human problem of large sections of the population living in disgraceful condition, but also threat to the whole community from epidemics, squalor and failure of supplies. What was merely a strain on the social conscience has become now a question concerning the material well being of those better placed.

We owe it to the present Chief Minister that the responsibility for housing the poor is recognised as a consequence of the existing civilisation which demands the services of the poor. Slums are an inevitable concomitant of bungalows unless there is a planned approach to improve and extend the habitations of the poor.

Growth in Vacant Areas

The position at present is that vacant areas, the property of the Government, municipality or private individuals, have been gradually settled by the poor without means to own or rent houses and tired of living in the streets. What may begin as a mere camping space is by slow stages given the semblance of a house. The question of roads and sewers receives no attention, as the number of homeless keeps pressing on the space available. The result is not only congestion and disorder but also insanitation and squalor which the natural growth of the families of the occupants only makes worse. Attempts to drive the trespassers even if successful, only shift them to some other unoccupied area, as near their work as possible. Improvement Trust Schemes which liquidate slums fail to the extent they ignore the problem of housing the dispossessed.

In these basic circumstances, various proposals are made. The first is that unless there are very strong grounds of health or other public interests, slums should be improved rather than liquidated. The responsibility for providing roads, drainage and lighting should be of the local body, while the Government or co-operative banks should advance the money required for permanent constructions on an ordered basis, up to plinth level. The superstructure should be left for permanent construction as and when the occupier finds the money and is stimulated by the example of others around him. The proposal obviates the problems of rehousing, as also the consequences of driving people far from their work.

Three Suggestions for Improvement

Three suggestions are made to capitalise the full value of the help and service to be given by the State and municipalities. They are more or less related to the principle of self-help which is not only a test of the earnestness of the

From the Presidential address by Sri J. M. Lobo Prabhu, I.C.S., Secretary to Government, Development Department, at the Celebrations of the Y.M.C.A. Community Centre, Graysnagar.

recipients but a process of selection for priority of the large number of slums to be improved. The first suggestion is that slums to be improved should have a community organisation for advancing not only the reconstruction but the general life of the occupants concerned. It is argued that only a collective consciousness can tackle the insanitation, ignorance and disorderliness of life in the slums and make them appropriate parts of the rest of the City.

The second suggestion is that there should be a deliberate attempt to make the occupants proud of their houses. Such house pride will not only ensure the completion of the superstructure, but will make for proper maintenance of the appearance and condition of the houses.

The third suggestion is that following the ownership vested in the occupants, they should be enabled to obtain materials for construction on long-term loans. This could be done through co-operative societies. Even private enterprise, for supply of some or all items, could be encouraged to advance material on the hire-purchase basis, the house being security for the same.

Abolition of Zamindaris : Interim Payments

On behalf of the Government, the Director of Settlements, Madras, has deposited certain amounts towards interim payments for fasli 1361 with the Chairman, Estates Abolition Tribunal, at Madurai, in respect of certain estates notified in Ramanathapuram District. The names of the estates concerned, the amounts deposited, the date of transaction and the reasons for the same are published at pages 1514-1516 of Part II of the *Fort St. George Gazette*, dated November 5, 1952.

Certain amounts have been deposited by the Director of Settlements, Madras, on behalf of the Government, towards interim payments for fasli 1361 with the Chairman, Estates Abolition Tribunal, Madurai, in respect of certain estates notified in Coimbatore District. The names of the estates concerned, the amounts deposited, the date of transaction and the reasons for the same are published at page 1516 of Part II of the *Fort St. George Gazette*, dated November 5, 1952.

Deposit of Advance Compensation

On behalf of the Government, the Director of Settlements, Madras, has deposited advance compensation for fasli 1360 with the three Tribunals in respect of the Zamin and under-tenure estates taken over in the third and subsequent batches. The names of the estates, the amount due for each estate and the date of deposit of the amounts with the Tribunals are published at pages 1295 and 1296, and page 1479 in Part II of the *Fort St. George Gazette*, dated September 17, 1952, and October 29, 1952.

Gifts to Hospital

The Government have accepted with thanks the offer made by Mrs. J. Koder, Cochin, of four tube lights and one rotating table fan for use in the Government Hospital, Cochin.

Progress in Polamur Panchayat

By SRI K. G. MENON, I.C.S., Inspector of Municipal Councils and Local Boards

The Panchayat is not only a regenerator of rural life; it is also an index to the civic standards of the people of a village. However great Government help may be, it is not easy to give an all-round improvement to a village until the villagers imbibe the spirit of self-help and learn to bear their share of responsibility. This truth is abundantly illustrated by the Panchayat and the people of Polamur which is a small village with a population of 4,281 in the Tanuku Taluk of the West Godavari District. The normal annual income of the Panchayat is only about Rs. 4,000, but even town Panchayats, with more than Rs. 50,000 of yearly income, can hardly boast of any of the achievements of the Polamur Panchayat.

Before the Panchayat came into existence in 1926 there had been nothing in the village of Polamur that had gone to make the life of the public happy and healthy. There was not a single metalled road in any of the streets. In the rainy seasons, the people were forced to walk in knee-deep slush of black cotton soil. The village tanks were so bad that Miss Mayo might have got her ideas about the drinking-water sources of India from a look at them. There were no latrines of any kind. Men and women were using every inch of vacant space in the village as latrine ground. There were no arrangements to sweep the streets. There was only one solitary educational institution, the elementary school of the village with three teachers and about one hundred and twenty pupils. It is out of this sad state of life that Polamur has risen to its present day happy condition.

Road Built and Maintained

At present all the streets and lanes have good metalled or gravelled roads, except one small lane which the Panchayat has refused to improve until the residents removed the encroachments of their own accord. It is hoped that the moral pressure of the Panchayat will have the desired effect and induce the concerned persons to remove the encroachments without the law being brought into operation. The roads maintained by the Panchayat are:

	MILES.	FURLONGS.	FEET.
Metalled roads 30 feet broad ..	0	4	0
Metalled roads—			
18 feet broad	3	4	0
12 feet broad	0	3	0
10 feet broad	1	5	0
8 feet broad	0	6	0
Gravelled road	1	5	330
Earthen roads	7	2	330
Total	15	6	0

The total value of all the road works done by the Panchayat including fixing of pipes and construction of culverts is Rs. 3,10,874. Towards half-grant for some of these road works the Inspector has so far disbursed Rs. 74,864 and an amount of nearly Rs. 50,000 is yet to be paid. The District Board, West Godavari, has paid a contribution

of Rs. 8,600 and the villagers have contributed about Rs. 31,700 by way of money, labour and materials.

Free Service in Road Works

The Panchayat itself has executed all these works departmentally with the result that the expenditure including contributions of labour and materials from the villagers is less than 70 per cent of the actual value of the work. The village is at a distance of about two miles from the depot of road materials which have to be conveyed to the work spots by bullocks carts. The village ryots owning bullocks carts are reported to have conveyed the materials free of charge. The rich and the poor have similarly rendered free service. Some time back the Panchayat resolved that each one of its nine members should mobilise free labour and other resources and metal and remetal the street roads to a specified length.

In pursuance of this resolution the members metalled and gravelled the roads to a length of 5½ furlongs. Not a pie was spent on these works from the funds of the Panchayat, though their total value was Rs. 13,800. For laying out some of the roads, constructing latrines and digging tanks private sites were required. The owners gave over sites worth about Rs. 12,000 as free gifts to the Panchayat. The Panchayat is now trying to cement the roads in the Harijanpeta and other slum areas of the village.

Water Sources Improved

It has improved its water sources in a remarkable manner. The total extent of its tanks is 43.50 acres. Four of its five tanks have been deepened at a huge cost. Their bunds are raised and protected. All the ways leading to the water line are closed to cattle and pigs. Proper precautions are taken to keep the water pure. It is said that such water-borne diseases as cholera and typhoid, which used to break out in the village very frequently at one time, have now become quite rare. The estimated value of the water-supply works executed by the Panchayat is Rs. 43,700. The actual expenditure was only Rs. 28,684 out of which the villagers contributed to an extent of Rs. 3,000 in cash. The remaining sum of over Rs. 25,000 was borne wholly by the Panchayat. The Panchayat is now contemplating to utilise one of its tanks as a source of protected water and to use the other tanks for intensive pisciculture.

The village is now regularly swept and kept neat and tidy. For this purpose the Panchayat is maintaining five sweepers and two scavengers. There are four common type latrines in the village. The Panchayat has now proposed to construct septic tank latrines of six seats each, the cost of which will come to about Rs. 20,000.

Educational Activities

The Panchayat and villagers have done excellent work in the field of education. There is a library and a reading room under the maintenance of the Panchayat. The library contains altogether 3,652 valuable books of which 2,499 are Telugu, 962 English, 64 Sanskrit, 100 Hindi,

Pay Clinic at Government Hospital for Women and Children

The Gynaecology and Obstetrics Department of the Government Hospital for Women and Children, Madras, has been upgraded to serve as an All-India centre for post-graduate training and research in the speciality. Under this scheme, a Pay Clinic has been functioning in the Women and Children Hospital, with effect from 22nd September 1952. The Clinic is located in the hospital premises within easy reach from the main gate. It functions on three days in a week on Mondays, Thursdays and Saturdays, between 4 p.m. and 6 p.m.

All those patients who are desirous of having professional consultation with the Director of the Upgraded Gynaecology and Obstetrics Department of the Hospital, may contact the Lay Secretary at his office in advance between 10 a.m. and 5 p.m. on any working day and register their names for consultation, after having paid the prescribed fee.

A fee of Rs. 20 will be levied for the first consultation and Rs. 10 for every subsequent consultation. This fee should be paid to the Lay Secretary at the time of registration for which a receipt will be issued. This receipt should be produced at the Pay Clinic for purposes of identification. The prescriptions given to the patients at the Pay Clinic will have to be got dispensed at private chemists' shops. Clinical examination of blood, urine, etc., confinement and operations at the Hospital will be done on payment of the appropriate fees prescribed for the purpose.

14 Urdu and 13 Tamil. The total value of the books is about Rs. 10,000. Since 1947 the Panchayat has got 602 books leather bound at a cost of about Rs. 1,800. The library possesses 13 bureaus which are full of books. The reading room of the Panchayat is provided with the following papers and journals :—

Telugu Dailies	2
English Daily	1
Telugu Weeklies	7
Hindi Weekly	1
Telugu Monthlies	16
Hindi Monthly	1
Total	28

The annual expenditure on the library and the reading room is Rs. 1,250.

The people of Polamur have contributed by raising subscriptions among themselves a sum of Rs. 24,000 to enable the District Board to start a high school which is now a full-fledged one with 20 teachers and 540 pupils. Besides the high school, the District Board is maintaining one boys' school with six teachers and 220 pupils and one girls' school with six teachers and 200 girls. The villagers

contributed Rs. 3,200 towards construction of a building for the District Board Boys' School. In addition to these District Board schools there are two Mission schools which have 270 pupils and eight teachers. The growth of the educational institutions is an indication of the thirst of the villagers for education. It should be borne in mind that these well-flourishing institutions are functioning in a small village with a population of only 4,281.

The Panchayat has not done anything so far by way of constructing pucca drains. As a result, there is mosquito trouble in the village. At the time of my visit to the village on 1st October 1952, I advised the villagers to construct cement drains with their private effort, each owner of a house bearing the cost of construction within the precincts of his house. It is hoped that they will carry out this suggestion and thus set an example to other people.

Augmenting of Income

The Panchayat has done two noteworthy things for augmenting its income. It has taken up intensive culture of fish. The Panchayat procures seedlings and younglings of fish of reputed varieties from the Godavari and its canals and rears them carefully in its tanks. The right of auctioning the fish annually has been taken over by the Panchayat from the Revenue Department. When the Tahsildar or the Revenue Inspector was conducting fishery sales the income was about Rs. 120. Now after the Panchayat took over the right the income from this source is running into thousands of rupees. The Panchayat expects that if it can continue the fish culture in future with the same zeal and zest as now, its income from this source can be raised to more than Rs. 50,000 per annum in the course of three or four years.

The Panchayat has so far planted 500 coconut trees on its tank bunds and road margins. Plantains and vegetable plants are also grown on the bunds of the tanks. There is a proposal to plant at least 3,000 coconut trees in the course of three years. The present annual income from trees and plants is about Rs. 800. It is anticipated that five years after the entire tree-planting scheme of the Panchayat is executed the annual income from the fruit-bearing trees and vegetable plantation will be about Rs. 4,000.

The Panchayat has taken over for five years' average lease amount of Rs. 60 the right of selling the grass and the usufruct of trees on the banks of the canals and channels which are under the management of the Public Works Department within the limits of the village. Its annual income from this source is about Rs. 1,300.

Civic Consciousness

Some of the outstanding features of the administration and activities of the Polamur Panchayat are described in the above paragraphs. There are certain important factors which are responsible for the success of the Panchayat. Through long suffering the villagers realised that the unhappy conditions of their village could not be removed without a united and conscious effort on their part.

The villagers of Polamur seem to have a highly developed civic consciousness which makes them give most liberal contributions towards public works. If all the Panchayats in the State follow the example of the Polamur Panchayat they can make village life worth living.

Sacred Sangu Fisheries

By Sri V. D. SPURGEON, Assistant Director of Fisheries, Madurai

Most of you may be familiar with the Indian Conchshell known as *Sangu* in Tamil and *Senkham* in Telugu, but not its fishery. *Sangu* is commonly used in religious ceremonies by a vast majority of people in our State. In Hindu mythology and ancient Tamil literature there are frequent references to *Sangu*. It is well known that *Sangu* is one of the two symbols piously associated by Hindus with Lord Vishnu. Pictures and idols representing this God show him always with *Sangu* in one hand and *chakra* or discus in the other. The 'Parawas' of Tuticorin who are a seafaring community have *Sangu* as a symbol in their flags. Travancore State coinage even today has the *Sangu* emblem on one side.

Valampuri.—A right-handed *Sangu* or Valampuri is held in great esteem among the masses. A Valampuri is believed to assure prosperity to its possessor and also to ensure safety from the adverse effects of "evil-eye" and witchcraft. Hence, Valampuri is in great demand and enquiries about it are addressed to the Fisheries Officer at Tuticorin. A good-sized and perfect Valampuri may fetch anything up to Rs. 1,500. This being the value of a single shell, many a legend has grown with time about its powers. Stories are not lacking to say that a man in the street turned a millionaire overnight by finding a Valampuri or an opulent person lost all his riches when his Valampuri passed away from his hands or great evil befell an unfortunate individual who dropped his Valampuri and broke its tip! Legend has it that a Valampuri originates from the Tirukazhukundram fresh water tank once in 12 years when the tank water gets greatly agitated and heated.

Edampuri.—The Valampuri shell occurs just one in thousands picked out from the sea. It is therefore a rarity and nothing but a freak of nature, while Edampuri or left-handed conches are collected in lakhs and lakhs along our coast every year. Edampuri shells are not so costly as Valampuri for quite obvious reasons, yet they form an important commodity in industry and commerce in India as they are in extensive demand all over the country for some purpose or other.

How Sangus are Used

Temples.—First of all *Sangu* is used as a blowing wind instrument. Its use as trumpet is spread all over the country and there is hardly a temple in the country which does not use *Sangu* in its festivals and pujas. *Sangu* plays a prominent part for family deities. The long-drawn notes of *Sangu* as they are borne clear and mellow on the evening breeze, have a haunting charm that serve to announce the commencement of rites and to scare away evil spirits. The mendicants also blow *Sangu*. In small temples only Edampuri *Sangu* is used whereas in important pilgrim centres like Chidambaram, Rameshwaram, Madurai and Benares, Valampuri conches are blown. This is considered an act of great merit and it costs much. This is a favourite even with the Lamas of Tibet.

Rites and ceremonies.—*Sangu* has some part to play in rites and ceremonies. In South India it is blown in funeral rites. In Bengal it is blown during marriages. In certain parts of Tamilnad bits of *Sangu* are tied in the

thali. Again, in Bengal nobody is considered to have been properly and legally married unless the bride wears several pairs of beautifully lacquered *Sangu* bangles. *Sangu* is also buried with the bodies of opulent and distinguished persons.

To ward off evil.—*Sangu* is used commonly as amulets to ward off 'evil-eye' and possible misfortune. It is tied in the doorlintels, around the neck of cattle and hung round the neck of children. In Madras City a *Sangu* hung round the neck of a cow or buffalo indicates that she is a milch cow. Pieces of *Sangu* tied tightly on the wrist with a black thread is considered an effective talisman. In the Gulf of Mannar region *Sangu* rings are popularly worn as auspicious symbols. Women of South Arcot use necklaces of *Sangu* beads with similar belief. A *Sangu* is buried while laying the foundation stone for a house to ensure prosperity and good luck to the inhabitants. The "Parawas" of Tuticorin bury *Sangu* just near the door so that a person has to touch it before leaving the house, which guards him from misfortune.

Feeding spout.—All orthodox country folk believe in feeding the newborn with the help of polished *Sangu* spout.

Lime.—*Sangu* when calcined yields the best lime for white-washing and polishing. The auspicious nature of the shell enhances the demand for *Sangu* lime, especially for white-washing newly built houses and temples.

Incense sticks.—*Sangu* has a horny lid to cover its mouth opening. This lid is called the *operculum*. This is dried and powdered and soaked in water and used as an adhesive to bind together fragrant material used for coating incense sticks.

Native medicines.—*Sangu* preparations are said to be highly medicinal. For pimples and skin troubles on the face rubbing a *Sangu* ring on the affected part is supposed to be good. *Sangu* ointment is doled out by native physicians as sure cure for sore eyes and piles. In Salem, South Arcot and Madras Districts powdered *Sangu* is administered internally for asthmas, cough and to cool the system. In Tuticorin a mixture of conch powder and camphor is given for sore eyes. Again, conch powder is given to dyspeptics in Tiruchirappalli, the idea here being obviously, that calcium carbonate will counteract hyperacidity. In Gujarat *Sangu* powder is prescribed as a specific for jaundice. The *Sangu* egg capsule ground in gingelly oil together with pepper is considered a remedy for headache. The dried remnants of the visceral mass are used as a cure for spleen enlargement. The dust produced in sawing the shells is employed to prevent the pitting of smallpox.

Food.—Inside the shell lives a soft animal. This is pulled out, boiled and sliced and sold as "*sangu sathai*" (*Sangu* meat). About 40,000 lb. of raw meat is thus realised for food in a year.

The divers after the day's fishing is over, on their run towards shore usefully engage themselves in extracting the *Sangu* flesh from within the hard specially twisted shells with the help of an iron hook. Flesh thus extracted are put in palmyra baskets and handed over to their housewives

who know the art of preparing them for curry. The meat is well-boiled and then cut into thin slices and sun-dried. After complete drying the product emerges out as crisp chips similar to potato chips in appearance. It is good eating if fried with "masala" paste in ghee or curried with vegetables. The stuff was retailed at 12 annas per Madras measure and it is Rs. 1-4-0 per measure now. Fisherwomen put them in coloured and fancy palmyra leaf baskets and hawk them along the streets. It is greatly relished by fishermen only, but others out of curiosity purchase small quantities now and then and try to cultivate a taste for it.

Jewellery.—Sangu is used in jewellery. It is this utility that outbeats all others described so far in the preceding paragraphs. Have you ever seen a well polished large Sangu? It is so milky white, bright, shining and will easily match with genuine ivory. Further, a national custom rigorously binds the womenfolk of Bengal to wear several pairs of Sangu bangles beautifully lacquered red.

What is a Sangu?

Sangu belongs to a group of soft-bodied animals called Mollusca. These protect their soft bodies with external shells. The richness and variety of colours, the fine polish and beauty and elegance of form exhibited by shells have always excited admiration. Shells are composed of carbonate of lime mixed with a small portion of gelatinous matter. Sangu strangely enough is large, heavy, porcellaneous resembling ivory. It lends itself for cutting, carving, lacquering, painting and polishing. Hence its fitness for jewellery.

Sangu shell with the live animal inside it is found crawling about at the sandy sea-bottom at a depth up to 11 fathoms. Sangu prefers a sandy bottom harbouring worms that form its food. This does not mean that Sangu is found wherever the sea-bed is sandy or full with worms. Peculiarly, the sea off Tuticorin is full with Sangu. Next in abundance comes the Ramanathapuram coast. After that Tanjore, South Arcot, Chingleput and Nellore Districts may be cited. But all these seas are nowhere compared with the productivity of Tuticorin Sea. Further, Tuticorin shell is the best of them all.

Tuticorin Fishery

Sangu fishery is a Crown monopoly. By that, it is meant that Sangu shells are the property of Madras Government and no one can remove them from the deep-sea or pick them when washed ashore or carry away if caught in fishing nets. They should be surrendered to the nearest fisheries officers.

Within Madras State, Sangu fisheries are off Tuticorin, Kilakarai, Mandapam, Rameshwaram, Pamban, Nambuthalai, Mullimunai, Tondi, Sethubavachatram, Adirampatnam, etc. Among all these, the only large-scale, well-organised and scientifically run Sangu fishery is that of Tuticorin.

Sangu Diving is a Risky Job

Sangu fishing is an arduous and risky job. To hold one's breath and to quickly descend down a depth of 11 fathoms (66 feet) and to crawl on the sea-bed, to spot Sangu by mere sight, to collect them one from here and another from there, to store them in a net-bag tied to the waist and then to rise up to the surface all the time holding

the breath—is no easy joke. Besides, mind you, the huge column of water above you will be exerting a terrific pressure on your body. You will be interested to know that the pressure on the sea surface is 15 lb. per square inch of your body and this increases by 15 lb. more for every 10 metres depth. It is because of this beginners in diving bleed through the nose and ears. Further the diver has to keep a vigilant watch all round to escape man-eating sharks that might lurk among seaweeds in the immediate vicinity. All these must be precisely performed within 1½ minutes.

If by wrong judgment a diver overstays he collapses at the bottom. Such expert Sangu divers are called "Kuzhial" in Tamil; usually a "Kuzhial" is a robust person, with broad shoulders and dark complexion. Because of the great risk involved in this profession, old divers are not willing to train their sons in this. As a result the divers' population dwindled to an alarming extent. On account of handsome wages and greater accommodation, ration and medical facilities introduced in the 1947-48 fishing season, there was a great influx of divers from all parts of the East Coast and since then we have on an average 340 divers working in the fishery.

Fishing Season

There is a particular season for fishing Sangu. As unlike other fishing operations, Sangu has to be picked out one by one from great depths in the sea, sea-water must necessarily be very clear to enable the divers to see clearly. For this, the sea must be calm and the sun bright. These two conditions exist side by side only from November to May. So Sangu fishery starts in November and lasts till April or May.

Early in November when the sea water is clear and fair weather prevails, the Assistant Director in charge of Sangu fishery invites divers to start the fishery. On an auspicious day chosen by the divers the officer convenes a large meeting of divers, boat-owners and boat-crew and delivers a welcome speech at the end of which he distributes pansupari, plantains, etc. A small cash present and advance are also given to each person to enable purchase or renewal of boat accessories.

Some divers own their Sangu fishing canoes while many join together and hire one for the season. Each canoe has a compliment of six divers, one samattie (boat-owner) and one thodai (one who tends the rope and attends to odd work). Prior to 1946 season only 15 canoes were operating and after 1947-48 season it has risen to 40. During the Sangu season the Tuticorin northern beach hums with activity from crack of dawn right up to 8 p.m. and at times up to 12 midnight.

Daily Routine of the Divers

By daybreak all divers assemble in cheerful mood after having a hot meal and before 7 a.m. they set sail. Usually a morning land breeze carries the canoes at three to five knots speed towards the fishing spot. When there is no wind the Fisheries Department arranges a free and quicker towage through the departmental motor launches maintained for the purpose.

To know the direction in the high seas when the landmarks are totally out of sight and to reach a particular spot where Sangu are plenty is not an easy job. Good deal of nautical and navigation knowledge is essential.

The diver who is illiterate has his own rule of the thumb method in locating fishing grounds. One would be surprised to see a diver reaching the same spot miles away from the coast without the aid of charts and instruments. Such an expert is locally known as "Paramandadi". He is paid daily wages by the Government to guide the fishing fleet to different regions. "Paramandadi" sails ahead of other canoes and stops at a place suitable for diving. The Sangu grounds are marked by means of red flags tied to long bamboo poles to help in easily reaching the next day even without the help of "Paramandadi".

Naked Diving

Divers reach the fishing spot by 10 a.m. Majority of the divers are Catholic Christians; they offer a word of prayer before exposing themselves to heavy natural odds for the day. A diver strips himself of all clothes but for the tight loin cloth and fastens a net-bag to his waist to keep shells while crawling at the bottom.

He thus jumps into the sea and keeps clinging to the canoe till the thodai lets out a long rope with a stone sinker tied to it. The diver slips one foot into the loose knot near the stone sinker and leaves the boat and descends quickly being pulled down by the heavy stone-sinker. On reaching the bottom the diver quits the stone which is at once hauled up by the thodai for use by another. The diver briskly crawls about straining his eye in the dim light at 60 feet depth in search of brown lumps denoting shells. While a diver is thus under water his fellow divers keep a watch to see whether he is back on the surface in

time. Usually before 90 seconds he can be seen rising to the surface a little away from the canoe. It is amusing for onlookers from a boat to see how a diver looks like from about 10 feet depth. He appears just as a dark spot in the blue water and after a few seconds he looks roundish with short stumpy limbs like a turtle and quickly floats on the top like a manikin (because of refraction phenomenon).

He delivers his catches to the thodai and takes rest for some time by clinging to the side of his canoe. Diving is thus repeated by all the 340 divers which mean that they literally comb the sea bottom for shells. Among the Travancore Malayalee divers, Mohammadan divers from Ramanathapuram and divers from Arabia, the local 'Parawa' Christian divers are the best. Arabian divers speak a funny Tamil and use a nose-clip to prevent entry of sea water into their nostrils while working under water.

Accidents Sometimes Occur

The fishery runs smoothly if there is no accident. Accidents are of two kinds. Firstly a diver however adept he may be in his art, if he does not use his judgment and act at once, is likely to overstay and die of suffocation. I recall how in 1940 and in 1948 there were deaths as the divers concerned went on avariciously collecting more shells and overstayed. No sooner the accident was noticed hectic efforts were made in recovering the body. Within an hour's time the body was drifted far away by undercurrents and it was late in the evening when the corpse was brought to shore.

No Excise Duty on Asavas and Arishtas

Government have received representations from Ayurvedic physicians and others complaining that the classification of Asavas and Arishtas by the Board of Revenue (Excise) and the imposition of duty and analysis fee caused great hardship and would be detrimental to the practice of Ayurveda in this State. The Government have considered the question as to how best the hardships could be minimised and the rules simplified to that end, without detriment to the policy of Prohibition.

The Government have decided as follows:—

(1) The Board of Revenue (Excise) should arrange with the Principal, College of Indigenous Medicine, to classify as many spirituous preparations (Asavas and Arishtas) as possible. All preparations so classified can be prepared by practitioners without being analysed individually.

(2) All non-potable preparations, i.e., those that cannot be consumed otherwise than in therapeutic doses, are exempt from gallonage fees. Other unclassified preparations will be entitled to exemption only after analysis.

(3) No excise duty will be levied on Asavas and Arishtas, but a gallonage fee of Rs. 3 only on the bulk manufacture of all potable preparations which are included in the Annexure A to the licences prescribed under the Act will be collected, as now existing in Bombay and recommended by the All-India Excise Expert Committee.

(4) The fee for analysis will continue to be the same, i.e., Rs. 5, but it will not be necessary for the preparations to be tested every year. A single analysis is enough as long as the formulae of the preparations are not varied by the manufacturer. This analysis will be necessary only in the case of preparations not classified by the Board and the Principal, College of Indigenous Medicine.

It will be seen from these concessions that there is no need to pay excise duty on Asavas and Arishtas at the rate of Rs. 35 as is prevailing now. Only a gallonage fee of Rs. 3 and that too only on potable preparations will be collected. Analysis is also not necessary in all cases but only in the case of preparations which have not been classified already. The Government consider that the rules as are issued now will not cause any hardship either to the Ayurvedic practitioner or the public.

Secondly, sharks create a scare now and then. A death due to shark bite creates such a panic among divers that they suspend the fishery indefinitely. A series of masses in local churches, pujas in temples and prayers in mosques alone can win the divers back to work.

Accidents spread gloom over the divers' camp and the officer has to quickly arrange for funeral expenses and adequate cash compensation for the families. There is a single instance in which what ought to have been a great calamity was averted by the nerve and heroism of the diver concerned. He is the leader of the divers. He was caught unawareness by a monster shark at the seabottom. He fought it with all his might and dragged it to the surface and swooned. His fellow divers rushed him to the hospital. Timely treatment saved his life. He feels proud today to show the 18-inch long and $\frac{1}{2}$ -inch deep scar on his back to visitors. He is the best among the 340 divers and in 1948 he was paid Rs. 93-8-0 for a single day's catch.

Economics of the Industry

Just on the outskirts of Tuticorin stands the majestic Sangu godown. This consists of four huge constructions surrounded by a fence. Green shade, a tea stall and a community radio set add attraction to the place. The premises are full of hustle and bustle after 4 p.m. every day during the season. Three hundred divers, 100 coolies and their dependents, tea-vendors and money-lenders add colour to the scene. There is a brisk sale of hot tea and snacks both for cash and credit. Until recently vendors had a record business in accepting Sangu instead of hard cash.

Divers earn a lot in a season. After the introduction of much needed Prohibition, there is a perceptible economic rise in the standard of living of an average diver. In the pre-Prohibition days, quarrels were common and divers lived in utter poverty in spite of handsome earnings. The average daily income of a diver is Rs. 10 and the best diver's wages for a day work out to Rs. 20.

Carving Industry

A well-established cottage industry exists in Bengal in cutting, carving and lacquering Sangu ornaments. Sangu is first of all polished, using acids. It then presents a shining appearance. Jewellery made out of it will appear at first sight as genuine ivory products. Bangles, rings, beads, pendants, buttons, ear-drops, religious emblems and a score of other dainty articles are made out of Sangu. Skilful lacquering enhances the charm of these ornaments and they are popular in Bengal, Bihar, Orissa and South Madras.

A shell is prepared (for cutting bangles) first by removing the columella so that sawing may be easy. The septa are then shattered. The shell is now open from end to end. The cutter then drives two short stakes of unequal length into the ground, leans against the longer stake and presses his toes against the opposite smaller stake and keeps his knees apart and grips the shell between his feet and carves out dexterously bangle after bangle. The carving saw he uses is a deep crescentic clumsy iron blade carrying many serrations. This blade has to be sharpened off and on. A good workman cuts out 100 bangles a day. Further chiselling, drilling, polishing and lacquering follow to make the bangles really beautiful. For lacquering

crystals of Cinnabar are ground to powder and mixed with shellac.

Sangu bangles are becoming increasingly popular in Bengal and elsewhere, mostly because of Indian tradition and culture. Of late brooches, tie-pins, hat pins, buttons, images of Gods, religious symbols and national emblems manufactured out of Sangu are becoming popular. Huge Sangu polished well with different designs carved out on the surface and coloured red, blue and green are the best paperweights and curios I have ever seen.

Fish by Air and Train

In a quiet suburb of Calcutta, on the banks of the Hooghly, there are people who catch fish from special ponds, give them a good look-over, and throw them back into the water. This is done with some kind of regularity—and with a purpose. For these are the research scientists of the Central Inland Fisheries Research Station at Barrackpore engaged in the study of the feeding, growth and other aspects of fresh-water fish, both edible and of commercial value.

Scientific study of fishes in their native habitat help fish farming in many ways. These studies reveal the conditions under which particular types of freshwater fish thrive—knowledge that would contribute more to the country's food resources.

At the Barrackpore Research Station, experts study the life-history and habits of such edible fishes like Hilsa, Mulletts and Major Carps, their pathology, and the parasites which are injurious to them. This work is a continuous process of co-related study.

Fish Seed by Air and Train

Ever heard of fish "seed" despatched by air or train? Well, this is one of the most important aspects of the work done at the Barrackpore research centre. By fish "seed" is meant small fry, one to two inches in length, sent in sealed tins or open earthenware vessels.

Their destination? Fish farms in Bombay, Hyderabad, Bhopal, Madhya Pradesh, Madhya Bharat, Madras and Assam. On an average, during the season roughly comprising fourteen weeks starting from the last week of June to the beginning of October—about 200,000 small fry of Major Carps are despatched every week by train or air from the Barrackpore Research Station.

By air, the small fry goes in closed tins, containing water and with extra oxygen pumped in to provide adequate air for the fish to breathe during the journey. In the case of more leisurely surface travels by train, they go in huge earthenware pots filled with water—and attendants to watch their safety. By special arrangement with the railways, third-class accommodation is reserved for them in mail trains. Usually, one fisherman and four attendants travel along with the fish seed consignments sent by train.

Besides the research done, the Barrackpore centre offers training facilities in practical fisheries. It is a ten-month course, and trainees come from all over India, most of them nominees of the State Governments. The minimum qualification for eligibility for the course is a degree in zoology, but this is sometimes waived in exceptional cases.

Rural Welfare Work in Srikakulam District

By SRI N. BHAGWANDAS, I.A.S., Collector, Srikakulam District.

Action, not words, is called for to secure the co-operation from the villager into whom a new spirit has to be infused to rouse his latent potentialities to make any scheme a success. The Rural Welfare Scheme has come as a boon to instil in the villager a feeling that he can forge ahead by his own effort and that the Government are there not merely as tax-gatherers, but as some one who will help him to better his lot. The Rural Welfare Scheme was first inaugurated in Gara Firka of Srikakulam Taluk in September 1946 and was later extended in April 1950 to two more firkas in the same taluk. These three firkas comprise 100 main villages and 194 hamlets. It has since been proposed by the Government to extend the scheme to Nagarikatakam Firka in Srikakulam Taluk, thereby bringing the whole of the taluk within the purview of the Rural Welfare Scheme. By the inclusion of this new firka, 93 more villages will be benefited.

Rural Welfare staff.—The executive of the Rural Welfare staff consists of a Rural Welfare Officer, ten Gramasevaks, one Khadi worker, one Special Minor Irrigation Overseer, one Agricultural Fieldman and six Demonstration Maistries. Monthly targets of work are fixed by the Collector at the time of the District Rural Welfare Committee meetings for each member of the executive staff for the purpose of accelerating the various items of work relating to Rural Welfare, and the progress made in the direction is closely watched.

Work done—(a) Village communications.—In the selected three firkas seven village roads covering a length of 11 miles have been formed and five roads covering a length of six miles are in progress; and six more roads are proposed to be taken up shortly.

(b) Rural water-supply.—In villages where acute scarcity of protected water-supply is felt, seven wells were sunk benefiting a population of 4,000 and eight wells are in progress and the population that will be benefited by these wells is 4,500. In addition to these, eight more wells are proposed to be taken up for benefiting a population of 4,350.

(c) Discretionary grant.—During 1951-52, forty-five urgent minor works such as deepening of wells, construction of platforms, etc., was done at a cost of Rs. 15,000.

(d) Village sanitation.—During the course of this year 376 sanitary drives were conducted, 197 compost pits were dug and 49 trench and community latrines were established.

(e) Medical.—Ten first-aid centres are being opened in the headquarters villages of the Gramasevaks. A leprosy clinic is being opened at Korni and the necessary staff is undergoing training at present.

(f) Improved methods of Agriculture and consequential increase in food production.—As the main object of the Rural Welfare Scheme is to bring about a co-ordinated and concerted effort for an all-round development of each aspect in the villages, the first and foremost aspect which requires proper development is intensive agriculture. The Rural Welfare Department has so far succeeded in inducing the villagers to resort to improved methods of

agriculture by using chemical fertilisers and improved seeds. A special Agricultural Fieldman and six Demonstration Maistries are in charge of the work. During the year 1952, improved methods were resorted to in respect of 20,100 acres of land, resulting in proportionate additional food production.

(g) Cottage industries.—Beehive industry was started at Arasavalli and attempts are being made to introduce it in as many villages as possible. Adequate assistance in the shape of tools and implements is given by the Industries Department to encourage carpentry and smith work.

(h) Livestock.—All cattle diseases are being attended to by the Stockman Compounder of the Veterinary Department and improved methods of castration have been adopted. It is proposed to open a poultry at Ronanki village in Srikakulam firka, by eliminating country cocks and grading up the existing stocks by introducing cockerels of exotic breed. The requisite number of cockerels have been indented for and their supply is awaited.

As an experimental measure, 25 cockerels were secured in the month of February 1952 and distributed among the villagers; as the effort was not concentrated in a limited area of a single village, the result could not be correctly gauged. The experiment now proposed to be tried is exclusively in Ronanki village where the villagers are very enthusiastic and willing to co-operate.

(i) Education.—Thirty-one adult literacy schools have been opened; 13 new elementary schools came into existence, and three higher elementary schools were converted into Basic schools (at Ampolu, Srikurmam and Calingapatnam). Poor and deserving school-going children are provided with free slates and pencils.

(j) Broadcasting.—Six rural radio sets have been installed in Srikurmam, Nelliparti, Purushottapuram, Vommaravalli, Calingapatnam and Ramakrishnapuram.

(k) Co-operation.—Fifty-six rural co-operative credit societies, two weavers' societies, three fishermen societies, one marketing society and one milk supply society have been formed and are functioning in the Rural Welfare area.

(l) Women's welfare.—Two women welfare centres were opened at Arasavalli and Calingapatnam, the women folk being given training in embroidery, tailoring, spinning and music. Adult education is also being imparted to the women folk.

(m) Khadi scheme.—Intensive propaganda about the utility of Khadi is being made in the Rural Welfare area. To induce the villagers to take up Khadi development work with the object of building up rural economy, spinning demonstrations are being regularly held and competitions conducted. During the year 1951-52, 167 new charkas were introduced and 285 old charkas were renovated.

(n) Libraries.—In the Rural Welfare area, one Central Library is functioning at Srikurmam and 37 branch libraries are attached to it. Books are being regularly supplied and the public are coming in increasing numbers to make use of these libraries. The average number of books read each month exceeds 1,000 on the average.

Village Production Councils

The Government have directed that, pending finalisation of the constitution of Village Production Councils, the Tahsildar in each taluk should nominate a Village Production Council for each village, consisting of five to ten members.

The Tahsildars have been instructed to nominate suitable representatives for the following classes to each council: (i) Cultivators in the village, (ii) artisans in the village, (iii) suitable representatives from existing Panchayats and co-operative institutions, and (iv) representatives of bodies that may have been created by the Agriculture Department. A suitable village official of the place will also be nominated to act as the Secretary to the Council.

The functions of the Village Production Councils are purely advisory and they will cover the following subjects: (i) Framing programmes of production to be achieved at each harvest by the village; (ii) assessing results attained at each harvest; (iii) taking steps to bring under cultivation land at present lying uncultivated; (iv) arranging for the cultivation of land not cultivated or managed by the owners; (v) assisting in securing minimum standards of tillage to be observed in the village with a view to increasing production; (vi) stimulating production through prizes and other incentive schemes; (vii) promoting the cultivation of high-yielding food crops; (viii) organising voluntary labour for community works; and (ix) estimating and assisting in the provision of requirements of local raw materials for the artisans of the village.

The discussions in the Village Production Councils will be oral.

This action has been taken on the suggestion made by the Planning Commission that there should be a Village Production Council for each village or group of villages, for the effective implementation of the First Five-Year Plan. The finalisation of the constitution of Village Production Councils will have to wait until the elections to the Panchayats are over.

Special Features

To show better what united efforts of the officers and the active co-operation of the villagers can do, I decided to take up a village for conversion into a model village. I called for volunteer villagers, my conditions being that in the village there should be no party politics, there should be utmost co-operation from the villagers and lastly that the villagers should be prepared to make sacrifice in the greater interests of the village such as, if, in the course of widening or straightening roads or improving the general layout of the village, a house had to be dismantled, they should be prepared to do it.

Only Ramakrishnapuram agreed to the last condition and as such that village was taken up and is being converted into a model village. The model village as such was officially opened recently when on the opening day, the "Ryots Day" was celebrated in the village. "Ryots Day" was also celebrated in many other villages with a view to show to the ryot the important position occupied by him in the economic and political structure and by opening his eyes to his importance to further encourage him to achieve greater yields from his land.

"The child being the father of the man", cub packs and children's parks are being organised to awake even in the children a sense of civic responsibility and to give them facilities of hygienic playgrounds.

The monthly meetings are being held in villages of the Rural Development areas in which all the officers take a prominent part. The work done by each Gramasevak is read and discussed and the programme of work is drawn out for the next month.

Ignorance, apathy and superstition are the three factors standing in the way of the Indian villages from coming forward. Ignorance is sought to be removed by the co-ordinated and concentrated efforts of all Departments of Government—Agriculture, Education, Veterinary, Public Works, etc., doing their mite in helping the villagers getting out of the old ruts. Apathy is given the go-by where the villagers come forward with their labour and contributions towards part-payment of all works undertaken in the village. Amenities by way of educational facilities, water-supply, co-operative credit societies, etc., uplift the minds of the villagers, with the result that superstition is slowly removed from the minds of the people.

Outdoor games for children, radio broadcasts and spinning during spare time created individuality and today the villagers in the area where the Rural Welfare Scheme is in force are decidedly better physically and mentally and economically than those in other villages.

Khadi Development Order

The Government have rescinded the Madras Khadi (Development) Order, 1949, as subsequently amended.

Written Tests by Public Service Commission

The Government have directed that the concession allowed for the candidates, who appear for the competitive examination by written test conducted by the Madras Public Service Commission and whose mother-tongue is Urdu, to answer Part I of the first paper in the revised syllabus for the S.S.L.C. standard examination in English, and to translate, in respect of the fourth paper, English into Urdu, and Urdu into English, be cancelled.

Part I of the first paper is Essay in the regional language. The fourth paper is Translation, both parts.

This action has been taken, as according to the special rules for the Madras Ministerial Service, as since amended, a candidate who do not possess an adequate knowledge of a language or of one of the languages of the district, will be ineligible for admission to the competitive examination for recruitment to the Ministerial Services.

The Government have ordered that the examinations of the Collegiate Standards should continue to be in English for the present and the syllabus for the competitive examination for Group IV Services should also continue without any change for some more time:

Rural Welfare Activities

A brief note on the salient features of the activities of the Rural Welfare Department in the areas selected for Rural Welfare during August 1952 is given below:—

Chittoor District: During the month under review, a sum of Rs. 5,209 was spent towards the sinking, repairing, etc., of wells in the district; one Central Library was opened; 3,528 books were purchased; three radio sets were installed; 60 cess pools were constructed; one bathroom was built; 35 tons of compost was produced. A sum of Rs. 3,000 in the form of materials, land and labour and Rs. 1,000 in cash to construct buildings was contributed during the month. An agriculture exhibition was held at Tirutani for one week. A cattle fair was held for one day. A maternity centre was opened at Poonimangadu on 27th August 1952 by the Minister for Rural Welfare.

Bellary District: Three works under Discretionary grants, three under Rural Water-Supply and five under Village Communications were under execution. A sum of Rs. 2,680 was spent towards Village Communications; Sixty-three sanitary drives were conducted; 53 compost pits were formed; 48 charka demonstrations were conducted; a subsidy of Rs. 2-8-0 was paid to the spinners; 150 hanks of yarn were spun and 12 yards of cloth was produced. Improved seed was used in 1,192 acres of land. A share capital of Rs. 165 was collected and an amount of Rs. 25 was collected from the hundi boxes towards thrift collection.

Salem District: A sum of Rs. 4,422 under Discretionary grant, Rs. 2,959 under Village Communications and Rs. 2,790 under Rural Water-Supply was spent during this month. A Harijan Seva Sangam was organised at Nattakurai village and an adult school was opened at Kanakkapalayam village. Nine charkas were distributed to the self-spinners who have produced 3,723 hanks of yarn and 74 lb. of cotton slivers. Spinning demonstrations, yagnams and congregational spinning were conducted in 12 places during the month under review; 358 manure and rubbish heaps were removed; 22 cess pools were constructed; 24 cherries were cleaned; 11 septic tank latrines were constructed; 23 insanitary pits were filled up; 89 compost pits and nine manure pits were dug; 80 old pits were rectified and nine trench latrines were opened.

Guntur District: During the month, fifty-two compost pits were newly dug; eight compost pits were opened; forty-four compost pits were properly covered or rectified; fifteen mass sanitation drives and eighteen individual sanitation drives were conducted; fifteen adult night classes were conducted by the Rural Welfare staff; four unhealthy pits were filled up; one soak pit was cleaned; two Wardha type trench latrines were constructed; twenty-six persons were given first-aid treatment by the Grama Sevaks, Inamanamellur group; two box charkas and twelve kisan charkas were introduced; sixty-three old charkas were renovated; sixteen spinning demonstrations were conducted; five hundred and ninety-eight hanks of yarn was produced by the self-spinners; two hundred and twenty-one bags of paddy seed was distributed to the ryots; 150 plants were planted; four Grow More Food gatherings were addressed; contour bunding was conducted in an area of seven acres of land; 221 bags of paddy seed and 17 bags of cotton seed were distributed to the ryots.

North Arcot District: A sum of Rs. 1,413 was spent towards sinking, repairing, etc., of wells and other drinking-water sources during August 1952. A sum of Rs. 450 was collected for expenditure under Village Communications. About 306 persons used the reading rooms and 540 books were circulated; 1,210 members were served by the libraries. Twenty-eight other type latrines were constructed and three repaired; 10 first-aid boxes were supplied to 10 Grama Sevaks; 113 persons were treated; 98 insanitary pits were filled up; 142 manure and compost pits were dug; 552 tons of compost were produced; 6 services were performed by bulls; 635 trees were planted.

South Arcot District: An expenditure of Rs. 2,417 was incurred during the month under Village Communications: 162 manure and compost pits and 20 trench latrines were put up; 90 charkas were distributed to the Harijans; 778 taklies were distributed to school children to learn spinning.

Srikakulam District: During the month, 60 sanitary drives were conducted; 63 yards of yarn was woven; 2,700 trees were planted; 1,695 books were distributed; and 48 cattle were attended to; 36 spinning demonstrations were conducted and two magic lantern shows were given.

Visakhapatnam District: In Pendurthi firka, 45 mass and 73 individual sanitation drives were conducted; 51 spinning demonstrations were held; 45 hanks of yarn were spun; 1,007 books were distributed; 836 members were benefited by libraries; 56 compost pits were dug; 92 ordinary pits were set right; seven magic lantern shows were held; 80 adult classes were conducted; 516 trees were planted.

In Kotauratla firka, 18 mass and 50 individual sanitation drives were conducted; 51 spinning demonstrations

Livestock Improvement Board

The Government have reconstituted the Livestock Improvement Board. The Minister-in-charge of Agriculture will be the Chairman of the Board. The term of office of the non-official members of the Board will be three years.

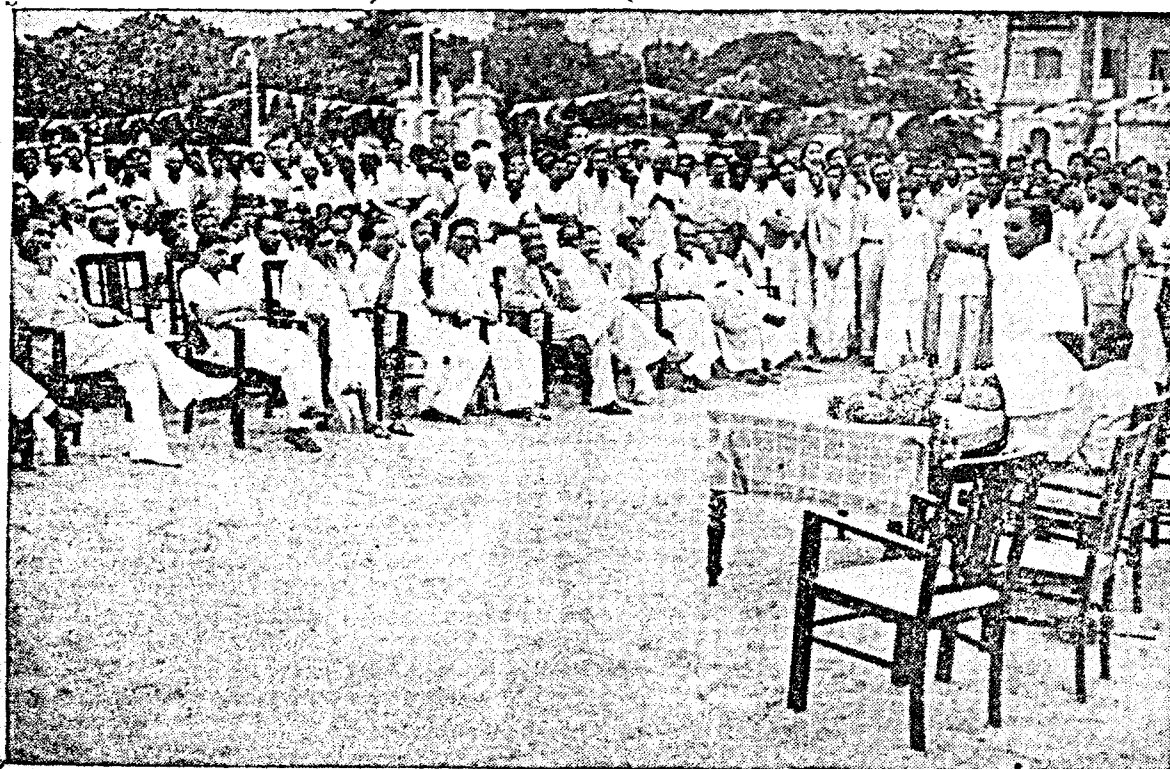
The following are the official and non-official members of the reconstituted Livestock Improvement Board:

The Director of Animal Husbandry, the Director of Agriculture, and the Registrar of Co-operative Societies; Sri S. B. P. Satyanarayana Rao, East Godavari District; Sri B. Ramachandra Reddy, M.P., Nellore District; Sri N. Nallasenapathi Sarkarai Manradar, M.L.C., Pattagar of Palayakottai; Sri K. S. Lakshminpathy, Zamindar of Idaiyakottai, Madurai District; Sri E. K. Sankara Varma Raja, M.L.A., North Malabar; and Dr. K. Balappa Shetty, Secretary, South Kanara Livestock Improvement Society, Hampankatta, Mangalore.



SELF-HELP: Sri T. S. Ramachandran, I.C.S., Director of Community Projects, organised a Self-Help day, and led the members of the Madras Secretariat Association on a manual labour campaign to help build their own sports ground.

SECRETARIAT GAMES SECTION: The Raja of Ramnad, Minister for House Rent Control and Sports, recently declared open the Games Section of the Madras Secretariat Association. Now the members enjoy all facilities for tennis, volleyball, cricket and tennikoit.



were held; 45 yards of yarn was spun and 47 compost pits were dug.

In Araku Valley firka, 41 and 35 individual sanitation drives were conducted; 90 cattle sheds were cleaned; 37 compost pits were dug; 50 ordinary pits were set right; 242 cattle were attended to; 542 medical cases were attended to; 2,500 green manure seedlings were sown and 3 community latrines were set up.

Tanjore District: Thirty-seven charkas were introduced; 111 charkas were repaired; 1,423 hanks of yarn were produced; 20½ lb. of cotton were sold; 53 compost pits were laid; 79 manure pits were dug; 58 were rectified; 143 tons of compost was taken to fields; 56 cherries were cleaned; 37 heaps of manure were removed; 23 insanitary pits were filled up; 23 trench and Wardha type latrines were constructed and 509 trees were planted.

East Godavari District: Twenty-seven compost pits were dug; 62 were set right; 19 sanitation drives were conducted; 54 heaps of manure were removed and 80 tons taken to field; 33 spinning demonstrations were conducted; 31 lb. of slivers were distributed; 29 lb. of cotton were sold; 16 charkas were introduced and 75 were repaired; 1,155 hanks of yarn were produced.

Malabar District: In Tellicherry, Kuthuparamba and Mattanur firks, 40 compost pits were got dug and 50 tons of manure produced were utilised for cultivation; four Agricultural Committees were constituted; three Youth Leagues were formed for social and recreational activities; Adult schools were started at Edavoor and Keezhur; Eleven charkas were newly introduced and six persons were given training in carding.

In Payyanur area, three compost pits, two manure pits, five trench latrines and one leaching type latrine were constructed. One Agricultural Advisory Committee was

organised in Karivallur amsom; 60 lb. of green manure seeds and 10 lb. of ammonium sulphate were distributed; ten charkas were introduced during the month; one Adult Education class was opened at Keloth.

Tirunelveli District: Nineteen charkas were introduced and 51 manure pits were dug.

Anantapur District: One private elementary school and one adult night school were opened. Seventeen charkas and 13 lb. of slivers were sold; 1,000 hanks of yarn were collected; Khadi cloth worth about Rs. 200 was sold; 600 trees were planted; 23 new compost pits were opened; one stud bull was purchased at Rallahalli.

Tiruchirappalli District: In Musiri firka, 13 charkas were introduced; 632 hanks of yarn were collected; 21 adult schemes were started; 10 manure and compost pits were dug and 40 tons of compost were produced.

In Vellakoil area, 350 persons visited the reading rooms during the month; one building for a reading room was constructed; four Grama Seva Sanghams were formed; 15 insanitary pits were filled up; 42 compost pits were dug and 130 tons of compost was produced and 20 trees were planted.

Kurnool District: Three hundred and seventy-eight books were circulated; 378 members visited the libraries; one school building was constructed; one ordinary type of latrine was constructed; 30 agricultural farms were started; 20 agricultural demonstration plots were started; 60 compost pits were dug and 1,545 trees were planted.

South Kanara District: During the month one reading room was started; two radio sets were installed; one agricultural demonstration plot was started; 32 manure and compost pits were dug; improved seeds and methods were employed in 127½ acres of land; one poultry unit was started and 103 trees were planted.

The Nilgiris District: Two elementary schools were opened; one demonstration plot was started; 51 manure and compost pits were dug; 75 tons of manure were produced; the number of services performed by bulls was 32; one bee-hive was set up and 4,000 trees were planted.

Ramanathapuram District: Fifty-two sweeping campaigns were conducted; a sum of Rs. 500 was spent under Discretionary Grant; 54 compost pits were dug; 200 trees were planted; 6,220 hanks of yarn were spun; 42 charkas were introduced; a spinning demonstration was conducted at Surakkaipatti; the villagers of Pattakulam contributed Rs. 295 for the installation of radio set in their village; 5,500 persons used the reading rooms; 250 books were circulated; the number of members served by the libraries was 800; three stud bulls and two Murrah buffaloes were supplied during the month and 118 trees were planted.

Nellore District: Thirty-one adult education classes were handled by the Grama Sevaks; 360 books were distributed by the Firka Central Library, Venkatachalam, and 632 persons were benefited; one community latrine was constructed at Gotlapalem; ninety individual and 47 mass sanitary drives were conducted; eleven soak pits were constructed; thirteen soak pits, 5 wells and 115 sewage drains were cleaned; sixteen pounds of vegetable seeds were distributed among the villagers for raising kitchen gardens; two pounds of cotton seed

Electricity Extension Schemes: Loans from Consumers

The Government have directed, in view of the present financial stringency, that the following procedure should be adopted in regard to the financing of schemes for extension of supply of electricity already sanctioned and those to be sanctioned in future:

(i) All schemes, which are basically essential and to which local contributions cannot be attached, will have first priority.

(ii) All other sanctioned schemes will be open to contributions, by local beneficiaries, of advances for capital expenditure. Where contributions are paid to the extent fully to meet the capital expenditure involved, the work will have first priority for execution. Where contributions are less than the 100 per cent requirement and the scheme calls for ways and means resources, priority will be given in the order of relatively high percentage of contribution towards the cost of the scheme.

(iii) All such advances will be repaid in not less than ten annual instalments with interest at three per cent per annum, the first instalment from two years after the collections.

The Chief Engineer (Electricity) has been authorised to accept loans from individual consumers for giving them service connections, provided the loans are given voluntarily, subject to repayment in not less than five annual instalments and provided also that the rate of interest to be paid on such loans does not exceed three per cent per annum. In such cases, service connections will be given to the consumers concerned under special priority and the agreement for supply of power to be entered into with the consumers concerned will provide for the loans offered voluntarily and the terms of repayment, etc.

were also distributed; five hundred and thirty-three acres of wet land bunds were planted with sesbania, speciosa and glyricidia plants for green manurial purposes; 1,229 shade trees were planted; 590 orange trees were treated with bordeaux mixture, 140 orange trees with zinc sulphate and 150 trees were pruned; twenty-three new charkas were introduced under the Extensive Khadi Scheme; forty-six spinning demonstrations were given; 873 hanks of yarn were spun and 126 yards of cloth woven.

Madurai District: To implement an intensive programme chalked out by the Collector, the Grama Sevaks, the Agricultural staff and the Health Inspector, worked in a batch in the villages of Keelaurappanur, Alampatti, and Kallupatti and removed all the rubbish from the villages and made the villagers dig compost pits according to a plan. At Keelaurappanur and Alampatti, 164 pits were dug.

Economic Statistics in Madras State

By DR. B. NATARAJAN, Economic Adviser to the Government of Madras

All sciences began with description of facts and so did Economics, when Adam Smith, the Father of Political Economy, wrote his *Wealth of Nations*; but it soon began to attain some precision when Ricardo set to apply the principle of deductive logic, followed by Mill, Jevons, Marshall and Pigou in England; and the Austrian economists like Bohm Bawerk added subjective elements. Thus evolved the Classical theory. Price was the central theme of Economics and the technique of its determination at the equilibrium applied to every other field where economic forces acted and reacted on one another. At this stage of the growth of the economic science, the role of the statistician was limited. It was at best to illustrate, vivify, confirm or explain away the basic hypotheses built on deductive reasoning, rather than to enlarge or modify, alter or reconstruct the theories. No wonder Marshall, though himself an eminent mathematician, relegated mathematical economics to footnotes and appendices.

The Classical approach has remained at best a static approach. The equilibrium it conceived of was a stationary equilibrium, applicable only to what Barbara Wootton disparagingly calls the "apple-pie" world unrelated to the realities of economic events. And so a dynamic approach had to be made towards building up a theoretical corpus which would explain the changing patterns of economic events through time and space. This was given to Lord Keynes. His "New Economics" as distinguished from the Classical Economics took Income and Employment as the central concepts instead of Price. And with it departed the favourite pursuit of earlier Classical economists of weaving rounded theorems based upon deductive logic and hypothetical assumptions.

This shift in centre of gravity from Prices to Income and Employment and in approach from stationary to changing equilibrium gave Economics an attribute of aggregative discipline. Macro-Economics became as important as Micro-Economics. This no longer meant the formulation of principal equations, relegating the innumerable variables to the background as in Classical Economics. The New Economics realised that these variables, however small, could in the aggregate profoundly alter the nature and significance of central equations. It is in the determination of the size and significance of these variables that Statistics has come as an invaluable help to Economics. New tools have to be fashioned, and in the process of fashioning them, the pure theory of Statistics itself has received large impetus and growth. And so developed a branch of Statistics, known as Econometrics.

Specialised Tool

This sets obvious limits to the role of Statistics in Economics. It meant that the handling of Statistics in the field of Economics is not the job of the pure mathematician or pure statistician. As Durbin points out,

From the opening address at the Seminar on Economic Statistics held under the auspices of the Indian Statistical Institute (Madras Branch) on 3rd December 1952, presided over by Sri C. Subramaniam, Minister for Finance.

Economic Statistics is no mere piling up of undigested information, the compiling of vast statistical tables, the detailed recording of events in time. An array of facts and figures giving production at factor cost, transfer payments, indirect taxes etc., will yield but an illusion of discovering facts in National Income unless an expert in Economics interprets them. It is only by analysis, comparison, hypothesis and prophecy that facts can be made to speak.

In other words, Economic Statistics is in the nature of a specialised tool, largely fashioned for the specific purpose of economic analysis, capable of being elegantly handled only by the competent specialist in the field of Economics. And, be it remembered, that competence in Economics needs understanding, if not competence in several other fields of knowledge.

To the American Economic Association, an Economist should possess qualities more than technical *expertise*. "He requires a knowledge of human history, philosophy and politics. But more immediately the economist should look beyond the regression co-efficients, propensities, balances of accounts and equilibria of forces within his own laboratory to the whole arena of economic life." And so it was that Keynes would consider that the primal powers needed for theorising in economics are largely an amalgam of intuition and logic, assigning but an auxiliary role to Econometrics.

Scope and Nature of Data Needed

This understanding of the exact role of Statistics in the field of Economics sets the scope and nature of the statistical data to be compiled. The measurement of the size and significance of the innumerable variables, no longer to be excluded under a *ceteris paribus*, gives an added range to statistical compilation. And as the "General Theory" of the New Economics functions as the economic creed for the political concept of Welfare State, tolerably precise quantitative data have to be obtained about National Income, factor payments, saving investment, marginal efficiency of capital, liquidity preference, employment potential, actual employment, balance of payments, standard of living, output, consumption function, multiplier effect, acceleration rates, magnitude of monetary sectors and a host of other concepts. These data have to be built up in time series. Models have to be constructed for purposes of analysis, forecasts and projections. A number of sectional studies have to be made to test the hypothesis.

All this involves time, training and money, but these are the implications of a Welfare State. Having renounced all faith in the "Invisible Hand" of the *laissez faire*, the Welfare State does not function by the hit-and-miss method. It proceeds on the basis of verifiable facts and employs tested techniques—techniques which seek to guide in the formulation of policies and shaping of administrative measures.

Surveys in Madras State

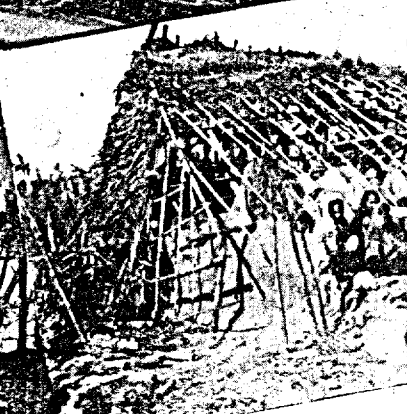
I shall now pass on to a few such enquiries conducted in this State during the last five years. The most handy



INTERNATIONAL CONFERENCE OF SOCIAL WORK

Madras City was the venue of the Sixth International Conference of Social Work, when nearly 1,300 delegates (1,000 from the Indian Union and 300 from abroad) met to discuss problems of mutual interest in social service. Photos on this page show the arrival at the airport of Mr. George E. Haynes, President of the Conference, addresses at the Conference by Shri Sri Prakasa, Mr. Chester Bowles (U.S. Ambassador to India), Dr. Jivraj Mehta of Bombay and others.

A Civic Reception was accorded to the delegates, some of whom are seen here (left) with Sri T. Chengalvarayan, Mayor of Madras: • •

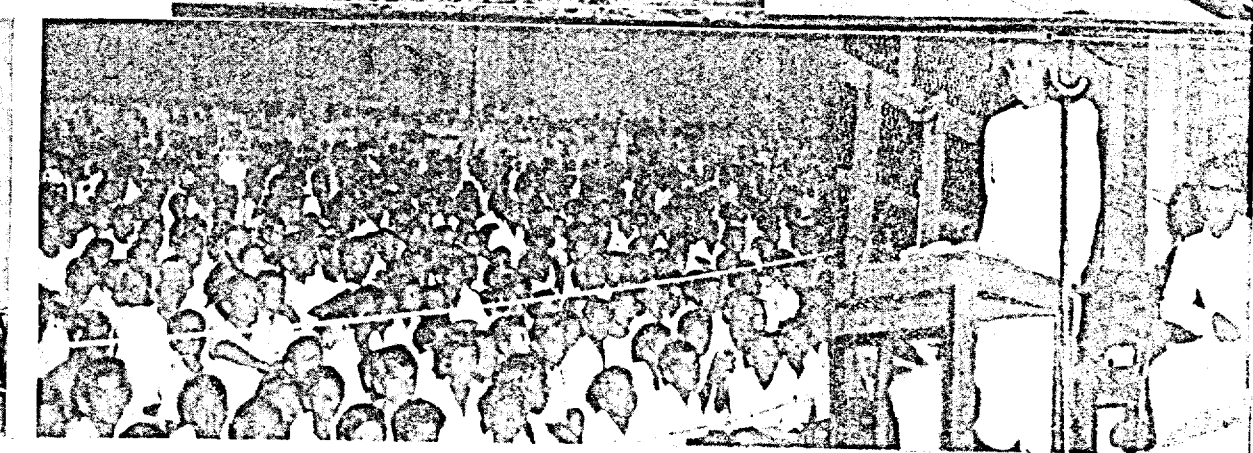
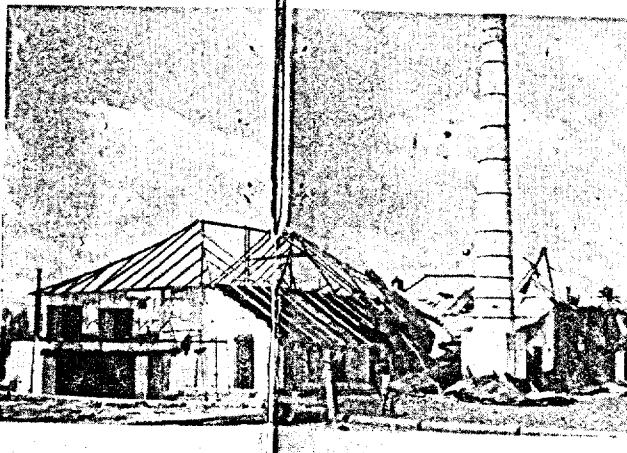
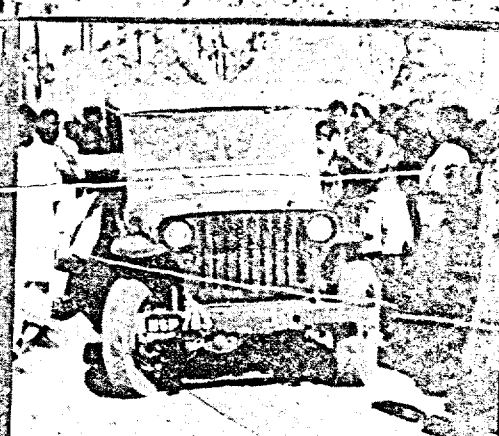
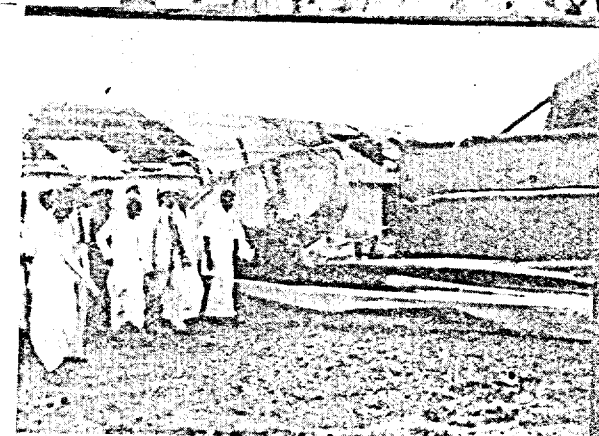
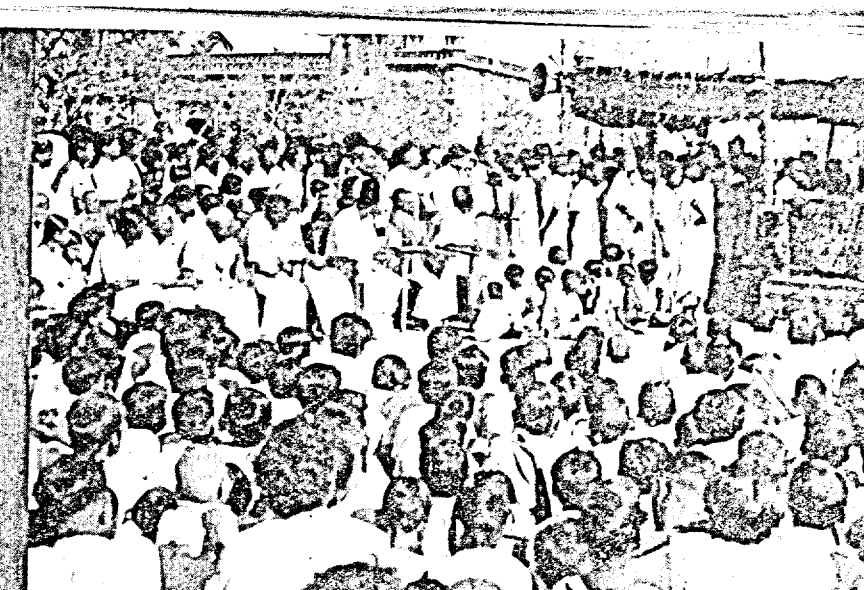


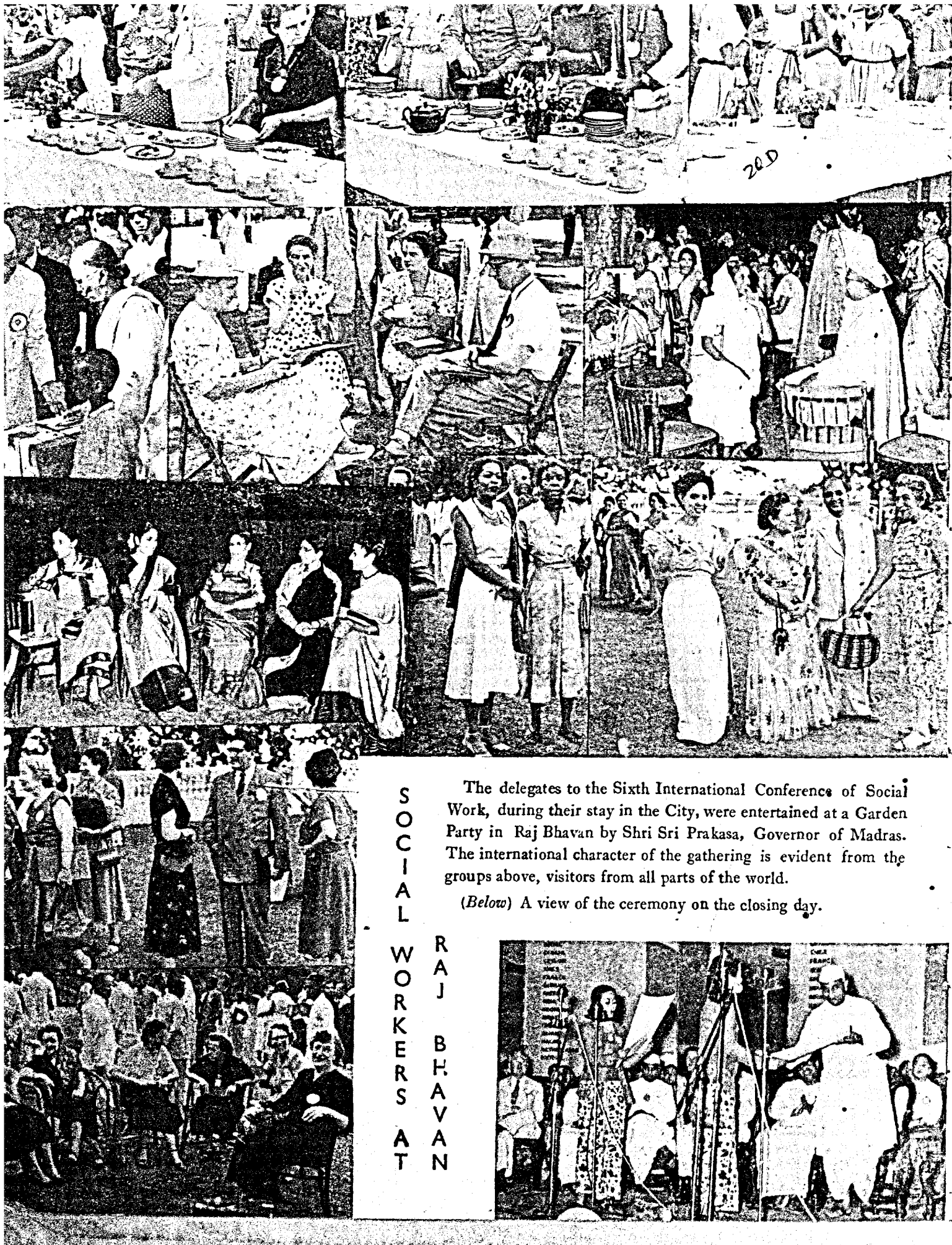
On November 2, 1952, the cyclone hit the southern coast of Madras State, and after spending its brief but terrific fury, left in its wake a trail of loss, ruin and devastation. Two of the most

prosperous districts in the State—Tanjore and Tiruchi—suffered the full brunt of the hurricane.

The Chief Minister, Sri C. Rajagopalachari, speedily undertook a strenuous 400-mile, four-day tour of the stricken areas, to judge personally the havoc wrought, to console the afflicted, and to inspect the relief measures launched.

Pictures on this page give a composite view of the tremendous damage done by the storm—gigantic trees uprooted, banana plantations ruined, betel vines destroyed, houses wrecked. The port of Nagapattinam was battered to shambles, and the tidal waves lashed the salt-water into the heart of the town; the harbour was ruined, the hospital wrecked, the railway station roofless and the bus-stand razed to the ground.





The delegates to the Sixth International Conference of Social Work, during their stay in the City, were entertained at a Garden Party in Raj Bhavan by Shri Sri Prakasa, Governor of Madras. The international character of the gathering is evident from the groups above, visitors from all parts of the world.

(Below) A view of the ceremony on the closing day.



ADMINISTRATION

21

MADRAS INFORMATION

technique yet devised has been the sampling. Sample surveys have become a speedy, cheap and yet reliable method of arriving at valid conclusions. About twenty such surveys have been undertaken with varying degrees of utility for practical policy. The Enquiry into the Motor Vehicle Taxation Act conducted in 1948 to find out the taxable capacity of fleet owners was based on the principle of stratified random sampling. The investigation into the working of the Government Bus Service was intended to give an idea of the economics of a State run public utility corporation. The enquiry into the economics of milk production in Madras City conducted in 1949 led to far reaching conclusions on the organisation of the milk trade in the city.

A pilot survey of Manure Production in Chingleput District determined the production and utilisation of farmyard manure and the steps to be taken to augment supplies. Incidentally, it also helped to determine the size of the sample for a State wide survey. The Test Economic Survey of the Tungabhadra Project area undertaken in three villages at the instance of Central Water Power and Navigation Commission was based on representative sampling and led to interesting conclusions on land utilisation, levels of living, income distribution, employment potential etc.

Enquiry into Agricultural Wages

The Enquiry into Agricultural Wages for the location of low wage areas for the fixation of minimum wages based on stratified random sampling technique helped to fix the minimum wages in Agriculture. The survey of livestock population in South Arcot District had the object of estimating the standard errors in the figures arrived at by the Census method. The enquiry into the possible changes in the off-take of foodgrains as a result of the withdrawal of food subsidies conducted at the instance of the Government of India had an immediate practical aim. An enquiry into the Family Budget of the Middle Class in Madras City has been recently completed and on its findings the construction of a separate series of cost of living numbers for the middle class will follow. The Crop Cutting Experiments, conducted annually under a Five-Year Co-ordinated Scheme sponsored by I.C.A.R., attempt to fix the normal yield of crops like paddy, millets, oil seeds, etc.

Connected with it is the survey to assess the results of the Grow More Food Aids like improved seeds, fertilisers etc. A separate survey to assess the success of the well digging campaign has also been completed. Two important indices are under construction, one to measure the relative prosperity of the farmer through the years, known as the Parity Index and the other a Building Construction Index Number to measure the changes in prices of commodities entering the constructional activities. An elaborate survey of nine important Cottage Industries in selected centres is in progress, as also an enquiry into cost of production of crops based on multi-stage stratified random sampling. A pilot enquiry into the distribution and size of cultivators' holdings, as a part of the World Census of Agriculture, is in progress, and plans are under preparation for a survey to test the accuracy of the primary data in Agriculture in general, and of area data in particular.

All these surveys are based on different types of sampling methods and each has been undertaken with definite objectives at the instance of administrative departments which use the findings for making policy decisions.

Statistical technique has thus come to play an increasing role in economic investigations conducted by the Government of Madras.

Cost of Living Index

These are in addition to the regular items of work in the Department of Economics of which some idea may be given. The Cost of Living Indices are constructed and published for nine urban centres including Madras City and 13 rural centres. Wholesale price indices are published monthly for the City and the State. The retail price indices are constructed every month for 26 articles. Indices of import and export prices relating to foreign trade of the State are published monthly. In the sphere of Industry, statistics are collected under the Industrial Statistics Act, Government of India, relating to capital structure, labour, fuel, raw materials and finished products from about 1,500 factories belonging to 29 industries. Labour statistics relating to attendance, wages, other earnings, hours of work, etc., are collected from 10,681 establishments both by personal enquiry and by the mailing methods.

In Agriculture, statistics are collected regarding land utilisation, area under various crops, yield, cost of cultivation and output. Crop forecasts form a very important piece of work on which estimates of national production are made by the Ministry of Food and Agriculture, Government of India. In Madras we issue crop forecasts for 25 crops, for several more than three times in a year and for some six to seven times.

Studies in State Economy

On the research side more than 75 special studies have been made on various aspects of State economy : 17 studies relating to agriculture such as Indices of Agricultural Prosperity, Statistical Assessment of Grow More Food Campaign, Land Utilisation and Half-century Changes in land holdings, six relate to Industry, such as Role of State in Industrial Development and Handloom Industry, some on Labour, such as Absenteeism, Wages and Industrial Output and Employment Trend and some more on trade like Three Decades of Foreign Trade of Madras and State Trading.

Some of them relate to Transport, such as Economics of Urban Bus Transport, Development of Highways under the Five-Year Plan, special papers like Trend of Prices since 1939, National Income of Madras, Co-operation and Rural Welfare, Women and Rural Welfare, etc., have been published. Special studies include Economic Wealth of Tamil Nad, Economic Wealth of Andhradesa, Economic Wealth of Malabar, Economic Wealth of Karnataka and Mineral Resources of Madras State, Foreign Capital and Enterprise for Backward Economy, Demographic Survey of India.

In the field of publication, the *Monthly Digest of Economics and Statistics*, the *Annual Abstract of Statistics*, the *Quinquennial Review of Statistics*, the *Decennial Statistical Atlas* are of a periodical character. Other publications are *National Income and Expenditure in India*, *Madras Finances, Wealth and Welfare, Food and Agriculture in Madras State, A Scheme of Crop Insurance*, etc. A 500-Crore Rupee Plan with an emphasis on Food and Agriculture was drawn up and published some time before the National Planning Commission was set up. In addition, an annual economic review setting out the salient features of economic conditions and progress achieved during the previous year was also attempted.

Selection Test in the S.S.L.C. Examination

The pupils of Secondary Schools in the State deserve congratulations for the excellent manner in which they behaved last Friday* against the inducement from outsiders to strike work as a protest against the re-introduction of the system of selections. Except for a handful of boys from a few schools who joined sets of outsiders and went round trying to get boys and girls out from schools behaving in disorderly ways, the overwhelming majority of pupils stuck to their work in a disciplined manner. This is due to a sense of orderliness and loyalty the pupils are developing and to the co-operation of the parents, the Education Department and the State Government in encouraging good education. (* December 5, 1952.)

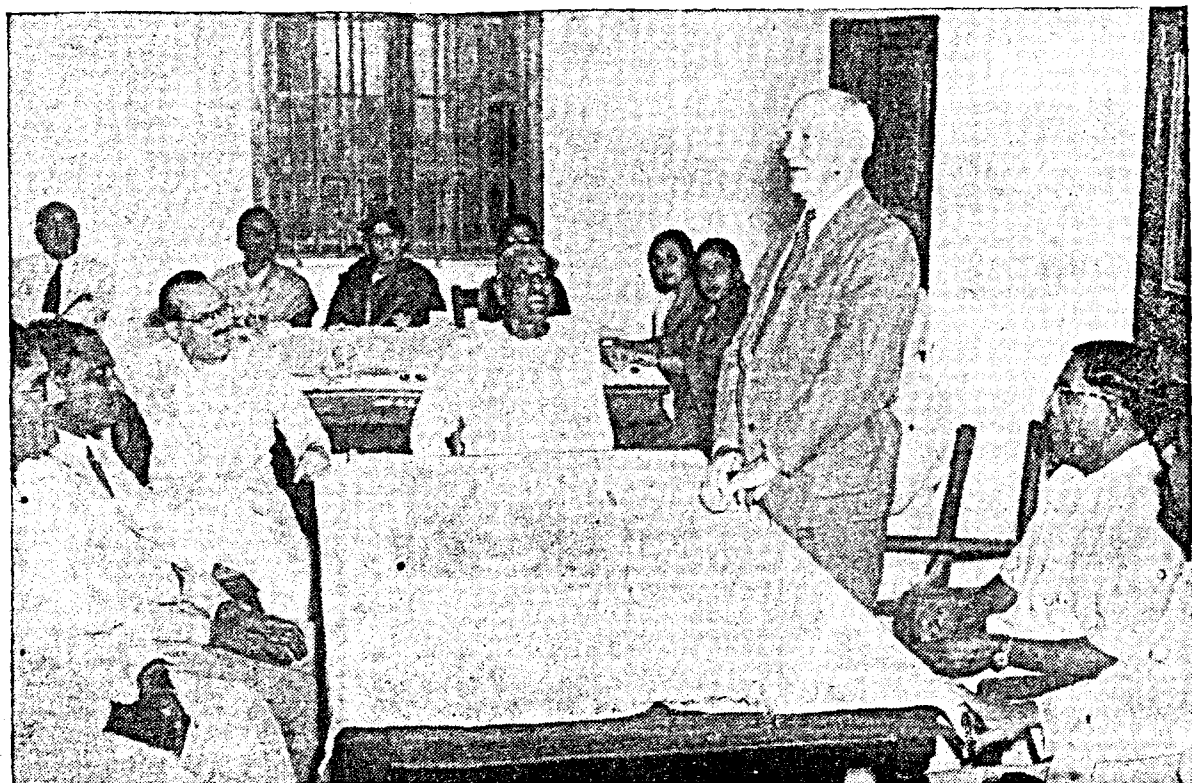
The failure of the strike should be a lesson to those misguided persons who tried to create trouble in schools. Schools are sacred institutions where the young citizens of the country are being trained. Parents entrust their children to the teachers and irresponsible outsiders should realise that they have no right to interfere with the children. Neither the teachers, nor the parents nor the children will tolerate such interference.

Fantastic explanations have been given by interested parties regarding the re-introduction of selection in the sixth form. It is important that the public should know why the State Advisory Board of Education, Secondary

Education Board, South India Teachers' Union and the Headmasters' Conference asked for the re-introduction. The reasons are—

(i) According to the present S.S.L.C. scheme, any pupil who is presented for the S.S.L.C. Examination is awarded a completed Secondary School-Leaving Certificate, whatever may be his marks in the S.S.L.C. Examination. If the Secondary School-Leaving Certificate is to be of any value, the pupils presented for the examination should reach a minimum standard of attainments in the sixth form. When there is no selection, any pupil who passes the fifth form, can get a completed certificate if he puts in 75 per cent attendance and sits for the public examination, even if he idles away the whole year without even sitting for a single class test in the sixth form.

(ii) All parents and teachers know that in the training of a child impetus as well as an element of restraint are necessary. The awareness that if a pupil does not do his work satisfactorily he cannot complete the S.S.L.C. is good; especially for those who dislike the re-introduction of selections. Improved methods of teaching try to stir the interest of pupils in their studies and to encourage their ambition for higher achievements, yet the element of restraint in the background, however small it might be, is essential for educational progress. During the last three



ADULT EDUCATION PROBLEMS: Dr. Frank C. Laubach, world famous adult literacy expert, recently discussed problems relating to the adult education campaign in Madras State. Among those who participated in the discussions were Sri J. L. P. Roche-Victoria, Sri Harisarvothama Rao and Sri K. M. Unnithan, I.C.S., Secretary, Education Department, Government of Madras.

NOTICE

The appointment of Sri K. S. Srinivasan, 60, Easwaran Koil Street, West Mambalam, as the sole advertising agent for *Madras Information*, *Chennai Cheilki*, *Rashtra Samacharamu*, *Madras Patrika* and *Madras Samachar*, is terminated with effect from 1st January 1953.

R. PARTHASARATHI,
Director of Information and Publicity.

Selection Tests in the Sixth Form

The Minister for Education met at a Conference in the Secretariat at 4 p.m. on December 2, 1952, representatives of the Headmasters' Association, Madras, the office-bearers of the South Indian Teachers' Union and the Madras Teachers' Guild. The Secretary to Government, Education Department, the Director of Public Instruction and the Deputy Commissioner for Government Examinations were also present.

The decision of the Government regarding the presentation of students for the S.S.L.C. Examination was discussed. The Minister for Education clarified that the supplemental oral tests referred to in the Government Order and the utilisation of the external teachers as examiners were not intended to be obligatory, but subject to the discretion of the headmasters. It was the wish of the Government that exclusive importance should not be attached to the written tests and in assessing the results thereof, the previous progress of the boy and the results of the periodic tests throughout the year should be taken into consideration and the written test itself could be supplemented by the headmaster with an oral test wherever he found it necessary. This applies to the annual examination in the IV and V Forms as well as the VI Form.

Further, it was expected that a not-too-strict standard should be laid down for the test held in the VI Form for the presentation of the candidates for the S.S.L.C. Examination, as well as for promotions from IV and V Forms, so as to provide an incentive and opportunity for the student to make up for any past lack of diligence and care. The intention is to disperse the intensity of a single test over the three years and to reduce to the minimum the hardships of a single written test by the measure suggested above. The move should be in the direction of shifting the emphasis from examinations to a deliberate effort to improve the standard of day-to-day work of teaching and learning in the school.

The Minister also pointed out that inasmuch as this change has been introduced just now, the headmasters may take full note of any hardship that may be caused. The Education Minister also clarified that the boys who are not sent up for the examination, have to complete their attendance till the end of the academic year and on the recommendation of the headmaster can appear for the October Examination.

years, schools have found the truth of this in the sixth form, where some pupils completely neglected their studies and by their indifference adversely influenced even others who wanted to study. It is only in the interests of the pupils and from a desire to see more and more pupils do their best in schools that the system of selection has been reintroduced.

The statement recently issued by the Minister for Education, on this question of selections, should dispel from the minds of parents and pupils any fear of hardship as a result of selections.

(a) Promotions and selections should be based on the general progress and possible improvement of the pupils as judged from class tests and terminal examinations and not on the results of any one examination.

(b) Different kinds of tests including oral tests may be adopted in order to make the assessment of progress as fair and reliable as possible.

(c) Teachers from other schools may be invited to assist in conducting tests for assessing the standards of attainments, if a school considers such an arrangement desirable.

(d) If the backwardness of pupils are corrected in the day-to-day work of the class, detentions in classes can be considerably reduced.

The schools can wholeheartedly agree with these suggestions. Pupils and parents can be assured that schools will always strive to do what is best in the interests of the children entrusted to them.

(Signed) S. Natarajan and
(") T. P. Srinivasavaradan
South India Teachers' Union.
(") P. Doraiannu Mudaliar and
(") L. Mariapragasam,
Madras Teachers' Guild.
(") K. Kuruvila Jacob and
(") K. Hanumantha Rao
Madras Headmasters' Conference.

Facts and Figures

1. In 1951-52, India exported Rs. 270.36 crores worth of jute yarn and manufactured jute as against Rs. 114.47 crores worth in 1950-51.

2. During the first six months of 1952-53, there were 18,400 cases of infringement of the Indian Land and Sea Customs Act involving goods valued at Rs. 1.08 crores.

3. India has 300,938 motor vehicles, comprising 145,290 cars, 26,677 motor cycles, 42,222 public service vehicles, 83,161 goods vehicles and the remainder vehicles of miscellaneous kinds.

4. The Indian paper industry consumes 400,000 tons of Indian timber per annum; the plywood industry comes next with an annual consumption of 150,000 tons.

5. At present, only 5.6 per cent of India's river water resources are used for irrigation. The irrigation schemes included in the Five-Year Plan, when completed, will increase this by an additional seven per cent.

6. Indian fisheries contribute about Rs. 10 crores a year to the national income.

Audio-Visual Education

By SRI K. RAGHAVA REDDY, B.A., B.SC., L.T., DIP. EDN. (Leeds), Special Officer for Audio-Visual Education

Audio-visual aids to education are as old as education. Our ancestors had discovered how to express themselves in signs and symbols before they developed speech or alphabet as a means of communicating ideas. The remarkable cave drawings of animals, the marvellous carvings in the ancient temples of Madurai, Tiruchendur, Bhadrachalam and Srirangam and the decorative glass windows of the Taj Mahal and Kutb Minar are all visual reproductions of the ideas and ideals which moved our forefathers. And these ancient monuments have, for long years, provided liberal education of a type unknown in other parts of the globe. Besides these, aural aids such as folk dramas and chanting of Vedas by our ancestors, have been useful in our country in the past, for conveying thoughts and ideas.

Coming to modern times, teachers have also for years recognised the value of visual aids in the scheme of education in our country, but these materials have been often of the simplest type, and their use has not always been systematic or planned. Again, these visual methods of communicating knowledge were not used as often as required in the institutions.

Importance of Pictures

It was only in the beginning of the present century that the importance of the pictures, maps, charts, models, etc., came to be fully realised in the scheme of instruction. Then gradually magic lantern and equipment like 16 m.m. projector came into use. Only due to the advances made in printing, photography, mechanical and optical devices have these aids taken on new and revolutionary phases in our schools.

Why should such importance be paid to these aids? The world of the child is a sensory motor world. The child is interested in things that he can see, hear and touch. Audio-visual aids supply an adequate background of sensory experience that is basic to all knowledge. As a result of the recognition of the value of these aids, we have today a greater variety of these in the schools than ever before and they are greatly enriching school life and contributing much to the progress of education.

Recognised Method

While it is true that the audio-visual aids have been in use for a long time, the expression 'Audio-Visual Aids' came to be used in relating to education, only recently. After World War II, the technique of audio-visual education has been vastly improved and is now a recognised method of instruction in the school or college curriculum. In the field of adult education also, this technique has established itself firmly.

It may be mentioned in this connection that the audio-visual aids now in use, include not only the older aids like pictures, maps and charts, but also the more modern aids like the projected picture still or movie and the radio.

Rapid Advance in Madras

Audio-visual education in the Madras State came to receive special attention in the last two years and a rapid

advance has been made in it. It was in 1947 that the State Government stepped in, for the first time, with a definite scheme of visual education. A special fee was allowed to be levied from the pupils in return for the special services in the field. However, so far as the work of imparting instruction was concerned, it was mainly entrusted to private cinema exhibitors owning projectors and electricity generators, specially licensed.

The films to be shown were those which had received the approval of the Director of Public Instruction. These arrangements were in existence till March 1951. The private exhibitor, however, did not concern himself in anything except the cinema shows. As this system did not work well and benefit the pupils, the Government revised the policy and took over upon themselves the entire responsibility in the field of audio-visual education in the State, in March 1951.

Features of the Revised Scheme

I shall now briefly outline the prominent features of the revised scheme of audio-visual education for the State. In view of the vast strides taken in the field, in all the progressive countries of the world, it was considered that so far as the modern equipment is concerned each of our secondary schools should equip itself with a set of three instruments called 'minimum equipment' in the course of three years—a 16 m.m. projector, a 35 m.m. film strip project and a radio. The State is arranging the supply of these at special concessional rates to the schools. The equipment is bought primarily out of the savings in the Special Audio-Visual Education Fund of each school to which each pupil in Forms I to III contributes Re. 1 while each pupil in Forms IV to VI contributes Rs. 2 per year. In some cases the managements are also helping the institutions financially in purchasing these.

The supply of these useful but more expensive items of equipment received special attention inasmuch as the older type of equipment like maps, charts, etc., were already familiar and were also widely used in the classrooms according to the instructions. Special emphasis has been laid on the condition that the teacher should use these aids in the classroom, to supplement his lesson—these are to serve as 'tools' for him along with the older devices. The cinema projector with its silent films and the radio with its classroom programmes in regional languages are the two ideal aids to the teacher in the classroom.

Equipment and Programmes

At present out of the 1,400 and odd secondary schools in the State about 300 are equipped with 16 m.m. projectors, while 90 secondary schools are equipped with 35 m.m. film strips projectors. So far as radios are concerned there are about 500 institutions owning radios and they are in the different parts of the State. At present there are school programmes only in Tamil, Telugu and English. It is, however, expected that programmes in Malayalam and Kannada will also be broadcast shortly in our State by the All-India Radio. The suitability of the school programmes of the All-India Radio is also receiving special attention

and the representatives of the Education Department and educationists of this State are closely associated with the arrangement of the educational broadcasts of this State.

It is necessary to say a few words about our excellent Central Film Library in the Director of Public Instruction's Office, which is supplying the films and the film strips for the use of educational institutions. The hire charges are nominal and the system of hire has become very popular. Speaking with reference to the latest figures, as many as 95 films were sent for hire on a single day, while the average figure is 60 per day. The figures will increase as more and more projectors start working in the schools. The Central Film Library has now about 1,000 educational films and about 600 film strips. The library is being enlarged to meet the demands of the educational institutions. During last year about 8,000 film shows were given in schools with the films obtained already from the Central Film Library. It may be of interest to see that so far, ours is one of the best libraries of educational films in India.

Film Libraries for Schools

While on the subject of film libraries, I may also mention that the State have decided to encourage such of the schools as can afford to maintain them to start film libraries of their own, meeting the cost out of the collections in the Audio-Visual Education Fund. In course of time, it may be possible for some schools to maintain such libraries which may lend films to other schools in the area on such terms as are fixed by the Education Department.

The cinema projectors in the school are mostly operated by the class teachers. Periodical training courses are run by the Education Department for training teachers in the handling of audio-visual equipment. It need hardly be mentioned that the availability of audio-visual equipment cannot alone guarantee success of the scheme. In this connection, I must acknowledge with gratitude the fact that the teachers are taking to the new scheme enthusiastically and are heartily co-operating with the Education Department for giving its full benefit to their pupils.

Audio-Visual Aids for Adults

So far I have been speaking about the audio-visual aids in the secondary schools. I must also mention that the State has provided means of audio-visual education to adults also. There are two hundred films in the Central Film Library for Adult Education purposes, and these are constantly made use of in connection with the "Adult Education" programme of the State particularly in conjunction with the vans. There are five such vans in use by the Education Department. Each van is equipped with a 16 m.m. projector along with other equipment including a radio. The vans are located in different parts of the State and are constantly on the move. These have been put in charge of a Deputy Inspector of Schools. The vans have proved to be useful to the Adult Education Movement which is in charge of the Director of Public Instruction, particularly through the films.

I have now given a brief account of audio-visual education in the State. As I have already said, Madras State has made rapid advances during last year in the field and hundreds of teachers are now in possession of a potent means of imparting education and supplementing their classroom lessons effectively. The role of the teacher is a noble one and we have now provided the teacher with adequate modern teaching aids. We can

confidently say that we have taken a definite step forward in implementing our plan of progressive education.

—A.I.R. Madras, (September 6, 1952).

Licensing of Trade in Foodgrains

According to the Central Government's Foodgrains (Licensing and Procurement) Order, 1952, republished with subsequent amendments in the *Fort St. George Gazette*, all persons doing business at present in foodgrains [viz., wheat, paddy (rice in husk), rice (husked), jowar and bajra including edible products thereof] either in the open market or dealing on behalf of the Government; all persons desirous of starting foodgrains trade, should get themselves registered, obtain a licence under the Foodgrains (Licensing and Procurement) Order, 1952, and maintain accounts of the foodgrains purchased and sold and submit returns to the Commercial Tax Officer concerned. Any person who stores any foodgrains in quantities exceeding 15 maunds shall, unless the contrary is proved, be deemed to store the foodgrains for purposes of sale and to be carrying on foodgrains trade.

The Order is merely a registration of foodgrains dealers made in order to enable the Government to requisition stocks of foodgrains at fixed price when it is found that prices in a particular area have unreasonably risen. It also empowers the Government to require any banking company to furnish such information as may be specified in the Order relating to any financial assistance granted by it to any dealer whether by way of loan or otherwise. It will thus be seen that the measure is aimed at preventing anti-social and unscrupulous activities.

All persons dealing in, or purchasing or holding stocks of foodgrains in excess of 15 maunds including those who already possess licences or exemption certificates under the rescinded Madras Foodgrains Control Order of 1947, should immediately apply to the Commercial Tax Officer concerned for a licence or exemption certificate under the Central Government's Foodgrains (Licensing and Procurement) Order, 1952, in the prescribed form.

A period of one month will be allowed to obtain licences under the new Order and, except for any one prevented by reasonable cause to apply in time, any person found dealing in foodgrains or storing foodgrains in excess of 15 maunds after the expiry of this period will be proceeded against.

Permits for Stage Carriages

The Government have directed that permits, other than temporary permits, issued under Section 62 of the Motor Vehicles Act, should, until further orders, be issued or renewed for a period of one year in Chingleput District only and for two years in the remaining districts of the State.

Price of Cement

The Government of Madras have made the following amendment to the Order relating to the sale of cement. The amendment will take effect from December 1, 1952, and will remain in force up to and inclusive of March 31, 1953. "The price of all Portland Cement produced in India shall not exceed Rs. 71 per ton exclusive of the cost of containers, if any, or Rs. 71 per ton plus the actual cost of packing subject to a maximum of Rs. 14-11-0 in full wagon loads f.o.r. destination."

South Arcot Lignite

By DR. C. V. S. RATNAM, Member, Experts Committee, Lignite Investigation

Part VI Gasification of Lignite and the Utilisation of the Resulting Gases

The lignite obtainable in South Arcot District in the Madras State can be regarded as an excellent fuel for all the purposes for which coal and charcoal are now used and as a good chemical material from which products varying from hydrogen to petrol, lubricants and fertilisers can be made. Gasification of lignite is one way of making lignite useful as a chemical raw material and as a clean burning fuel.

Gases made from coal find great application in the everyday life of the people in the more advanced countries of the West. These gases are used for household heating and cooking purposes. They are also used in industry both for heating purposes and as a raw material for making various types of liquid fuels and chemicals.

Lignite is an ideal material for gasification. Being more reactive than other types of coal and being non-cooking, lignite was found to be very suitable for complete gasification, processes which completely convert the lignite into various gases.

Varied Uses of Gases

The gases which can be obtained from lignite have varied uses. They can be used as an ideal household fuel for cooking and heating, as a source of hydrogen for vegetable oil and fertiliser industries, as a raw material for synthetic liquid fuels like petrol, and as a raw material for making alcohol, acids and waxes and many other chemicals and plastics.

The abundance of brown coal deposits and lack of oil made the gasification of lignite a very important industry in Germany. The Germans developed good many processes for the complete gasification of lignite for the synthetic liquid fuel industry. Among them are the Winkler process, the Lurgi process and the Wintershall-Schmalfeldt process. The Winkler and Lurgi processes attracted great attention in the U.S.A. because they had a special economic value as applied to American conditions.

Research on Gasification

The above three German processes are developed to gasify the brown coals in Germany and they can be adopted for use elsewhere where non-cooking coals like lignite are available. Large amount of research is now being done in the U.S.A. to evolve an efficient and economic way of gasifying lignite. The U.S. Bureau of Mines, in association with the University of North Dakota, is now investigating lignite gasification. A pilot plant ("Parry Report") with a capacity of a million cubic feet of gas per day was built at Grand Forks, North Dakota, and extensive investigation is being done on lignite gasification. When gasification of South Arcot lignite is decided upon, these investigations will be of real value to us to arrive at a suitable method of gasification, as our lignite is very similar to lignite obtained in those countries.

Coal gas with a heating value of 450 to 500 B.T.U. per cubic foot is commonly used in the more industrially advanced countries for domestic heating and cooking

purposes. The advantage of the utilisation of gas for domestic purposes is obvious. Gas is a clean burning fuel which leaves no residue or ashes after combustion. The flame and the temperature can be regulated at will by controlling a simple valve. The housewife is not worried about smoke, storage problems and availability. Gas range can be used for simultaneously cooking a number of dishes. Gas proved to be economical. To make gas range a general feature of most kitchens in South India, the standard of living must be considerably raised and a development of this nature must await the rise in living standards. The Lurgi gasification process is suitable to make high B.T.U. gas from lignite.

Hydrogen from Lignite

Complete gasification of lignite with steam and oxygen gives a mixture of carbon monoxide and hydrogen with lesser quantities of other gases. The carbon monoxide may be made to undergo the water gas shift reaction with steam to give hydrogen and carbon dioxide. After clearing away the carbon dioxides and other gases, pure hydrogen can be obtained.

Hydrogen is used in the vegetable oil industry, fertiliser industry where ammonia is made with hydrogen and nitrogen, in the synthetic liquid fuel industry and in making a large number of chemicals.

Synthetic Gas Industry

Complete gasification of lignite preferably with steam and oxygen gives a gas rich in carbon monoxide and hydrogen. Innumerable materials can be manufactured by the judicious combination of these two gases under varying conditions of temperature pressure and catalysts.

Processes are well established for the manufacture of petrol, lubricants and waxes, methyl alcohol, various other alcohols and a good many other chemicals from synthetic gas which contains one part by volume of carbon monoxide and two parts by volume of hydrogen. These processes and the processes for making synthetic gas from lignite are under constant investigation to improve their efficiency and evolve cheaper methods.

Great Possibilities

The gasification of South Arcot lignite and the utilisation of these gases hold great possibilities of development of South Indian economy. Although some of these developments, for example, the manufacture of gas for domestic purposes, are too early to contemplate, others such as fertilisers hold good promise.

The South Arcot lignite deposits, the only significant deposits of these kind in India and the only coal deposits of any importance in South India (2,000 million tons in an area of 100 square miles), will attain a dominant position in our economy, once it is established that they can be mined economically.

Two committees of the Government of Madras are now working on the project and they hope to successfully complete their task.

(Concluded)

The Indian Mica Industry

Several serious problems confronting the Indian Mica Industry came up for discussion at the meeting of the Mica Advisory Committee of the Ministry of Natural Resources and Scientific Research, Government of India, held in Calcutta in September 1952.

India has received a unique bounty from Nature in mica, for she produces 80 per cent of the world supply of this mineral. Within the country, 80 per cent of the supply comes from Bihar State, where the principal mining centres are the Hazaribagh, Gaya and Monghyr Districts. Other mica centres are Rajasthan and the Nellore District of Madras.

What gives importance to mica is the fact that it is the only mineral in Nature which combines many important properties: transparency; breakability into thin films even up to one-tenth of an inch; flexibility; elasticity; resistance to heat and electricity. By virtue of these properties, this multipurpose mineral has over 30 different uses.

Some Uses of Mica

The electrical industry finds the largest use for mica. The use in the automobile industry is also considerable: with one's naked eye one may not be able to see it, but mica is there all right, in ignition coils, in voltage regulators, in generators and in starter motors. Even in the horn of your car mica plays a part.

High power motors, used in aeroplanes, have been made possible by spark plugs in which mica is the insulating medium. The highest quality mica is used in television as a filter. It is also used in radio sets and various electronic devices to be found in broadcasting and transmitting stations. Roughly, eight pounds of mica are needed for every kilowatt of power used in a radio station. Its transparency and resistance to heat make mica an excellent medium for peep-holes of furnaces, and for windows of stoves, gas lamp chimneys and lamp-shades.

Some of the other uses of mica may be listed. It is used in water heaters, coffee percolators, toasters, flat irons, neonlights, etc., in gas masks, goggles, stereopticons, instrument covers and other articles where transparency is necessary; in special compasses, mica is used for the indicator. Ground mica is used for surfacing paint on asphalt shingles, Christmas tree snow, the manufacture of axle greases and oil, annealing, concrete and foundry facing, pipe enamel, filler in plastics and rubber, decorative wall papers, special paints, pipe and boiler lagging. Cloth, paper and tape, impregnated and covered with ground mica, have been used for insulating purposes. If mica is an important substance in peace, it is also a vital commodity in times of war. Tanks and trucks use mica. Fighter planes, tools, need mica. And, of course, in radar mica plays its important role.

Not only in the matter of quantity but also in the matter of quality India enjoys a pre-eminence. The deposits in the Indian Peninsula are considered to be finest in the world because of their large size and perfection of the crystal plates. Their high quality is also due to their immunity from disturbances such as crumpling, shearing, etc. From the Nellore mines, in Madras, have occasionally come crystals more than three yards in diameter, from

which valuable transparent and thin sheets are cloven off. The United States of America takes the major portion of India's output. Great Britain is another large importer. Other customers of Indian mica in the past have been Japan, Canada, Australia, New Zealand, Sweden, France, Italy, the Netherlands, Belgium, Switzerland, Egypt, Iraq and China.

Problems Confronting the Mica Industry

The dependence on foreign markets and the absolute lack of internal demand have always been there, in the Indian mica industry, as perilous factors concealed by the surface prosperity. Industrially advanced countries are continuously engaged in their search for a substitute, prompted by several reasons. They would like to utilise local materials and secure economies; obviate difficulties arising in the import of goods from abroad; explore the possibilities of developing superior qualities and guarantee self-sufficiency in the case of essential goods. The United States produces large quantities of scrap mica. As it stands, this mica is unsuitable for replacing mica of Indian origin and it is being utilised for making fine powders for use as paint pigments, plastics, fillers, etc. But it is understood that several large industrial interests in the country are actively engaged in the research for producing integrated mica.

Over 25 years ago a similar threat from foreign substitutes to Indian shellac exports led the Government to create the Indian Lac Cess Committee, whose researches enabled Indian shellac to hold its own in the world market. In the case of mica, a suggestion has been made that there should be some form of control over export of processed mica on the basis of agreed international standards and an intense research and development activity. For the control of distribution of mica, the creation of a Mica Marketing Board had been suggested. During discussions held between the Ministries of Natural Resources and Scientific Research, Production, Commerce and Industry, Finance and the Planning Commission in July 1952, it was felt that such a Board would be opposed by industry and would not make for goodwill with foreign buyers who might react unfavourably to Governmental interference in such matters. Besides, the bulk of the mica exported was the production of a few firms who were well able to look after themselves as they had representatives and organisations abroad to safeguard their interests.

Protection to Small Producers

It was felt that it was the small producer who required protection, which could be best afforded by State Governments helping the small producers to work on a co-operative basis. The Ministry of Natural Resources and Scientific Research has advised the Government of Bihar to consider helping the small producers to work on a co-operative basis. Most of the mica mines in Bihar are situated in a block extending over a region of about 90 square miles which constitutes a fairly compact area. It has been suggested that co-operative organisation here, therefore, will not be difficult and the small producers will be able to derive the benefits of technical personnel for expert advice, elimination of middlemen and the acquisition of machinery which, as it stands, it is impossible for them

Electricity : Review for September 1952

Machkund Hydro-Electric Scheme.—Land Acquisition proceedings were continued. The Lamptaput Surge Tank has been completed and was being maintained in good condition. The road from Seguru to Jalaput was formed and metalling was done for a length of 6 miles and 4½ furlongs. The deck slab has been laid on; work on forming approaches was nearing completion for the bridge at 6/0. Concreting road surface was over and approaches were being formed for road dam at 3. Materials were being collected for the road dams. In diversion dam 49.79 per cent of execution and 42.92 per cent of masonry have been completed; 66.2 per cent of flume channel work has been completed. In tunnel pond dam excavation for foundations was completed; 21.31 per cent of masonry was over and 14.51 per cent bucket and apron concreting were also completed. Concreting of final invert of pressure tunnel was finished except for a length of 266 feet from the entrance. No work was done in surge shaft due to rains. In pipe tunnel, concreting side walls and arch 60 feet had been done. On the flume tunnel, concreting the side walls and arch had been completed on 2nd September 1952. Fifty per cent of concreting of the final invert of left half has been completed as also about 19 per cent of concreting of the final invert right half. Grading of penstock slopes was progressing and outturn in earth was 90.9 per cent and rack 97.3 per cent levelling powerhouse site was almost completed. Foundation excavation for powerhouse tail race excavation, levelling site for permanent workshop, and transformer yard were progressing. Excavation of foundations for main dam at Jalaput was continued and 1,394 units of earthwork have been done so far. Total labour during the month was 4,273.

Moyar Hydro-Electric Scheme.—All the civil works from headworks to powerhouse have been completed except for the drain wall along the slope. Erection of third unit and the balance of work in switchgear erection were progressing. The second unit was put on commercial load after the necessary tests but till the connected power transformer is

ready, which is expected to be before the end of October, this will not add materially to the generating capacity.

Pykara Plant Extensions III Stage.—Construction of masonry for wing wall and dam main structure and concreting R.C.C. core wall were continued. Work on earth bund on the right flank was progressing. Erection of scour and power pipe in the left flank was completed. Penstock line has been completed.

Erection of steel structure for the singers powerhouse will be taken up shortly. Concreting the terminal anchor No. 6 and foundation for machine No. 7 were in progress.

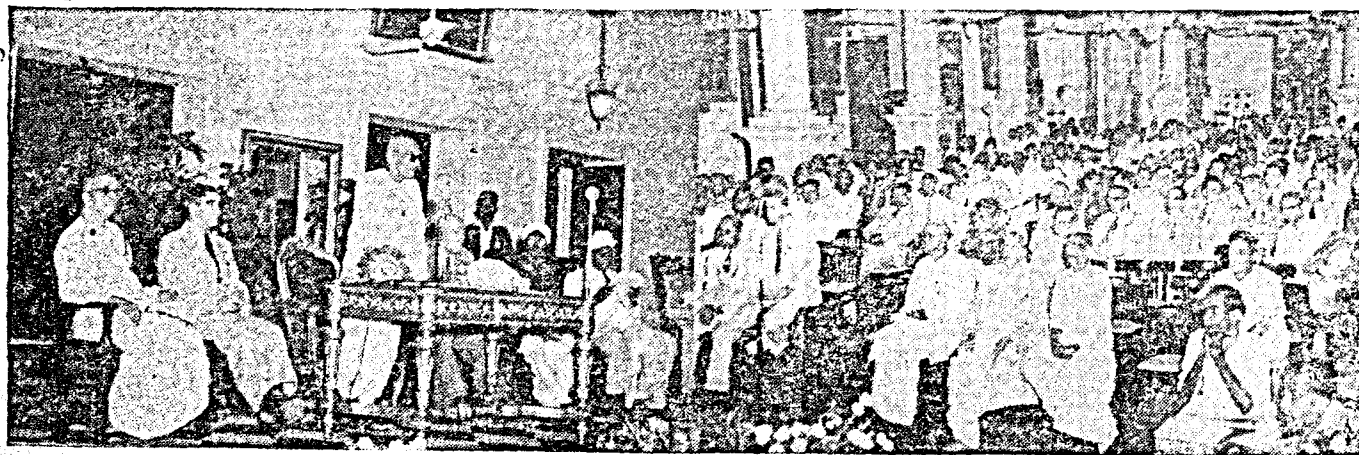
Madurai Thermal Scheme.—Work on foundation block for 10,000 K.W. set has been completed; work on the construction of additional cooling pond was almost completed. Construction of turbine platform has been taken up. Works relating to the erection of the turbine condenser, oil circuit breakers, etc., have been taken up. Contract for the construction of foundation of boilers has been awarded. Turbine materials and boiler parts continued to be received and they were verified and stacked.

South Kanara Scheme.—Tree valuation for 110 KV line has been completed to a total length of 66 miles. Plotting in Hiriadka-Coondapur reach has been completed to a total length of 11 miles.

Tungabhadra Hydro-Electric Scheme.—(a) Trial pits were deepened in the forebay, lower pressure pipeline and surplus channel and tests for permeability were progressing. Land acquisition proposals were under scrutiny.

(b) **Transmission Lines.**—Realignment in the Guntakal-Gooty and Gooty-Anantapur Sub-station has been completed, as also for the existing diesel station at Nandyal. Acquisition proposals for Kodur were under scrutiny.

Vijayawada and Visakhapatnam Powerhouse Extensions : Vijayawada.—Work on a second raw water well was continued. Work connected with control room and repair house were progressing. R.C.C. structures' work was in good progress; work on cooling pond No. 1 was being taken up.



STEAM USERS MEET: The Third Annual Conference of the Madras Provincial Steam Users' Association was recently held in Rajaji Hall, Madras City. Chief Minister Sri C. Rajagopalachari inaugurated the Conference.

Visakhapatnam.—Fabrication of steel work and foundation work were progressing for the west side extensions. Foundation for VI boiler was taken up and site for the boiler foundation was handed over to the contractors.

Nellore Thermal Scheme.—Work on staff quarters at Gudur Sub-station was continued. Sub-station structures at Nellore and Gudur were completed and operated at 11 KV.

Madras Plant Extensions.—All structural steel work has been erected except the special egg-crate flooring for the boiler room; major portion of the work on main power station superstructure was over. Plastering of walls in Power Station was continued. New Boiler No. 4 is in operation and work on boilers 2 and 3 was in various stages of progress; work on No. 1 coal conveyor and waggon tripper was progressing. Turbo-set flooring was almost completed. Erection of 750 MVA Switchgear and 5 KV neutral earthing gear was in progress.

Operation Branch

Hydro Areas.—The rainfall in all the basins of the Hydro system during the month was below normal due to the weak South-West Monsoon. The storage at Papanasam and the gross head at Mettur Dam fell appreciably due to heavy irrigation discharges in both systems. In view of the above it was considered impossible to meet the demand until time the North-East Monsoon sets in. Hence restrictions, i.e., grouping of power loads, and supplying them in turns, staggering of recess hours of mills, and peak hour restrictions were imposed from 22nd September 1952. In addition to the above, a cut of 25 per cent in consumption was imposed on all but essential loads from 29th September 1952 in all hydro-electric areas.

The number of units generated, peak load and the services connected up during the month in the Hydro systems were as follows :—

Name of System.	System peak load in K.W.	Generation in millions of units.	Services connected.		
			Agricultural.	Industrial.	Domestic.
Pykara	44,300	21.34† 8.535*	86	14	293
Mettur	44,200	17.2	56	4	109
Papanasam	21,800	5.92† 1.879†	51	8	265

* 8.535 million units were generated at Moyar Powerhouse, the peak load being 14,200 KW.

† 1.879 million units were generated at Madurai Thermal Station with a peak load of 3,600 KW.

Thermal Areas and Ceded Districts.—On 3rd September 1952 one of the two bigger turbo-generators at Basin Bridge Power Station, viz., Unit No. VI of 12,500 capacity, broke down owing to an apparent internal fault in the stator and consequent flash over. The system was in parallel with the Mettur System at the time. This failure has crippled the plant capacity of the station and has left it without adequate standby, but the power needs of the city are being met without any additional restrictions by taking relief from Mettur during peak load hours.

The peak load, generation and the number of services connected up during the month in the several areas were as follows :—

Name of System.	Peak load in K.W.	Generation in millions of units.	Services connected.		
			Agricultural.	Industrial.	Domestic.
1 Madras	29,600	11,263	12	29	174
2 Vijayawada—					
Steam	8,400	8.73	35	2	74
Diesel	330	0.001			
3 Visakhapatnam—					
Steam	3,840	1.504			15
Diesel	1,060	0.057			
4 Kakinada	800	0.061		1	45
5 Rajahmundry.	660	0.045	4	1	66
6 Srikakulam	120	0.019			36
7 Ongole	104	0.022			
8 Narasannapeta.	21	0.003			4
9 Nellore	1,075	0.365		6	21
10 Proddatur	118	0.029			9
11 Anantapur	215	0.051			16
12 Kurnool	310	0.095	1	5	23
13 Cuddapah	225	0.070		2	25
14 Nandyal	140	0.024			
15 Tadpatri	67	0.012			4
16 Power purchased from Hindupur.	250	0.059			
Ceded Districts	3,120	1.19	5	10	18

In Visakhapatnam Division, electricity was made available to Kottapalam and Kumaram villages. In Vijayawada division supply was extended to the Agricultural College, Bapatla. In Rajahmundry Division, 2 Nos. 224 KW sets have been installed at the Kakinada Powerhouse and they were brought into commercial service in the first week of October 1952.

In the Madras Electricity System, 67 D.C. services with an approximate connected load of 72.14 KW were changed over to A.C. supply on a voluntary basis, during the month.

During the month 24 extensions were sanctioned by Chief Operation Engineers and Chief Engineer for Electricity at an estimated total cost of Rs. 6,21,000.

Telephone Exchange at Alagappanagar

An automatic telephone exchange connected to the Trunk system of the country via Trichur was opened at Alagappanagar on November 4, 1952, by Dr. R. M. Alagappa Chettiar.

Public Telephone

A Telephone Public Call Office has been installed at the Poonamallee High Road in front of the Traffic Office; it is working from October 25, 1952.

Telephone Exchange at Pakala

An Automatic Telephone Exchange connected to the Trunk System of the country via Chittoor was opened at Pakala on November 7, 1952.

to purchase on their own. It may also be possible for the society to obtain short-term finance from the State Co-operative Bank.

These suggestions as well as certain difficulties experienced by the trade due to the increase in the shipping freight rate on mica and the alleged irregularities on the part of some foreign purchasers came up for discussion recently. In the meantime, suggestions have been made

Can Indian Wood Replace Steel?

Can wood replace steel in India for structural purposes? Theoretically the answer is yes, because weight for weight timber is as strong as steel. In addition, as compared to steel, it has a low thermal expansion and conductivity, low density, high resistance to electrical conduction, chemical and electrical corrosion, high sound absorption and high brittleness. Experiments show that the railway track on wooden sleepers as against on metal ones not only gives greater riding comfort to passengers but also prolongs the life of the rolling stock. That explains why U.S.A., one of the world's largest producers and consumers of steel, is also the largest producer and consumer of timber. What is the position in India?

The annual outturn of timber in India is about two million tons. This includes only 10 per cent of soft wood like the pines, deodar, fir and spruce, obtainable from Kashmir, Himachal Pradesh, Punjab, West Bengal and Assam. Supplies of naturally durable timber are limited in India. Therefore teak is imported to the extent of 40,682 tons per annum valued at Rs. 2.7 crores.

All species of timber contain what is known as sapwood and heartwood, the outer and inner portions of a tree respectively. Experiments conducted at the Forest Research Institute, Dehra Dun, show that while the heartwood of only a few species is by nature durable, it is not so with the majority of the species. This is why only naturally durable species are selected for railway sleepers. Such sleepers of sal, teak and rosewood have a normal life of 15 to 20 years. Sleepers made from non-durable timbers such as chir and haldu last for only two to five years. The same is the case with electric poles made from non-durable sapwood.

Artificial Treatment—the Remedy

The remedy therefore lies in the artificial treatment of timber with suitable chemicals. In some of the advanced countries of the world, timber preservation started along with the development of railways, electric power, telephone and telegraphic communications. U.S.A. has about 300 wood preservation plants. Statistics show that by chemical treatment the life of treated timber, especially of the non-durable class, is prolonged four or five times as compared to untreated timber. The U.S.A. railway sleepers have an average life of 20 to 25 years. In India, the experience is the same for treated sleepers. Service tests are also being conducted at the Forest Research Institute, Dehra Dun, on the behaviour of treated bamboos and thatched grasses for building purposes.

There are about a dozen commercial treating plants in India. Of this about six plants are treating railway sleepers, marine poles and other constructional timbers

for intensive research towards finding new uses for mica and the initiation of development programmes aimed at starting indigenous industries requiring mica as a raw material. Such products include micanite of a number of varieties, cut and punched mica parts for uses in electronic tubes, radio and telephone apparatus, finished electrical condensers, electrical insulation of a large variety and a number of types, etc.

with creosote fuel-oil mixture. The other six treat timber with ascu, a preservative developed at the Forest Research Institute, Dehra Dun, about 20 years ago.

Of the various preservatives known, two—creosote of oil type and ascu of the water soluble type—have been used on an extensive scale under Indian conditions and have given satisfactory results. The production of coal-tar creosote in India is about 3,600 tons a year. Ascu can be made in India if supplies of arsenic pentoxide are obtained from Scandinavia. Arsenical ores have recently been discovered in Kashmir; this opens up possibilities of manufacturing arsenic pentoxide in India as well. With the opening of the silver refinery at Calcutta about 300 tons of waste chemicals like copper, zinc and nickel sulphate may also be available for use in wood preservation.

Methods of Treatment

There are several methods of treating timber both in the fresh and dry states. The latest development in this connexion is the treatment of freshly felled trees and bamboos with water soluble preservatives under 10 lb. to 20 lb. pressure. It is possible that this method may lead to wood preservation becoming a cottage industry.

Several preservations of the oil water soluble and organic solvent types have been treated at the Forest Research Institute, and found to be effective. For treating timber for use in outside locations like sleepers and marine poles, creosote is generally recommended. For timber use in inside locations, water soluble preservatives are suggested. Since treated timber lasts four to five times longer in inside locations the more extensive use of such timber will help the country in conserving its limited timber non-durable heartwood which at present go to waste.

The Planning Commission in its chapter on Forests has given considerable prominence to wood seasoning and preservation, and has stressed the importance of establishing wood seasoning and preservation plants in the country. The Uttar Pradesh Government has already included in its five-year plan the establishment of wood preservation plants at every important timber depot in the State.

Gift of Maternity Ward

The Government have accepted with thanks the offer of the Madras Provincial Welfare Fund, Tirunelveli District Branch, to construct a maternity ward of eight beds and a semi-permanent shed of eight beds at a cost of Rs. 15,000 and Rs. 10,000, respectively, in the Government Women and Children Hospital, Vannarpet, and hand them over to Government for maintenance.

Labour Outlook in Nationalised Transport

By SRI O. MOHANASUNDARAM, Labour Welfare Officer, Government Transport, Madras.

With the dawn of Freedom, a Welfare State will have to be born out of the shackles of the Police State that India had been. The change-over is not easy and the transition is proving rather ticklish. Further, freedom had come all in a flood and has swept us off our feet. Old habits die hard and we are yet to believe in the freedom, steeped as we are in the vestiges of power, prestige and pride on one hand, and utter poverty, ignorance, and low ebb of life on the other. Gandhiji has, in a way, prepared the country for freedom through emphasis on the socio-economic programmes and village rehabilitation. It is yet to be realised that the duties and responsibilities are much more in a free country; and only when these are adequately understood, implemented and translated into action through hard and unostentatious labour, it is possible to derive our due rights and privileges.

In an ideal Welfare State, all functions of the Government including the function of the Police will have to be harnessed to the service of the common citizen. The spirit of service will then become the life breath of its administration. Leaders of labour who had mostly participated in the struggle for freedom, actively or passively, can now render assistance in the socio-economic consolidation of the nation. The implication of freedom is that we should preserve it, conserve it, consolidate it and make each one understand his duties and responsibilities of being a citizen of Free India. It becomes a fundamental duty to educate the masses, to build the infant of Free India into a sturdy youth of a Welfare State.

Profit versus Service

Nationalised Industry had been the dream of the progressive elements even in countries that had been free for ages past. The idea and ideal of nationalisation is the shifting of emphasis from profit to service. The private operators derive their inspiration from the profit-motive. Hence, what is done to the public who may be incidentally served, or, to the personnel that serve the industry, is invariably determined by the competitive nature of the industry, or, by the statutory obligations of the day. A few progressive employers may play the role of trustees of the public and the workers as well. That exactly is the ideal of Neo-Industrialism based on service, that is yet to be born. But this ideal is and should be the guiding star for a Nationalised Industry,—service to the people, first and last. The progressive State of Madras that had launched the first Nationalised Transport certainly deserves support and wholehearted co-operation from one and all.

With great hope and fervour, the Labour Government in England embarked on nationalisation of some industries. They took up the public utility services, one by one. The Bus/Passenger Transport attracted almost their first attention. It is the service in which the public of all strata of society can be served every moment in comfort, courtesy and convenience, irrespective of the cost involved to the State. To be stable and successful, of course, the State Transport has to be built up on a self-supporting basis. It certainly cannot be a losing concern or a liability to

the State Exchequer. But there is no capitalism, real or disguised, in a Nationalised Industry, to exploit men for profit and more profit.

Role of Labour

No doubt, there are problems where large number of people are brought together under an industrial set-up. But let it be realised that all are participating in a national venture, either as members of the management or as technical, traffic or office staff, attending to their respective allotted duties and responsibilities. Justification may or may not be, for aggressive labour union activities generating hatred or bitterness against owners of private industries. But such attitude of mind is out of place in a nationalised industry. In a Welfare State even the private industries will have to look after the labour interests. For that purpose alone all progressive labour legislations are brought into effect by our National Government. The State plays the role of protector of the workers, thus wiping out prospects of bitterness and hatred.

Therefore, the leaders that guide the workers of the State Transport from within and outside, should make the workers proud of the fact that they have the opportunity and good fortune to serve in the first nationalised industry of the State; that the failure or the success of this public service will determine the future of public ownership or State ownership of industries, of basic and key industries. State Transport workers should be made proud of the fact that they are engaged in State service in Free India; that they are earning for the State, and that they are serving the State people through their service.

People and Personnel

In a pioneering Welfare State like India, the great socio-economic projects like Prohibition and rural rehabilitation have been launched by the Government, in spite of the loss of revenue and at considerable national sacrifice. These great movements for the amelioration of the masses will transform our countryside from one of want into a land of plenty, with the blessing of God and Mother Nature. Even if the nationalised transport brings in a fair margin of profit to be pooled into the general revenue, we will be only doing our duty to the State through our contribution. We can rest assured that it will be used in full for more and more welfare services of the State for the betterment of the country and the people.

Further, in the nationalised industry the welfare of the workers that serve the concern becomes almost the first charge on the revenue, next only to the comfort of the travelling public. Therefore, all welfare services rendered for the betterment of the workers, whether sponsored by the State or through their unions, are complimentary to each other but not competitive. There is no place for any suspicion or misgiving, or, any unhealthy rivalry, for the common aim is to serve the workers.

Safeguarding of Finances

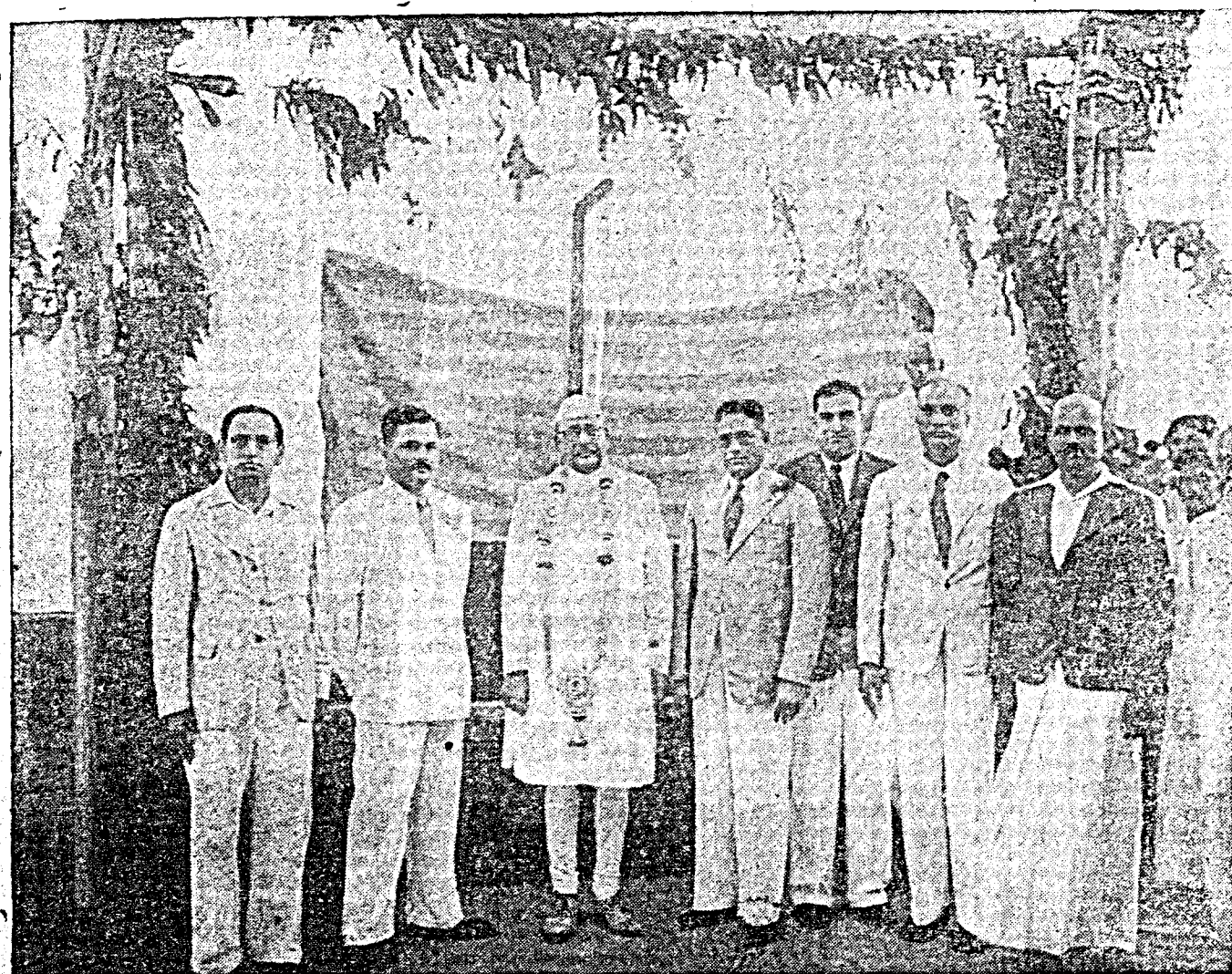
To safeguard the finances of the State Transport, therefore, becomes the primary duty of all those who have

come to serve it, in whatever sphere their lot may be cast. No frittering away through extravagance or pilfering of the revenues by individuals or cliques can be tolerated. Any misdemeanour on the part of a public servant expressed in rudeness to the travelling public cannot be looked on with complacency. Necessarily, the dignity in bearing and discipline in service will have to be maintained at a high level, and built up slowly and steadily. While justice will have to be meted out to one and all, strictness in the way of enforcing discipline should not be misconstrued as undue harshness. Sympathy misplaced will act as a stimulant for more misdemeanour. Punishment awarded in time may act as a preventive medicine or a deterrent. Anyway, in a nationalised industry that has come to stay, the emphasis has naturally to shift to encouragement for good work.

The Efficiency Bonus schemes are pointers in this direction. With their future well assured, it is for the leaders of labour to impress on the workers that they have a

big stake in serving well the State Transport. Everything is and will be increasingly done for the well-being of the workers, but not at the cost of efficiency or discipline. The public are the partners in this State enterprise. If their co-operation is also forthcoming in full measure through elimination of ticketless travel, over-riding or connivance with the defaulting traffic crew, it will go a long way to cure the ills of the Transport Department.

State Transport as a nationalised industry is a new experience, just as the freedom that had come all in a flood through the bloodless revolution. It should be our fervent hope and prayer that all should rise in full stature to answer the call of freedom and the new nationalised industry, in the shape of hard, honest, industrious labour in their respective spheres of service. We should see the vision of a new class of workers rising, happy, healthy and buoyant, serving well, without fear or favour, with the present and future well assured.



T.B. SANATORIUM: Shri Sri Prakasa, Governor of Madras, recently laid the foundation stone of the South Arcot District Tuberculosis Sanatorium at Cuddalore. Photo shows (from left to right): Sri C. Narayanaswami, Executive Engineer, Sri K. P. K. Menon, Collector of South Arcot, the Governor, Dr. V. Krishnamurthy, Honorary Secretary of the South Arcot District Tuberculosis Association, Sri Narayanaswami Aiyer, Supervisor in charge of the building, and Sri V. Batcha Reddiar, contractor in charge of the building.

Second Phase of State Insurance Scheme

The Employees' State Insurance Scheme, the first of its kind in South-East Asia, was inaugurated at Kanpur by the Prime Minister on February 24, 1952. It is designed to cover about 2½ million employees, not earning more than Rs. 400 in a month in the aggregate and working in perennial factories using power and employing 20 or more persons. In its initial stages, at present, it is benefiting about a lakh of employees in about 200 factories in Kanpur and about 55,000 employees in the factories of Delhi.

The Scheme provides five types of benefits: (i) *Medical Care*—Including general practitioner's care, free drugs and medicines, hospitalisation, pre-natal and post-natal treatment, etc.; (ii) *Sickness Benefit*—Periodical cash payment to an insured person in case of certified sickness; (iii) *Maternity Benefit*—Periodical cash payment to an insured woman in case of confinement; (iv) *Disablement Benefit*—Periodical cash payment to insured persons suffering from disablement as a result of employment injury; and (v) *Dependents' Benefit*—Periodical cash payment to the dependents of insured persons who die as a result of employment injury.

Three of these benefits—Medical Care, Disablement Benefit and Dependents' Benefit—became payable to insured persons right from the date of the implementation of the Scheme in Kanpur, i.e., the 24th February 1952. But for Sickness and Maternity Benefits, certain contributory conditions have been laid down under the Employees' State Insurance Act. The contributions paid by an insured person during a period of 26 consecutive weeks, which is called Contribution Period, will determine the eligibility of such persons to Sickness or Maternity Benefits during a subsequent period of 26 consecutive weeks. There will be a gap of 13 weeks between the close of a Contribution Period and the beginning of the corresponding Benefit Period, because this period would normally be required for the Corporation to prepare relevant records, to calculate rate of sickness benefit and to intimate the same to Local Offices. As such the first Benefit Period will commence nearly nine months after the implementation of the Scheme in Kanpur, i.e., from 23rd November 1952.

Sickness Benefit

Sickness Benefit will be available to insured persons from that date during period of certified sickness which implies a condition requiring medical treatment and attendance and necessitating abstention from work on medical grounds.

The rate of benefit will ordinarily be half of the average daily wage; but as benefit is payable for all the days of the week including Sundays and holidays, it would be roughly 7/12th of the average weekly wage.

An insured person will be able to claim Sickness Benefit for a maximum period of 56 days in continuous period of 365 days. However, they will not be paid any benefit for the first two days of sickness which is called 'Waiting Period' except in case of sickness which follows another spell of sickness at an interval of not more than 15 days. In that case benefit is payable from the first day of such spell.

Maternity Benefit

Maternity Benefit is intended for women workers and is payable for a period of 12 weeks of which not more than six weeks shall precede the expected date of confinement at the rate of 12 annas per day, or at the rate of Sickness Benefit, whichever is higher. Since the minimum rate of Maternity Benefit is 12 annas per day, the proportion of benefit to the average weekly wage may be higher than this in the case of a woman worker, whose average daily wage is below Rs. 1-8-0. A recent survey conducted by the Regional Office of the Employees' State Insurance Corporation, Kanpur, regarding the average earning of the women workers in different industries, shows that even in these days there is an appreciable proportion of women workers earning fewer than Rs. 1-8-0 per day. As such there would be a considerable number of insured women employees who would be able to claim more than 7/12th of their daily wage in the shape of Maternity Benefit during periods of confinement from the 23rd November 1952.

Qualifying Conditions

As already pointed out, admissibility to Sickness and Maternity Benefits is subject to certain contributory conditions. In order to become eligible to certain Sickness Benefits, contributions for at least 2/3rd of the number of weeks during which insured persons were deemed to have been available for employment during the contribution period, subject to a maximum of 12 contributions, should have been paid in respect of an insured employee.

An insured employee is deemed to be available for employment during every week of the contribution period except when (1) he is unable to work on account of sickness which is certified by an Insurance Medical Officer whether he can claim Sickness Benefit or not; (2) he is qualified to receive Temporary Disablement Benefit; and (3) she has been either entitled to receive Maternity Benefit or would have been so entitled if other necessary conditions had been fulfilled by her.

As regards Maternity Benefit the contributory condition laid down for Sickness Benefit should be fulfilled and besides that at least one contribution should have been paid between 35 and 40 weeks before the week in which confinement takes place or in which notice of pregnancy is given before confinement, whichever is more advantageous to the insured women.

Besides these contributory conditions, an insured person should not work for wages during any day in respect of which Sickness or Maternity Benefit is being claimed.

Procedure for Obtaining Benefit

An insured person in order to claim sickness or maternity benefit should (1) report to the Insurance Medical Officer of the Dispensary to which he or she is attached; (2) obtain a certificate of sickness or confinement or of expected date of confinement, from the Insurance Medical Officer, treating him or her; and (3) fill in the appropriate claim form and submit it together with the certificate obtained from the Insurance Medical Officer at the appropriate Local Office.

The Local Office, on receipt of a claim supported by relevant certificates, will make payment to an insured person in respect of such periods of certified sickness or confinement at the rate which the insured person is entitled to these benefits. It would ordinarily be payable in cash at the counter to the insured person or to his authorised agent. But arrangements should also be made for making payment of benefit by Money Order, if it is so desired by an insured person.

It will not be possible for an insured person to combine Sickness or Maternity Benefits with any other cash benefits, that is, an insured person cannot be paid (i) Sickness Benefit and Maternity Benefit; or (ii) Sickness Benefit and Temporary Disablement Benefit; or (iii) Maternity and Temporary Disablement Benefit for the same period.

Insured persons claiming Sickness and Maternity Benefits are required to observe certain conditions, namely: (1) the insured person should remain under medical treatment at a dispensary, hospital, clinic or other institution provided under the Act and should carry out the instructions given by the Insurance Medical Officer; (2) he should not, while under treatment, do anything which might retard or prejudice chances of recovery; (3) he should not leave the area in which medical treatment is being given, without the permission of the Insurance Medical Officer; and (4) he should allow himself to be examined by a duly appointed Medical Officer or the Sick Visitor or other person authorised by the Corporation in this behalf.

Insurance Court

All certificates under the Scheme are issued free of cost and provision has also been made to accept alternative evidence in genuine cases who either fall sick in their village or while sick go to the village with the permission

COIR CONFERENCE: The Conference of Coir Interests met in Trivandrum on November 14, 1952 under the Presidentship of P. Govinda Menon, Minister for Finance, Government of Travancore-Cochin. Thirty-two representatives from the trade and industry and also various Chambers of Commerce participated in the Conference. The Conference recommended setting up of a Coir Board to regulate and develop the industry on proper lines. Picture shows Sri P. Govinda Menon, reading his speech. On his right is Sri T. Swaminathan, Textile Commissioner, Government of India, and next to him is Sri V. N. Rajan, Chief Secretary to the Government of Travancore-Cochin.



of the Insurance Medical Officer, with a view to avoiding any hardship in such genuine cases.

An Employees' Insurance Court has been set up at Kanpur and when an insured person is not satisfied with the decision of the Corporation, he can take the matter to this Court.

The Scheme is a three-party venture and its successful working is the responsibility of the employers, employees and Government, who are represented in the Employees' State Insurance Corporation and other committees set up under the Act for the administration of the Scheme. Regional Boards on the same lines have also been set up for Kanpur and Delhi.

The Employees' State Insurance Scheme is a modest beginning in the field of social security. But the gradual evolution of social insurance schemes has been the normal feature of the social security programmes in all countries of the world. Most of the countries like England, the United States of America, France, New Zealand and Australia, which have very comprehensive social security programmes now, have a long history extending over as many as 50 years or more, of piecemeal social insurance and social assistance schemes. So far as South-East Asia is concerned, India has the proud privilege of taking a lead in the field of social insurance. The future programme, in this sphere, will depend to a very great extent upon the successful working of the present pioneering measure. If this measure succeeds, one can definitely look forward with faith and confidence to the extension of social insurance schemes to other classes of the population and to other contingencies like unemployment and old age. It is, therefore, in the interests of all to make this experiment a great success so that the way for a comprehensive social security programme in India too may be paved.

Accommodation Control

By Sri D. JAGANNATHAN, Assistant Secretary, Public Department

The fundamental necessities in life for human beings are two things, Food and Shelter. Non-availability and scarcity conditions create an atmosphere for control, and such controls will have to continue till necessity for such controls ceases. Various factors contributed to the scarcity of accommodation and there is no need to discuss them here.

In Madras City alone, the population increased from 7 lakhs to 14 lakhs, an increase of over 100 per cent. The Government, with a view to control the situation, introduced the Accommodation Control Order in 1945, and later introduced the Madras Buildings (Lease and Rent Control) Act of 1949, and this Act, as modified up to the 1st May 1951, is in force now.

Accommodation and Rent

There are two main aspects in the administration of the Act, one the Accommodation Control and the other the Rent Control. In the City of Madras the Accommodation Controller deals with the work relating to Accommodation Control and the Rent Controllers who function in a judicial capacity with Rent Control work. In the mufassal, both the work is combined in one officer who is designated as the Rent Controller for the area concerned.

Under this Act, the interests of both the landlords and the tenants are protected and the salient features of the Act are explained below. This Act applies to the City of Madras and to all other municipalities in the State and the Government can extend it to any other area by notification in the *Fort St. George Gazette*. Under this Act, the landlord of a building whose rent exceeds Rs. 25 if it is a residential building and Rs. 50 if it is non-residential, should notify the vacancy to the Authorized Officer within seven days from the date of the vacancy.

Notice of Vacancy

The notice of vacancy that will be given by the landlord should contain the door number, name of the street, ward number, name and address of the tenant who was occupying the building, whether the building is residential or non-residential, details of accommodation available together with particulars as regards ground area, garden and out-houses, amenities available, monthly rent paid by the previous tenant and fair rent if already fixed and the Corporation Assessment for the building for 1939-40.

The Officer on receipt of such a report will take over the building if required for Government purposes, i.e., for allotment to Government servants or Government offices and issue an order to that effect within 10 days from the date of receipt of the vacancy report. The period of 10 days will be computed excluding the day on which the vacancy report is received. If the landlord does not receive an order from the Authorized Officer within 10 days as stated above, the landlord will be at liberty to let out his house to any person of his choice.

If any landlord fails to report the vacancy, he will be liable for prosecution and shall be punishable with simple

imprisonment which may extend to three months or with fine which may extend to two thousand rupees or with both.

Taking over of Building

In addition to the above punishment, the Authorized Officer will have the power to take over the building by force in respect of which such a contravention has been committed and the tenant who occupies the building without authorisation will be evicted summarily. The expenses, if any, incurred by the State Government in effecting such summary dispossession will be recovered from the landlord or the tenant.

A building whose vacancy has been notified will be offered to various Government servants who have registered their names for accommodation, and after getting their consents, it will be allotted to one of them. To meet the demand for houses from persons other than Government servants, about 50 per cent of the houses that fall vacant are allowed on private lease to private individuals who produce consent letters from the landlords. Thus, the needs of the general public are met.

Fixation of Fair Rent

Under the Act, equal opportunities are allowed to both the landlord and the tenant to go to court for fixation of fair rent. If the tenant feels that the rent is too much, he can file a petition for reduction of rent, and if the landlord feels that the rent is too low he can file a petition for enhancement of rent. On presentation of such petition, the Court (Rent Control Court or City Civil Court) will issue a notice to the other party and after due enquiry and inspection, if necessary, will fix the fair rent. For buildings controlled by the Accommodation Controller (Authorized Officer), the fair rent applications will have to be filed before the City Civil Court and for other buildings before the Rent Controller.

The fair rents are fixed with retrospective effect, i.e., from the date of allotment or from the date of order which in any case should not be more than 12 months from the date of the petition for other private buildings. If after fixation of fair rent there is either increase or diminution in accommodation or amenities the parties can claim either an enhancement or reduction of rent, as the case may be. The landlord is also entitled for increase in rent based on the increase in taxes and cesses.

Limitation on Advance

The Act also prohibits the landlords from taking advance exceeding two months' rent. The introduction of this provision safeguards the interests of the landlord also, as, if the tenant fails to pay regular rents, he can adjust the advance without incurring any loss. The interests of the tenants are safeguarded by restricting the advance that can be demanded by the landlord to two months' rent only. This checks the taking of heavy advances and puggies. All agreements in contravention of the Act entered into between the parties are null and void. The tenant should pay the rent due by him in respect of the

building within 15 days after the expiry of the time fixed in the agreement, and, in the absence of any agreement, before the last day of the month next following that for which the rent is payable.

The tenant who pays the rent is entitled for a receipt. If the landlord refuses to receive rent or evades to receive rent, the tenant may by notice in writing require the landlord to specify within 10 days a bank into which the rent may be deposited to his credit. If the landlord fails to specify the bank within 10 days, then the tenant can send the amount by money order at the cost of the landlord until he specifies the bank or receives it in person.

Grounds for Eviction

Tenants are liable for eviction on the following grounds and the landlord can file a petition therefor before the Rent Controller :—

- (1) For wilful default in payment of rent,
- (2) Sub-letting the building without authority,
- (3) For using a building for a purpose other than for which it was leased,
- (4) For committing acts of waste as are likely to impair materially the value or utility of the building,
- (5) For committing acts of nuisance which are detrimental to the other tenants or neighbours.

The landlord may also apply for eviction of a tenant if the building is required for his own occupation and, if the Controller is satisfied, orders for eviction will be issued giving reasonable time for handing over possession of the building to the landlord.

No eviction order can be passed for any of the above reasons where the Government are the tenants. Eviction for own occupation cannot also be passed against tenants whose services have been declared as essential, viz., Government employees including Honorary Medical Officers in Government Hospitals, and the Medical dispensaries and the Maternity and Child Welfare Centres of the Corporation of Madras.

If the tenant occupies the building and does not occupy it within one month or occupies it and vacates it without reasonable cause within six months of suit date, the tenant who has been evicted may apply to the Controller and get back the building. If the previous tenant is not interested in the building the Controller may take over the building and allot it to Government servants.

If a landlord files a petition for eviction which is considered as frivolous or vexatious by the Rent Controller, the Controller may direct that compensation not exceeding fifty rupees be paid by such landlord to the tenant.

Restoration of Amenities

Considering the various other troubles that are at times created by the landlord by way of cutting the amenities such as electricity, water, etc., a special provision has been made in the Act empowering the Rent Controller to order the restoration of such amenities on filing a petition. Conversion of residential buildings into non-residential buildings without permission is an offence under the Act and whenever the landlord wants to convert a residential building into a non-residential building he must obtain the order of the Rent Controller.

It is also made obligatory on both the landlord and the tenant to furnish all the particulars called for by the Authorized Officer, and failure to furnish such particulars is an offence.

Release of Houses

It must also be very clearly understood that when a house is released to the owner under the Act stating that it is not required for Governmental purposes, the landlord should not take it for granted that the house is once for all released to him and is always exempt from the provisions of the Act. This release operates only for the immediate letting out to a tenant. If that tenant vacates, again the landlord becomes liable to report vacancy. The landlord must be reporting vacancy then and there to the Accommodation Controller, every time the house falls vacant even though every time the house is not taken over by the Controller of Accommodation for allotment purposes.

The need for control of accommodation became a necessity from a long time on account of the existing condition and on account of the increasing population. The new constructions are not at all keeping pace with the demand and the scarcity is becoming more and more acute. As long as the disparity in the proportion of the population and number of houses exists, the scarcity of accommodation will persist to continue. It is therefore necessary and essential that the State should have control over the distribution and control of accommodation according to the needs of the people having various avocations in life. It is the sacred duty of the landlords and the tenants and the public generally to co-operate wholeheartedly with the Government in solving this difficult problem to the satisfaction and happiness of one and all in society.

(A.I.R., Madras)

Jumbo for the Farm

No question of spares or troublesome, nagging overheads will plague the Indian farmer in the matter of ploughing his fields, if the experiment, now going apace in Uttar Pradesh of yoking elephants to ploughs turns out successful as envisaged by its sponsors.

A full-dress demonstrative rehearsal of elephants "yoked" to disc ploughs and harrows, normally towed by tractors, was held recently in the Naini Tal Tarai forest area near Lalkua in the presence of Sri Jagmohan Singh Negi, Deputy Minister for Forests, Uttar Pradesh. With special harness made of leather, they drew the implements well, both on virgin and cultivated land.

According to the sponsors of the scheme, now still in its exploratory stages, the use of elephants for farm work is weighted with advantages.

An elephant usually costs only about Rs. 4,000 to Rs. 6,000, and in view of its long life span, could be of practical use for farming work for not less than 30 years. There would be no depreciation costs as is the case with machinery or implements.

It is suggested that an elephant used for ploughing could be worked for six or eight hours a day, for 20 days in a month, for eight months in year. Even during the idle periods it could be used for hauling or transport work.

Vast room for adjustment, the sponsors believe, exist in the economic use of elephants for farm work. They are hopeful of catching and taming about 200 elephants a year from the roaming wild herds in the forests.

Cultivation of Casuarina Around Pits

By Sri MULUKUTLA SATYANARAYANA, B.A., B.Sc. (Ag.), Deputy Director of Agriculture, Eluru

In the seaboard on the Masulipatnam coast, there is the practice of raising casuarina gardens around pits. By resorting to this method of cropping, a return of over Rs. 100 per acre of land is secured per year in cropping against lesser returns from other systems raising casuarina and from other crops. The method of raising casuarina around pits is different from the normal method of raising the crop on the surface. Fifty pits per acre are dug at intervals of 30 feet, from centre to centre of the pits. The diameter and depth of the pits are six feet roughly. The earth removed from the pit is put on the ground all round the pits. In the level so raised, 32 plants are planted in two concentric circles, around the pit. The plants are watered till they establish and in drought periods till the third year.

It is reported that by adopting this practice the growth and development of the girth of the plant, at the end of three years, is at least double that in the normal method. The earth removed from the pit and put around it for weathering is considered as naturally better than the soil in situ.

The following is the expenditure and return from the culture of the crop, cut at the end of five years.

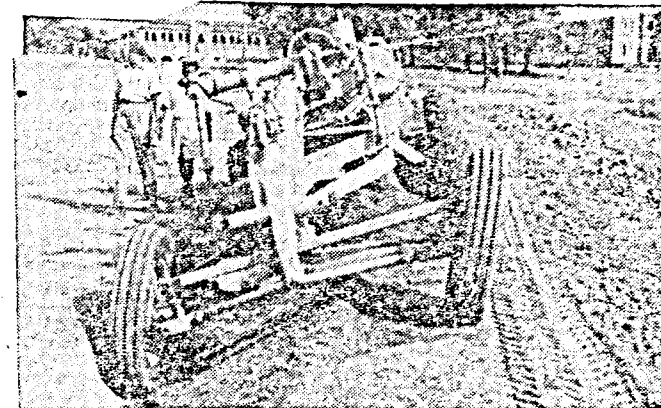
	RS.	A.	P.
50 pits dug on contract in one acre, at 11 annas per pit	34	6	0
Cost of 1,600 seedlings per acre, at 32 round each pit	5	8	0
Labour for planting—4 men at Re. 1 each.	4	0	0
Watering for six months, on contract basis in the first year	75	0	0
Watering for two months, in the second year	25	0	0
Harvesting labour in the fifth year for cutting and weighing at Rs. 3-8-0 per ton on a yield of 20 tons	70	0	0
Carting at Rs. 6 per ton, on 20 tons	120	0	0
Total	333	14	0
Receipts.			
Cost of 20 tons of wood, at Rs. 40 per ton.	800	0	0
Loppings of dry wood from second year to fifth year	100	0	0
Loppings of the lower branches	100	0	0
Stumps and roots	10	0	0
Total	1,010	0	0

Net income for five years :—

Rs. 1,010-0-0 minus Rs. 333-14-0, or Rs. 676-2-0.
Annual return per year—Rs. 676-2-0/5, or Rs. 135-3-0.

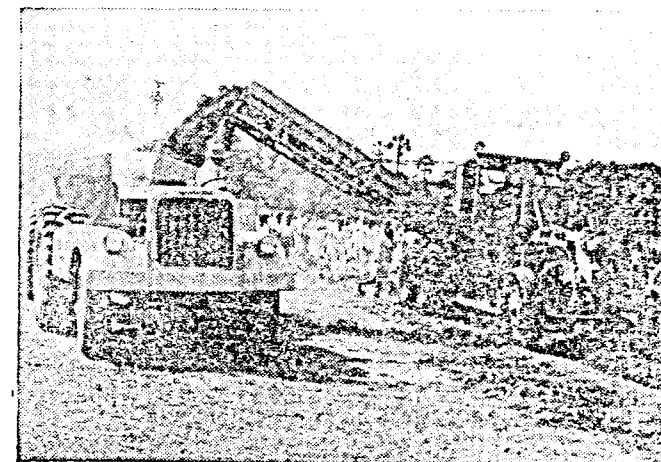
Punished for Corrupt Practices

During the month of September 1952, an Assistant Surgeon, two Sub-Inspectors and a Constable of the Police Department were dismissed, a Tahsildar and a Manager of the Highways Department were compulsorily retired and two Prohibition guards were discharged from service. Four others were awarded less severe punishments.



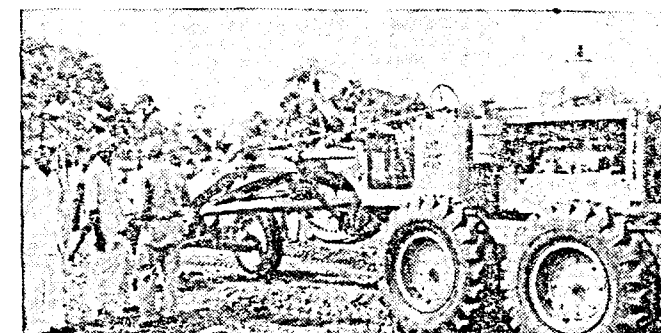
Road Making Demonstration

FURLONG IN ONE HOUR: A demonstration of road-making with a Caterpillar 112 motor grader (75 h.p.) was recently arranged by Messrs. L. and Toubro, Limited, at Gandy. Mr. Marion J. Breen, the operator, made a strip of road with drainage ditches, one furlong long and 40 feet wide, in one hour.



NO OPERATOR: The grader finished the ditch cut without the operator in the seat. By the proper adjustment of the blade, the levelling of the road was done.

MANY USES: Dr. R. Nagan Gowda, Minister for Agriculture, and Sri N. Ranga Reddi, Minister for Public Works attended the demonstration. The motor grader is useful for levelling of land, contour bunding in soil erosion work maintenance of roads, and in preparing airstrips.



The Use of Ammonium Sulphate

Ammonium sulphate is an artificial fertiliser and not a natural manure. It is not a complete plant food and its food value is less than good. It can easily do more than good. It is best used in conjunction with phosphatic and potassic fertilisers in suitable proportions.

By itself it is valuable as a tonic, supplying nitrogen deficiency, and its use encourages leafy growth. It is therefore widely used for leaf crops like lettuce, spinach, cabbage, cauliflower and celery. Provided other chemicals in adequate quantities exist in the soil, ammonium sulphate also helps both fruit and root crops, and can be used satisfactorily on brinjals, chillies and tomatoes when fruit production has commenced. In such cases its use extends the fruitful period of the crop, for it increases the vigour of the plants treated.

In weak doses it has a forcing action, bringing on earlier maturity, and is helpful in treating onions, carrots, beet and turnips for this purpose. Plants weakened by insect attack are helped to recovery by application of light doses after the insect attack has been repelled. It is useful also to stimulate to activity growth of newly transplanted seedlings.

Applications of this fertiliser (which is a dry crystalline substance resembling sugar) can be made either in the dry state or in solution with water. In either case evenness of application is important. If the vegetables have been sown or planted in neat rows the fertiliser can be applied between the rows, after which it should be hoed in, and the soil watered. As this chemical is very soluble, heavy watering will take the food value down below the roots without full benefit to the plants. Watering should therefore be done taking into cognizance the size of the plants. Young seedlings need little more than sprinkling after application, while mature crops benefit from a copious though not heavy watering. If the soil is already moist, application of a solution is the more satisfactory method of distribution.

A liberal dose for maturing crops is one oz. (half chhattak) per square yard. At this rate each lb. should be applied to a plot 16 square yards in area (12 feet x 12 feet). In terms that the mali can understand this means that a cigarette tin full (which contains seven oz. of ammonium sulphate) is sufficient for each application for 7 square yards (roughly 60 square feet) for a plot 10 feet x 6 feet in area. A watering can as used by the Horticultural Division holds three gallons when filled to the top. For a liberal dose an ounce and a half should be dissolved in each filled can (this is roughly a quarter of a cigarette tin full) which should be watered over every square yard and a half (say 5 feet x 3 feet). For smaller and younger plants half this rate is advised.

Applications of this fertiliser should be made at intervals of about a month; weaker doses can, however, be made more frequently though allowing at least a fortnight between applications.

For estimating the winter season's requirements an idea of one's needs can be assessed by basing calculations on the data given below. Four applications (November, December, January and February) will be required. Every

thousand square feet requires approximately 7 lb. per application—or 28 lb. (14 seers) for the season.

For annual flowers the date of application can be the same. For lawns ammonium sulphate should be used only where the quality of grass is good and free from weeds. The rate of application should be at least doubled.

Rice Research at Ambasamudram

The Rice Research Station, Ambasamudram, was opened in 1937, on a temporary basis, with 9.49 acres of wet lands and 2.18 acres of dry lands. In 1944, an additional area of 4.43 acres of wet lands was added on to the original area, making the total extent of the Station 16.10 acres. The object of the Station was to improve the local varieties of paddy by pure line selection and hybridisation and also to try the possibilities of introduction of new and better varieties from outside.

During the course of the past 15 years, pure line selection work was successfully carried on in nine of the more important local varieties and ten strains have been released for general distribution (A.S.D. 1 to 10). Excepting the three strains that were released recently, namely, ASD 8, 9 and 10, the others are estimated to have a spread in 64.6 per cent, 13.6 per cent and 20.3 per cent of the normal area under paddy in Tirunelveli, Madurai and Ramanathapuram districts, respectively. When the potentiality of the ASD strains of paddy is taken into consideration, it can be said that they have covered 90 per cent, 60 per cent and 50 per cent of the area that can be covered in Tirunelveli, Madurai and Ramanathapuram districts, respectively.

The actual areas that have been covered by these improved strains of paddy, the additional quantities of paddy estimated to be produced annually on account of these strains and the extra income estimated to go into the pockets of the cultivators because of these improved strains are given below:—

	Extent of spread, ACRES.	Extra production, TONS.	Extra income, RS.
Tirunelveli	194,830	17,395	45,22,700
Madurai	43,064	3,748	9,74,480
Ramanathapuram ..	70,430	5,659	14,71,340

Grants for Unemployment Relief

The Government, in October 1952, sanctioned grants to the following district boards for unemployment relief:—

	RS.
1 Guntur	85,230
2 Bellary	2,00,000
3 Kurnool	3,44,000
4 Anantapur	5,61,646
5 Chingleput	68,500
6 Coimbatore	41,000

A grant of Rs. 2,04,900 has also been sanctioned to the Nellore District Board for Post-War Road Development Works.



PAK CRICKETERS: Members of the Pakistan Cricket team which recently toured India, seen with Srimathi Kamini Devi, on their visit to Raj Bhavan, Guindy.



WITH THE GOVERNOR: Despite his indisposition at that time, Shri Sri Prakasa, Governor of Madras, insisted on meeting the Pakistan players for an informal chat. At the extreme left is Hanif Mohammed, the baby of the team.

The Police Sports at Vellore

Hundreds of people assembled to witness the various interesting games organised by the State Police Force from the 24th to 30th of November 1952, at the historic Fort of Vellore. The Principal, Police Training College, Sri M. Lakshmana Menon, one of the senior District Superintendents of Police, explaining the significance of this annual function, revealed the following facts:—

The State Police Sports have an invigorating effect on the entire Police Force of the State every year. In fact, every member of the State Police Force, from the constable to the District Superintendent of Police, eagerly looks forward to playing an active part in them. Every member is given equal opportunity to participate in the competitions held at various centres. For the sake of convenience the entire Police Force is divided into seven ranges for sports purposes:—

(1) Northern Range; (2) Central Range (including Railway Police, Madras); (3) Western Range; (4) Southern Range (including Railway Police, Tiruchirappalli); (5) Malabar Special Police; (6) Special Armed Police; (7) Madras City Police.

A large variety of games are organised and a number of teams are made to participate in tournaments. Police Officers irrespective of their official positions, take their places in the various teams, as per the wishes of the team captains.

Training for and participation in the various games, actually commence at various centres nearly two months before the Annual Week and keen interest is evinced in these sports and every police official feels it a great honour to get selected for these competitions. Nearly four hundred men, chosen at the various ranges, meet at Vellore every year. From 1936 to 1951 this was suspended, and the honour of reviving this healthy convention goes to Sri T. G. Sanjevi Pillai, the present Inspector-General of Police.

Various sports and games including Football, Hockey, Hurdles race, Obstacles race, Long Jump, High Jump, etc., were organised. The highlight of the week was the prize distribution at a distinguished gathering on the 30th November 1952. Raja Sri Shanmuga Rajeswara Sethupathi, Raja of Ramnad, Minister for Sports, graced the occasion with his presence and gave away the prizes at the request of Sri T. G. Sanjevi Pillai, the Inspector-General of Police, to the successful competitors.

A new record in 400 metres hurdles was set up by Balakrishna Panicker (M.S.P.). He lowered last year's record by 2.3 seconds when he timed the event in 59 seconds. Marimuthu of the Coimbatore Police stood second and Krishnan of the M.S.P. third.

Subedar Vasudevan of the M.S.P., broke his last year's record of 80 feet 3½" by 14 feet 3½" in the hammer throw. Jemadar Ivan Jacob of the M.C.P., lowered the State record for 100 metres by two seconds and the India Police record by one second. Krishnan Nambiar of the M.S.P., lowered the high jump record by ½". The M.S.P. improved by 7 seconds the last year's record for the 4 x 100 metres relay.

Highlights of the Sports are:

Hammer throw:

- (1) Subedar Vasudevan (M.S.P., Coimbatore)
- (2) Joseph (Central Range, Coimbatore) and naswami (Western Range).

10,000 metres:

- (1) Sahul Hamed (Southern Range, Ramanathapuram)
- (2) Karunakaran Nambiar (Coimbatore) and (3) Alangaral.

High Jump:

- (1) Krishnan Nambiar (Coimbatore) 5' 7½", (2) Chinna-sami (Western Range) and (3) Deseanadan.

4 x 100 metre relay:

- (1) M.S.P., (2) M.C.P. and (3) Western Range.

100 metres:

- (1) Jemadar Ivan Jacob (M.C.P.), 11 seconds, (2) Madhavan Nair (M.S.P., Coimbatore) and (3) Marimuthu.

These sports are just like the annual sports of any college or school. But the special significance of these activities can be fully understood when we look at them from the morale point of view. Besides providing recreation they offer opportunities to keep up the enthusiasm and to strengthen the discipline of the Police forces, which are out of necessity forced to be stern and cold.

"Apart from physical training and moral exhilaration, there is scope for developing human personality," said the Principal of the College.

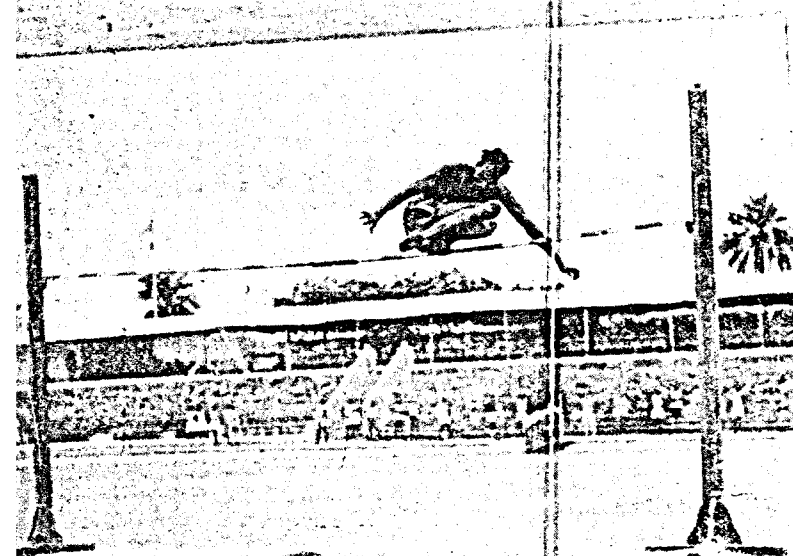
The Police Sports at Vellore offers fine opportunity to experiment on such physical and mental development.

Kollar Society

The Kollar Multipurpose Rural Credit Society No. A-207 in Tindivanam Taluk, Tirukkoyilur Circle, South Arcot District, was registered on 11th April 1915 and started on its work on 2nd May 1915. At present there are 218 members and the paid-up share capital is Rs. 1,711. The society is affiliated to the Tindivanam Supervising Union. The maximum borrowing power of the society is Rs. 22,000. During the year 1951-52, the society borrowed Rs. 8,230 from the South Arcot Co-operative Central Bank and distributed it to members. A sum of Rs. 10,405 was due to the Central Bank under loans. The society is also enjoying a cash credit of Rs. 700 accommodated by the Central Bank. A sum of Rs. 595 was due to the Central Bank under cash credit on 30th June 1952. Rs. 11,976 was due from members.

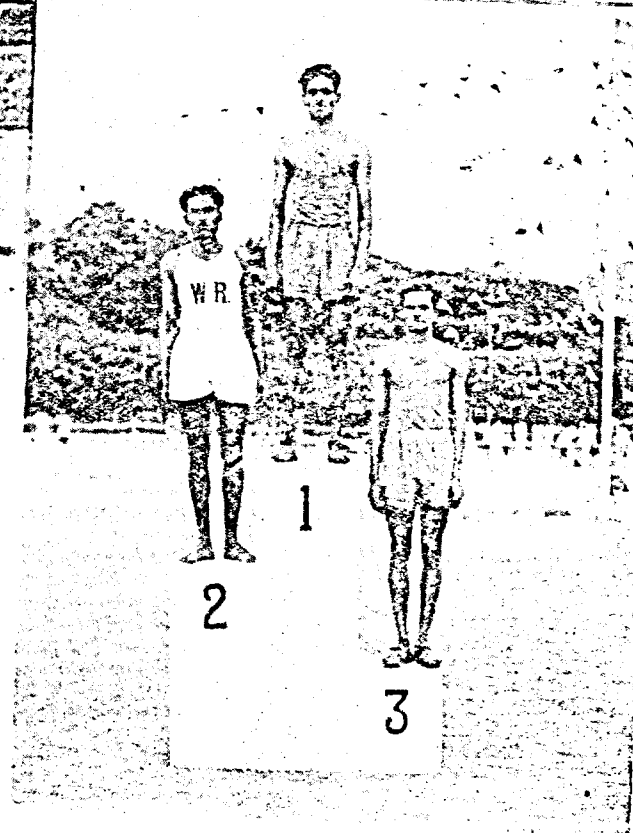
Besides the credit transaction, the society is also doing multipurpose activities for the benefit of the members and others. During the year 1951-52, the society purchased and distributed chemical fertilisers to the extent of Rs. 10,570. The society has also introduced thrift scheme through hundi-boxes. Towards recreational activities, the society is conducting rural games at regular intervals.

The society has invested Rs. 1,279 towards Reserve Fund, and it has invested Rs. 150 as share in the South Arcot Co-operative Central Stores. The amount earned by the society in the transactions amounted to a gross profit of Rs. 323-10-0.



40A

POLICE SPORTS



AT VELLORE

Action photos of outstanding efforts in the State Police Sports conducted recently at the historic Fort of Vellore, are presented on this page. From constable to D.S.P., every member of the Police Force looks forward to this annual event, where everybody has equal opportunities for participating in the various competitions, to break new records for 'higher, faster and greater' efforts in sport.

For the sake of the sports, the entire Police Force is divided into seven ranges: 1. Northern Range; 2. Central Range (including Railway Police, Madras); 3. Western Range; 4. Southern Range (including Railway Police, Tiruchi); 5. Malabar Special Police; 6. Special Armed Police; and 7. Madras City Police.

At left: Sri T. G. Sanjevi Pillai, Inspector-General, addressed the gathering on the final day function and the Raja of Ramnad, Minister for House Rent Control and Sports, distributed prizes.

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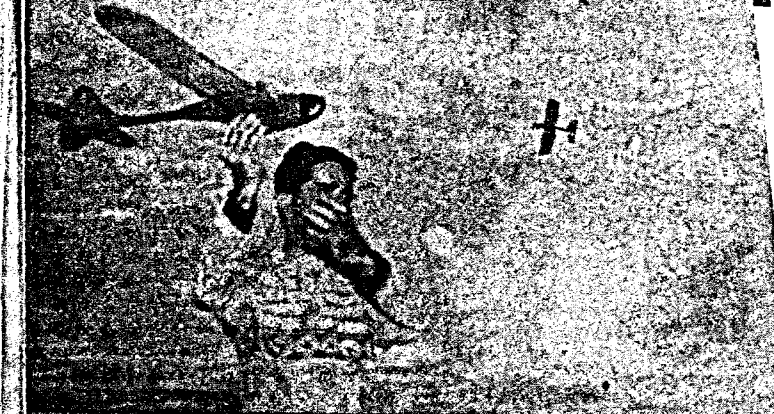
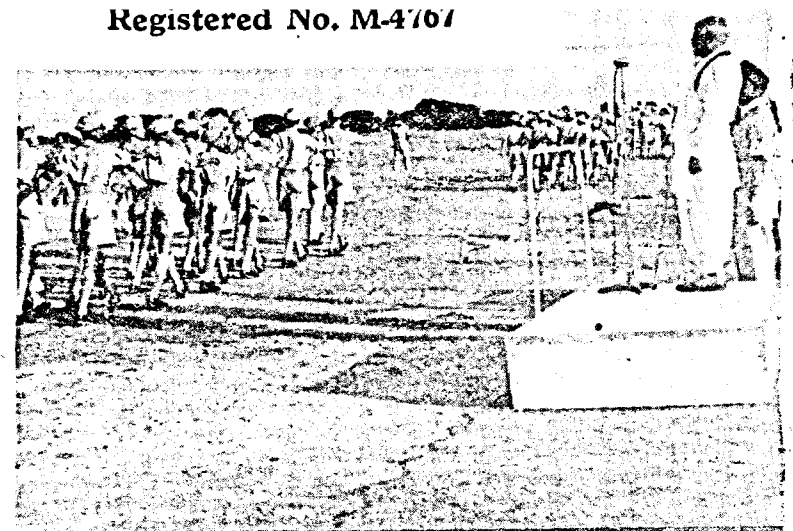
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N.C.C. AIR SQUADRON PARENTS' DAY

The No. 3 Madras Air Squadron of the National Cadet Corps celebrated the Parents' Day at its headquarters in Meenambakkam Airport. Dr. M. V. Krishna Rao, Minister for Education, presided.

Pictures show the Minister reviewing the cadets and taking the Salute; display of model planes and demonstration flights; presentation of cups to the best cadets. Sgt.-Cadet Karumbayya (Engineering College) won the cup for best all-round cadet (intermediate stage) and Sgt.-Cadet Krishnamurthy (Arts College) for the basic stage.

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The Governor's Message To The People of Madras

Raj Bhavan,
Guindy, Madras-22

On this occasion when we celebrate the Third Anniversary of our taking our rightful place on the map of the world as a Sovereign Democratic Republic, let us remind ourselves of the pledges we took as we struggled for our Freedom; and on the basis of the successes and failures of the immediate past, apply ourselves with wholehearted devotion to the great tasks that lie ahead for the proper fulfilment of our great ideal of a Welfare State. It is no doubt an occasion for National rejoicing; but, at the same time, it is also one of heart-searching, for we cannot afford to be complacent. Every single one of us has to place his hand upon the heart, and make sure that he has done his duty properly and well.



Our Five-Year Plan for National Development is ready. What we need now is the resolute will to implement it. The success of the Plan depends largely on the co-operation of all sections of the people, and on the co-ordination of activities in all departments of life—public and private.

Let us utilise this auspicious occasion to re-dedicate ourselves to the service of the motherland, and work for the fulfilment of the great objectives of Mahatma Gandhi that alone can ensure the true Unity and Liberty of the people, and bring us enduring peace and prosperity.

S. C. Prakasa
Governor

The Path to Prosperity

By SRI C. RAJAGOPALACHARI, Chief Minister of Madras

I can add nothing to the fervent appeal made by our illustrious and beloved Prime Minister for the working of the Five-Year Plan. There is no need for me to add to the chorus of hope with which all sections of the people have welcomed it. But I shall point out some difficulties which Government have to face. It is only by knowing the difficulties we may more satisfactorily respond to the Prime Minister's appeal.

In the first place, it is quite a new adventure for the Government of India working under and through democratic institutions to frame and execute a long-term plan. Totalitarian Governments can do a great many things which democratic Governments cannot. A Government which holds office under the pleasure of the Legislature has to take orders every year from the people's representatives as to its finance. It must get parliamentary sanction for all taxation. It is to live from hour to hour on the confidence of the Legislature facing the continuous attacks of organised opposition parties who are by no means suppressed, but enjoy complete liberty of speech and action. Above all, working in an economic structure mainly of private enterprise, we must necessarily be prepared for previously laid down estimates of resources and costs proving wrong to a disturbing degree.

Problems before Planners

Of all non-totalitarian Governments, it is only perhaps in India we have ventured on a Five-Year Plan. Neither England nor America has done it. Planning in our country for a period of years, be it five or ten, must face errors in appraisal of resources and considerable variation in the cost and speed of projected plans. We cannot have that firm hold on production and distribution and on the price, be it of commodities or of services or of labour by way of wages, that firm hold such as is necessarily associated with a planned economy.

The Five-Year Plan that India has adopted is based on two assumptions—one, that Government can and will take all measures firmly to hold the price-line and two, that all men will sincerely and intelligently put forth labour in the nation's interests as the planners have planned.

In the structure of prices, the producer of foodgrains at the bottom supports the whole structure. The bottom layer bears the weight of all that is built above. The producer of foodgrains must accept the limitations placed on the return he can get for his labour and his investment. It is the inescapable basis of the Five-Year Plan, and for the time being therefore the Plan assumes that this will not be disturbed. In spite of this, we must devise means to create incentives for greater production of foodgrains.

Progress Depends upon National Labour

More important even than the question of prices, is the hard fact that the country's progress depends upon the amount and quality of work put in by the mass of the workers. It is this unwritten chapter in the book that is

all important. Unless we largely improve the total output of national labour, we cannot have progress. It is national labour alone that can produce national wealth. Like all fundamental truths, this is apt to be forgotten in the complex structure of life and we cannot too often remind ourselves of it. Tradition and culture produced the even flow of labour in the old days; but tradition, religion, culture and other such intangible forces that made hitherto for co-operation and for automatic production have largely disappeared or are fast disappearing.

Legal or executive compulsion to which facile references are often made, is a broken reed. All laws are difficult enough to enforce. Least of all can we hope to enforce laws for bodily labour and personal service. The wage-motive is there, but every manager knows that wage cannot super-vise. Wages do not produce quality or even the quantum bargained for. An increase of wage or salary produces no doubt an immediate psychological effect, but it fades away after some time. Piece-work payment is definitely unpopular in labour circles. Profit sharing also has failed in its purpose. Adult franchise makes democracy, but it is unstinted honest work on the part of the bulk of the people that makes national progress, whatever the Constitution may be.

I am convinced that we can succeed, only if we can make men feel that it is dishonourable and unpatriotic and bad policy for each one of us, even from the most selfish point of view, to fall below standards in work. We have to create new traditions to take the place of those we have deliberately destroyed or otherwise lost by force of time and circumstance. Laws and regulations will not help. We should hurry up by example, encouragement and fostering care to build a new ethic of patriotic sacrifice and work, even as we did during the political struggle.

Need for Patriotic Urge to Work

Our difficulties are there, no doubt. Men by nature try to evade taxes and to avoid hard work. If the rich men in business have, as I am told by lawyers, a right to find legal ways of evading taxes, poorer men have an equally natural dislike for hard work and would, if at all possible, avoid it. It is unfortunately a law of nature that men prefer ease to work. The intangible sense of duty that made people work in the old days having disappeared, we are left only with a poor substitute, the wage motive. That everyone today desires to reduce work to the minimum and to increase the demand for wages to the maximum is certainly not a hopeful feature for the fulfilment of our plan. I must confess this is worrying me greatly. Our basic shortage is a shortage in the patriotic urge to work. This shortage is observed at all levels and affects all aspects of national life.

The progress of the nation waits on a greater output of labour, even as victory in the battle-field waits on the soldiers' courage. Soldiers realise the truth after a couple of bad defeats and after suffering the disgraceful consequences that follow defeat. Armies, generals as well as men, have fully realised, and it has become their tradition, that sacrifice and valour are sound policy as well as honour.

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New Composite Protein Food Evolved

A process for the manufacture of a new vitamin and mineral fortified protein food has been developed at the Central Food Technological Research Institute, Mysore.

Casein foods are recognised tonics and nutrients for convalescents recovering from wasting diseases, expectant and nursing mothers and growing children. Such foods are not at present being manufactured in India. The new food evolved at the Institute has been tested by extensive feeding trials on patients convalescing from wasting diseases.

The process involves the conversion of casein into a soluble product, drying the product at a low temperature, grinding and incorporating calculated quantities of mineral salts, B-vitamins and flavouring agents. Casein, the principal raw material required, is available in the country. The process is simple and the equipment required—dough mixer, disintegrator and hot-air drier—is readily available. The flavoured composite protein food is dispersible in water and milk and is highly palatable. Its intrinsically high nutritive value renders it a useful adjunct for raising the dietary value of a variety of other foods such as milk, cocoa, chocolate, etc. It can also be readily incorporated in puddings, omelettes, etc.

The process for the production of the vitamin and mineral fortified composite protein food whose commercial feasibility has been established by pilot plant trials, is covered by Indian Patent No. 47580. It is now available to industry for exploitation. Those interested may contact the Industrial Economist, Council of Scientific and Industrial Research, Raisina Road, New Delhi.

Must we in the civil field of labour forget all old traditions and re-learn only after serious disaster and distress? May we not be wise and understand even now that national output of work alone can produce what we desire even by way of higher salaries, greater amenities and increased wages? All these will follow in natural sequence but cannot precede the hard work that the Plan involves and on which assumed foundation the Plan for greater national wealth has been conceived and argued out in the book that tells us about the Plan.

Worship in the Form of Work

Mere redistribution of existing wealth will not result in anything better than at the most the computed average national income which as every one knows is very poor. The computation of national resources on which increased wealth is planned for has taken for granted the quantum and quality of the work that is to be at once put in. This is the most important, and as I have said, the basic unwritten chapter in the Five-Year Plan. Work and not

money is the ultimate reality of resources. The Plan by itself will crumble into waste paper if we do not all together and individually work hard. In the old days good men worked proudly to pay back their father's debts. So must we do now. Our age-long asset, the sense of religious and pious obligation to work, must be mobilised again. The motherland waits for worship—worship in the form of work. And this form of worship is propagated not by much speaking or writing, but only by example and mutual encouragement. May God bless all our endeavours and put fresh life into our people.

The main things wanted to make the widespread and earnest co-operative rural effort which is an essential requisite at every step in the execution of the National Plan available to leaders of men and administrative officers, are two very old-fashioned things. Everyone who has had long enough field experience, as distinguished from debate and writing in the drawing room and secretarial offices, knows how almost impossible it is to organise continuous work on co-operative lines among the rural population.

Moral Values and Co-operative Effort

Except of course when a flood or a fire throws the people into elemental confusion, individualism and selfishness are paradoxically at the highest among the poverty stricken rural people, making longer-visioned co-operation nearly impossible. Much persuasive propaganda is indulged in and listened to without dissent but no action follows. Now, the two very old fashioned things that I said would help in the sacred task of rebuilding rural co-operation are Religion and Barter. The sense of values, moral as well as material, has gone amiss. We have to improve the general sense of moral values through religion and we have to correct material mis-values, by substituting barter for money economy as far as it may be possible in modern circumstances. Unless we grow in company with God from childhood, we shall not be able to develop that internal sense of law which alone makes men co-operate with one another in spite of the urge of selfishness that nature has imbedded in life for survival in evolution.

As man has evolved, he cannot survive either in town or in village without the further principle of action, viz., co-operation. General happiness and safety can only be secured through co-operative effort and co-operative habit and for this religion is essential. Barter will help to remove the illusions that have crept in the wake of inflated money and enable men to realise every moment what wealth really consists in. Men will naturally be led to industriousness and creative effort if barter takes the place of money at least in the villages. Working with symbols—and money is only a symbol hardly different from written account—we are apt to forget the concrete reality. We gain by now and then actually dealing with reality in place of symbols.

Of course as I have admitted and again repeat, these two things are entirely things of an older world which we almost thought recently we had given up for ever. We find, however, that whatever replaced these two old fashioned things are tinsel. We must put the tinsel aside and go back to what built up the world, during the millenniums through which it has come out so greatly and we have yet a long way to make with the help of these two old fashioned things.

(A.I.R., Madras)

Progress in the Years of Freedom

In the last five years of democratic administration, despite financial stringencies, despite failure of rains and consequent aggravation of food shortage, beginnings were made in the direction of all-round national reconstruction. Major multipurpose projects like Lower Bhavani, Tungabhadra and Machkund were started. Quite a number of minor irrigation and tank improvement schemes were executed. Agriculturists are now looking to the Agricultural Department not only for advice, but also for their vital needs like manures, implements and better strains of seeds evolved in Government Research Stations.

The growth of the co-operative movement has also been phenomenal. Its total turnover today exceeds even the revenues of the State Government. The constructive ideals of Mahatma Gandhi are being put into practice in the State through its welfare departments, viz., the Harijan, Rural and Women's Welfare Departments which are the unique creations of the Madras Government.

One of the boldest steps taken in recent times, as soon as the new Ministry took over the responsibility of Government under the leadership of Rajaji, was the decontrol of food which was brought into effect on the 6th June 1952. Decontrol was one of the most important steps which Mahatma Gandhi was urging five years back; it was left to the present Madras Government to carry out the Mahatma's wish successfully.

The State's Financial Position

A brief glance at the budgetary position of the State for the current year will present the proper perspective for a study of the problems of the State. According to the Budget for 1952-53, the revenue on the basis of the existing taxation is Rs. 6,176 lakhs and expenditure on revenue account, Rs. 6,535 lakhs. Thus there is a deficit of Rs. 359 lakhs. The Government decided to increase the financial resources of the State to cover this deficit. Thus the following taxes have been proposed. The taxes are: (1) enhancement of the sales tax on motor spirit from 4 annas to 6 annas per gallon; (2) a surcharge on passengers travelling by public transport buses; (3) levy of a surcharge on land revenue on larger holdings, based on a sliding scale; (4) levy of a betterment tax on lands newly brought under irrigation on public expense, and (5) levy of a special tax on the sales of foreign liquor to permit holders.

If all the proposals for new taxation are accepted, the resources during the current year will be enhanced by Rs. 270 lakhs, leaving a deficit of Rs. 89 lakhs only. This small deficit is expected to be met by savings that would be effected from the retrenchment in the Civil Supplies Department consequent on the decontrol of foodgrains and by withdrawal from the Revenue Reserve Fund.

With the breach in the revenue budget thus practically closed, the expenditure on the general ways and means side during the current year, mainly capital expenditure outside revenue account, will be about Rs. 28 crores. This is to be met by cashing the securities in the Revenue Reserve Fund and Cash Balance Investment Account, loans in the open market and loans from the Government of India.

The phenomenal success of the five-crore loan floated by the State Government has revealed the firm confidence

people have in the stability and resources of the Government. Despite the unsteady features in the economic field and the stock and share markets and despite the shyness of big business in investments, the response to the loan was so overwhelming that the loan was oversubscribed by over a crore within 24 hours. Another striking and noteworthy feature of the loan was that the confidence reposed by the Government in the small investor—who has not hitherto ventured into the field where big businessmen and moneyed classes held the monopoly—has been more than amply repaid. The Chief Minister's appeal to the small investor drew a spontaneous response, and the success of the loan not only proved the common man's confidence in the Government but has infused a new interest in him in the business of the State.

Nation-Building Activities

An objective analysis of the activities of the Government in the various nation-building spheres will give a comprehensive overall picture of the strides that the Madras State has taken in reconstruction under trying circumstances and handicaps.

Irrigation.—Irrigation is the life-blood of agriculture. Ever since the assumption of power by the people's elected representatives, this problem is being tackled methodically, to the utmost limit of available finances. The irrigation programme of the Madras Government can be divided into three parts—the short-term programme to

Conference of T.B. Experts

A four-day Conference of Tuberculosis workers in India is beginning in Mysore on Monday, February 2, 1953. Over 200 delegates from different parts of India are expected to attend the Conference. Dr. R. B. Lal, Chairman of the Standing Technical Committee of the Tuberculosis Association of India, will be the President of the Conference.

The Conference, which is the tenth organised by the Association, it is understood, will be addressed by the Union Health Minister, Rajkumari Amrit Kaur, and the Rajpramukh of Mysore.

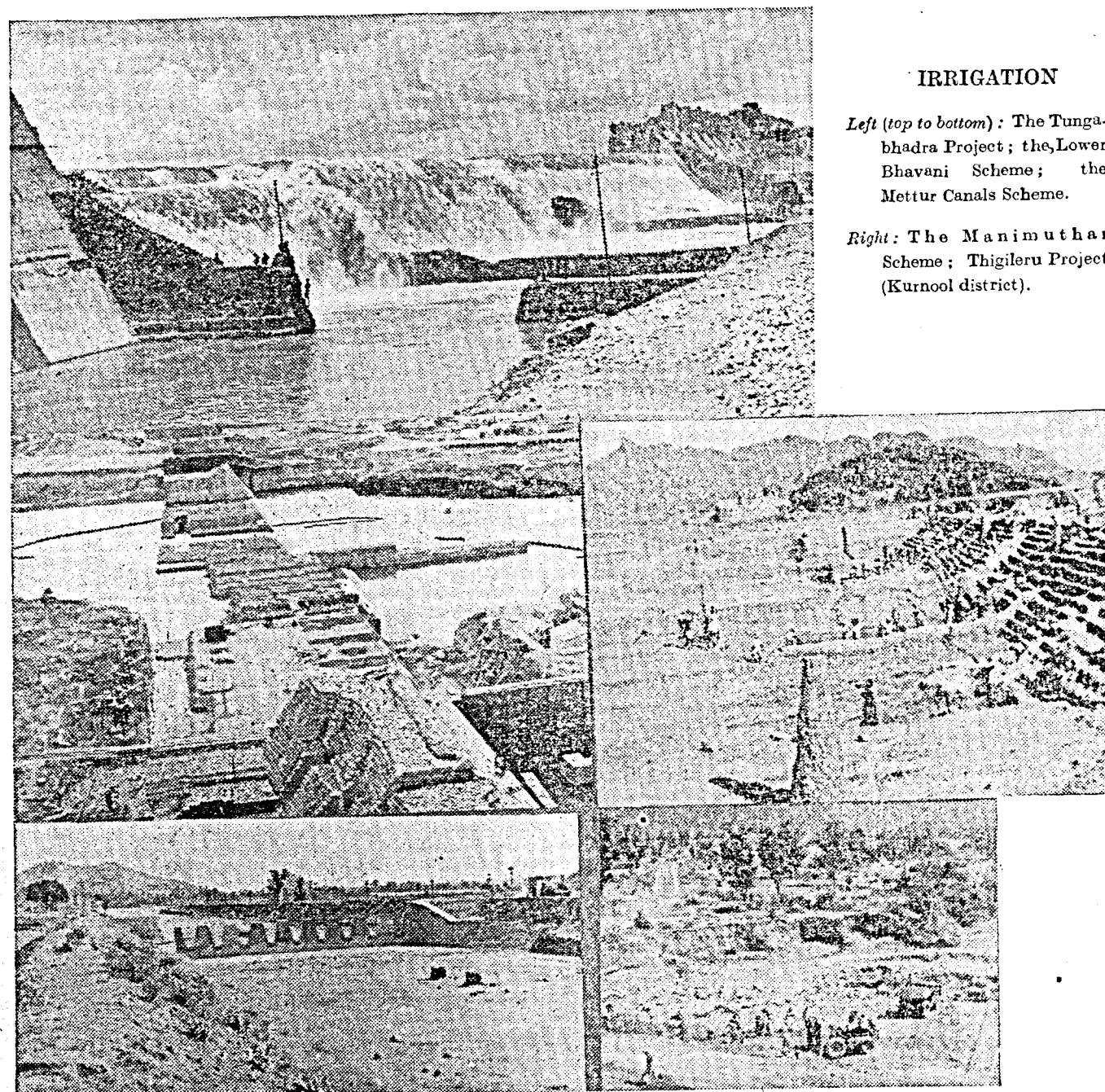
One of the main subjects of discussion will be the results obtained in India by controlled investigations into the effects of Isonicotinic Acid Hydrazide in the treatment of tuberculosis. Papers on chest surgery, BCG, mass X-ray, the possible role of BCG as a prevention against leprosy, are some of the other subjects on the agenda of the Conference.

The Government of Mysore and the State Tuberculosis Association, on whose invitation the Conference is taking place in Mysore, are making the necessary arrangements.

IRRIGATION

Left (top to bottom): The Tungabhadra Project; the Lower Bhavani Scheme; the Mettur Canals Scheme.

Right: The Manimuthar Scheme; Thigileru Project (Kurnool district).



execute more than 300 minor irrigation schemes, the mid-term programme for executing medium-sized projects like Malampuzha, Manimuthar, Mettur Canals, Upper Pennar, Walayar, Mangalam and the like and the long-term programme for the execution of multipurpose projects like Lower Bhavani, Tungabhadra, Krishna-Pennar and Ramapadasagar. Of these multipurpose projects, Lower Bhavani, Tungabhadra and Machkund are well under way. The Tungabhadra Project is a joint venture with the Hyderabad State Government and the Machkund Project is a joint scheme worked by the Madras and Orissa Governments.

The short-term programme for the execution of small irrigation schemes, including Grow More Food Schemes, is primarily to augment supplies of food as quickly as possible.

We have endeavoured to execute schemes in dry tracts as far as practicable, provided water resources are available to justify such schemes and hold out promise of their successful working. Twenty-five schemes costing Rs. 1,265 lakhs have so far been executed and 13 schemes costing Rs. 4,845 lakhs are under execution in Rayalaseema; 69 schemes costing Rs. 38.5 lakhs have been executed and 62 schemes costing Rs. 141.4 lakhs are under execution in the Circars; 58 schemes costing Rs. 65.30 lakhs have been completed and 45 schemes costing Rs. 92.54 lakhs are under execution in the Tamil districts; 27 schemes costing Rs. 2.90 lakhs have been completed and 10 schemes costing Rs. 22.83 lakhs are under execution in the Malabar and South Kanara Districts. The total ayacut developed so far under the completed works is 69,300 acres, and the works in progress will add a new ayacut of about 80,000 acres.

All irrigation schemes are being carried out in accordance with a well-defined scheme. Such a plan for the five-year period practically ending in 1954-55 has been drawn up in draft by the Planning Commission in consultation with the State Government and as work has been started on a number of schemes, the plan consists only of schemes actually in execution. From the figures given, the current year is practically the peak period of execution of the Five-Year Plan.

Lower Bhavani and Tungabhadra Projects are already in advanced stages of execution. The Lower Bhavani Project at an estimated cost of 907 lakhs of rupees would benefit 207,000 acres in the District of Coimbatore and Tiruchirappalli. Irrigation under the Tungabhadra Project may commence round about the middle of 1953. This project at an estimated cost of Rs. 1,970 lakhs would benefit an area of 294,000 acres in Bellary and Kurnool Districts.

This Government have also proposed to the Planning Commission a supplementary programme comprising 11 irrigation projects, the total ultimate cost of which will be Rs. 145 crores. This scheme under the supplementary plan includes, among many others, the Krishna-Pennar and the Ramapadasagar Projects.

Agriculture.—In the sphere of agriculture, notable progress has already been made in Madras State. The facilities offered by the Agricultural Department are sought after by the agriculturists more and more. Chemical fertilisers, green manure seeds, tractors and oil-engine pumps which are supplied by the Government are in great demand.

Agricultural research is also proving more and more fruitful in the State, some of the short-term and drought-resistant varieties of paddy evolved at the research stations having become popular among the agriculturists. Oil engines and electric motors for irrigation purposes are being given to the ryots in increasing numbers by the Department. Credit is also being made available to the agriculturists by way of *takkavi* loans. Government subsidies and credit issued by the cooperative organisations.

Electricity.—Electricity has played a large part in the development of this State; it has taken big strides in the State in the past few years. It has helped not only industrial expansion, but has benefited agriculture to a large extent. Today power is made available in more than 2,000 villages.

At the end of the war in 1945, the installed capacity of the generating plants in the State totalled about 160,000 K.W. To meet the increasing demand for power, a number of major schemes were taken up to add an additional 180,000 K.W. of power. Some of them had been completed, viz., the Ceded Districts Grid, the Nellore Thermal Scheme, the first stage of the Madurai Thermal Scheme and the Visakhapatnam, Vijayavada and Papanasam Extensions. The others in execution had been incorporated in the basic Five-Year Plan of the Planning Commission, for the period 1951-56. The total cost would be Rs. 50 crores for that period. But most of the works would be completed by 1954.

The Moyar Hydro-Electric Scheme is nearing completion. The Machkund Hydro-Electric Scheme, which is a joint scheme financed by the Madras and Orissa States, will be completed in 1954 adding 51,000 K.W.

of power capacity. When the Tungabhadra Hydro Power station is completed, it will supply power to the Ceded Districts area. The rest of the programme consists of extensions to existing powerhouses to provide additional supplies of 27,000 K.W. at the Pykara Hydro-Electric Station, 30,000 K.W. at the Madras Thermal Station and 10,000 K.W. at Madurai Thermal Station.

The Government have also proposed to the Planning Commission a supplementary programme of power development. One of the schemes in the supplementary programme provides for the generation of power using the waters of the Periyar Lake. This scheme will cost Rs. 10.5 crores and will provide 75,000 K.W. in the first stage and 100,000 K.W. ultimately. Another scheme proposed is the Kundah scheme in the Nilgiris, which will utilise the waters of the Kundah and Bhavani rivers in their upper reaches and generate power to the extent of 75,000 K.W. in the first stage and 150,000 K.W. ultimately. It is estimated to cost a little over Rs. 30 crores.

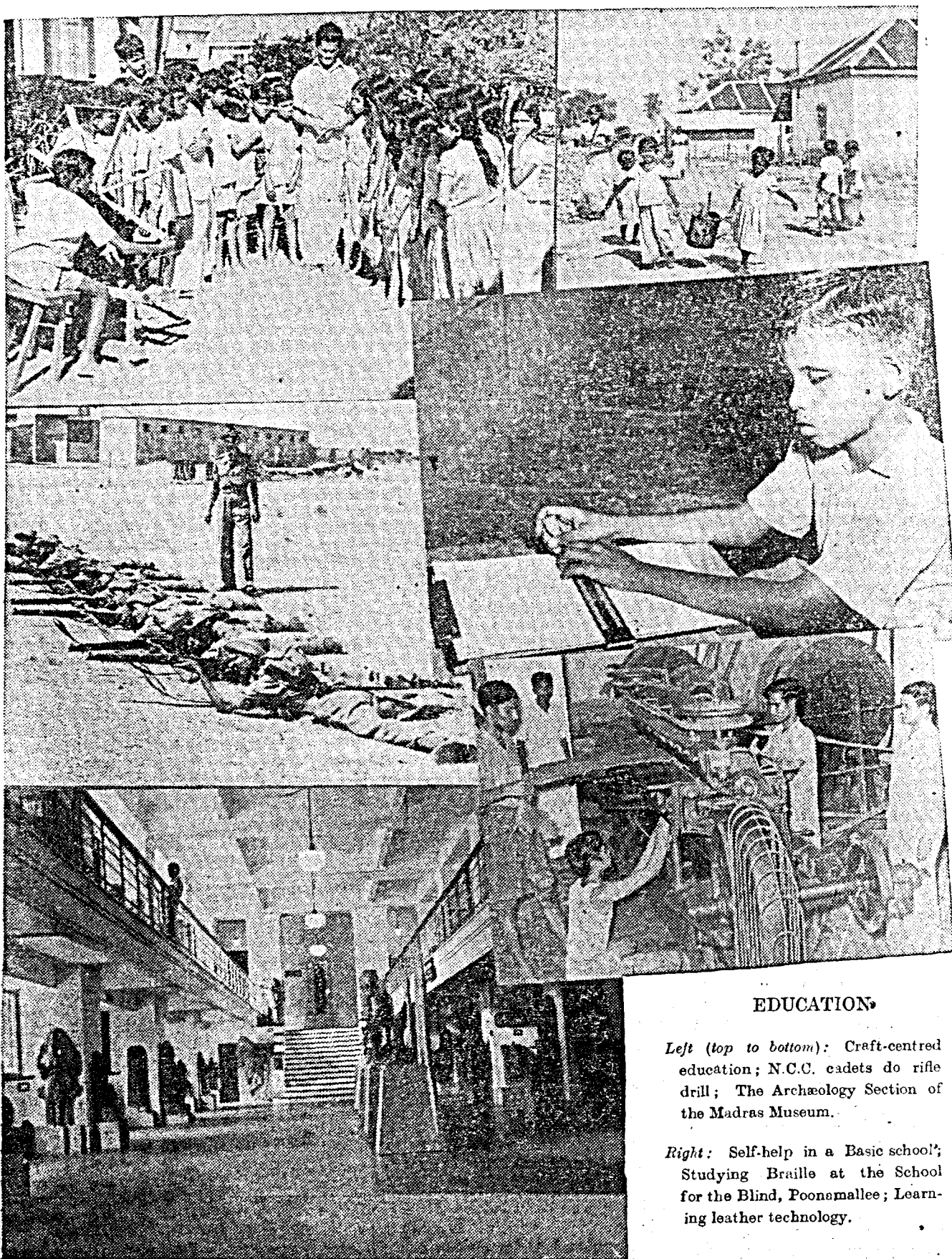
Education.—The expenditure on education in Madras State has been growing in almost phenomenal manner in the post-independence era. From Rs. 459.72 lakhs in 1945-46, it has risen to Rs. 1,195.02 lakhs in 1952-53. The provision made during the last few years is as follows:—

Year.	RUPEES IN CRORES.
1946-47	5.9
1947-48	7.0
1948-49	8.9
1949-50	9.6
1950-51	10.3
1951-52	11.39
1952-53	11.95

A thorough reconstruction of the educational policy and programme to suit the genius of the nation is being pursued by the Popular Government. The other two main objectives of the Government are provision of universal free elementary education and the educational advancement of the weaker sections of the people and in particular, Scheduled Castes and Tribes. The amount of interest evinced by the State in the spread of primary education is evident from the growing expenditure under that head. From Rs. 300 lakhs in 1946-47, it has grown to Rs. 708 lakhs in 1951-52 and Rs. 716 lakhs in 1952-53. There was also a corresponding increase in the number of primary schools in the State.

The State-wide adoption of Basic education, i.e., craft-centred education at the primary stage, has been accepted as the aim of the Government. Accordingly, the existing elementary schools and ordinary training schools are being converted into the Basic type. Year after year new Basic schools and Basic training schools are also being opened. There are, at present 56 Basic training schools and 607 Basic schools in the State. For the children of the age group 2½ to 5, there are also at present pre-Basic sections attached to 27 Basic schools under aided management.

The Government are also providing liberal educational concessions and aid to Scheduled Castes and Tribes and Backward Classes. A reservation of 40 per cent of the seats in professional colleges and other Government institutions for the educationally Backward Classes has been made.



EDUCATION

Left (top to bottom): Craft-centred education; N.C.C. cadets do rifle drill; The Archaeology Section of the Madras Museum.

Right: Self-help in a Basic school; Studying Braille at the School for the Blind, Poonamallee; Learning leather technology.

Recently Government have granted fee concessions to the children of non-gazetted Government officials and employees of local bodies and aided school teachers. The children of all non-gazetted Government servants and of employees of local bodies drawing Rs. 300 and less per month (the grade of pay applying only from the latter) and of aided school teachers, will in future be given full fee concessions in elementary and lower secondary schools and half-fee concessions in high schools. A provision of Rs. 50 lakhs has been made in the current year's budget to cover the loss.

In the field of secondary education, expansion of educational activities is striking. The number of secondary schools in the State has gone up from 655 boys' secondary schools and 200 girls' schools in 1945-46 to 1,143 for boys and 256 for girls respectively, during 1950-51. Today the number of secondary schools has increased to 1,526, under the policy of providing every taluk in the State with at least one high school. Similarly the number of students increased from 325,117 boys and 79,821 girls to 534,122 boys and 123,527 girls by 1950-51.

In spite of huge demand under secondary education, the State has maintained expenditure on university education. Considerable amounts are being given as grants to the Universities in the State for starting new sections and courses.

Co-operation.—The co-operative movement has achieved striking progress in the State as evidenced by the fact that the working capital of all the co-operative institutions is well over rupees 85 crores, which is more than the total revenue of the State.

It has progressed both in the credit and non-credit directions. The Madras Government initiated the policy of the expansion of rural credit system in 1949. The two objectives of the policy were to increase the number of societies so as to cover 50 per cent of the villages and 30 per cent of the population and to reorganise the rural credit societies into multipurpose societies to cater to the economic needs of the members. The rural credit system covered about 10 per cent of the villages and 13 per cent of the population in 1949. Three years afterwards these percentages rose to 65 and 18, respectively. With regard to the re-organisation of the rural credit societies, out of 16,000 societies about 13,000 had been converted into multipurpose co-operative societies.

The weavers' co-operative societies of which there are 1,017 in the State have conferred many benefits to the weavers. The progress of the societies can be seen from the fact that they have installed a co-operative spinning mill at Guntakal. Subsidies are being paid for the encouragement of cottage industries. A total of 2,080 palmgur manufacturers' societies have been established for employing 1.71 lakhs of ex-tappers.

Medical Relief and Public Health.—An effective fight is being put up in Madras State against scourges like cholera and malaria. The cholera control work has become more effective with the provision of a reserve of hundred health inspectors and four mobile vans for dealing with epidemics.

Remarkable results are also being achieved in the fight against malaria and plague. Thirty-seven anti-malarial schemes are now functioning in 3,600 villages and hamlets in 18 districts covering a total area of 10,000 square miles. The malaria control programme will be extended to other areas this year and in course of time, it is bound to be State-wide.

Medical facilities are also being increased in the State every year. Within the past five years, the bed strength in the hospitals in the State has been increased from 14,467 in 1946 to 21,269 in 1951. Improvement is also being effected in the standard of work done at hospitals by opening specialist departments providing X-ray equipments, starting blood banks and in such other ways.

Treatment facilities for tuberculosis patients are being expanded year after year by opening clinics and increasing the number of beds at hospitals and sanatoria. With the aid of public donations and the contributions given by the Provincial Welfare Fund, sanatoria are being established in several districts.

Industries.—Since 1944-45, the number of Joint Stock Companies in the State has increased from 1,695 to 3,544, oil mills from 349 to 1,192, sugar factories from 14 to 17 and textile units from 67 to 75. The total amount of aid given under the State Aid to Industries Act has increased from Rs. 1,11,500 to Rs. 1,00,91,720; 5,65,857 spindles have also been allotted since 1945.

The lignite deposits in South Arcot District are a valuable asset of this State and the Government are continuing their efforts to exploit this resource. Investigations have revealed the existence of about 2,000 million tons of lignite (brown coal) in an area of about 100 square miles in South Arcot District at a depth of about 175 feet below ground level. The samples of lignite taken, when processed, compare favourably with Grade I coal received from Bengal. A pilot scheme for mining the lignite at a cost of Rs. 79 lakhs has been decided upon. The Government of India have agreed to lend machinery worth Rs. 15 lakhs as their contribution to the working of this scheme.

The Government have recently sanctioned a revised scheme for the survey of cottage and small-scale industries in nine selected areas in this State and the Economic Adviser to Government is in charge of this survey. The survey is expected to be over in about 16½ months. Encouragement to handloom industry is also engaging the earnest attention of the Government.

Khadi Development.—The Government Khadi Scheme is based on a recognition of the fact that hand-spinning on the charkha is a cottage industry capable of being practised widely on account of its simplicity and usefulness and as an off-season occupation for agriculturist families, who have no occupation practically in many areas for nearly eight months in the year. The intensive part of the Khadi scheme was introduced in seven centres in 1946-47. So far 46,300 spinners have been registered and the quantity of Khadi produced in the Government Khadi Centres is 1,378,700 yards. The expenditure under the scheme in the initial years averaged Rs. 10-47 lakhs.

Labour Welfare.—The Government have decided to introduce the working of the Employees State Insurance Act in one centre in the State. The Government of India had suggested that the Minimum Wages Act would have a wholesome effect if applied to areas in the State where wages were abnormally low. Recently certain concessions were also granted for workers in the Government Transport.

Harijan Welfare.—Harijan Welfare has been one of the primary welfare schemes to which the Madras Government have been paying particular attention.

Assignment of house-sites, maintenance of schools, grant of scholarships and stipends, grants for the purchase

of books, slates and clothing are among the ameliorative measures taken by Government. Provision has also been made for wells and tanks for the supply of drinking water, of sanitary amenities, street lights, burning and burial-ghats, and grants to private bodies engaged in the social and economic uplift of the eligible communities. In regard to the provision of house-sites the Government have given a high priority in their programme.

Emphasis is also laid on the educational advancement of the eligible communities. The policy of the Government has been to get the people belonging to these communities admitted in schools already existing in local areas and open separate schools only in places where caste prejudices or other causes existed. Besides separate schools, a number of scholarships and stipends to Harijan pupils are also being sanctioned. The Government are also giving at present grants to the hostels at the rate of Rs. 150 per annum per pupil. The expenditure on boarding grants in 1951-52 was Rs. 20.37 lakhs and it is estimated at the current year at Rs. 22.5 lakhs.

This year so far 4,310 scholarships involving Rs. 5.55 lakhs have been recommended and sanctioned by the Director of Harijan Welfare, which covers Scheduled Castes, Scheduled Tribes and converts to Christianity from among Harijans. Rupees 2,74,000 have been distributed to Collectors for renewing non-residential scholarships to students in their districts. Scholarships involving Rs. 2.58 lakhs have been recommended for Backward community pupils and Rs. 5.70 lakhs have been spent till now for renewal of first instalment of boarding grants to subsidised hostels for Harijans.

Equality in social status has been assured to Harijans by the special law enacted, the Madras Removal of Civil Disabilities Act—Madras Act XXI of 1938 (as amended in 1947), and the freedom of religious worship in temples has been secured by the Temple Entry Authorisation Act, 1947. Strict enforcement of these laws has been observed by the Government, but the complete success of such enforcement can be assured only with the active co-operation of the public of all communities.

Rural Welfare.—The Rural Welfare Scheme which originated in 1946 under the name of Firka Development Scheme was designed to put into practice Mahatma Gandhi's concept of Grama Swaraj. The scheme has been successfully worked in several rural centres and is being extended to more centres. Initially 34 firkas were selected for intensive rural development work in the last quarter of 1946. Later it was extended to 50 additional firkas from 1st April 1950. This year the scheme has been extended to 24 additional firkas lying contiguous to the existing areas. What is being attempted in these firkas is to educate the villagers on the art of self-help, with small grants from the State in providing water-supplies, internal communications, and other common amenities.

The scheme is carried out by using local initiative and local resources to the utmost extent possible in the economic, political and social fields of reconstruction on co-operative lines. Self-reliant, self-dependent and properly organised life in the villages will thus be the aim of Rural Development work. Such work will ultimately lead to the establishment of a just and democratic social order along practical lines. What is being aimed at by the Community Project is only an extension on a more intensive and wider scale, of what is being done under the Rural Development Scheme.

Another programme of the Government actively contributing towards rural reconstruction is installation of Community Radio receiver sets. So far more than 2,100 receiver sets have been installed in the State. The expenditure is usually borne by the local bodies or panchayats, the maintenance alone being undertaken by the Government.

Women's Welfare.—This is a pioneering activity for which the Madras Government can justifiably take credit. The Women's Welfare Department tries to bring light and sunshine into the lives of the less privileged sisters of the community. The Department also aims at the advancement of all women, particularly in the cultural sphere. The trained and selfless workers of the Department inculcate through personal contacts, in the homes of other women, their duties as mothers and also as citizens. Literacy, training in crafts and medical relief are some of the main planks of the activities of the Department. Quite a good number of urban and rural centres are being run by the Department for training women and children in the art of self-reliance. There are 178 centres and 82 branches both urban and rural engaged in this work. The Department has also done creditable work in the Rayalaseema famine areas, by opening work centres in the worst affected areas.

Famine Relief.—The Madras Government had to face an unprecedented situation by the onset of scarcity and near famine conditions in the Rayalaseema area, due to continuous drought over a period of five years. The famine was brought about by failure of crops as a result of continuous failure of rains in the last five years in succession. Only the energetic measures taken by the Government and the wholehearted support of the people have so far averted a major catastrophe.

The first and foremost step taken was to provide employment for thousands of people who found themselves without any means of subsistence since they largely depended on agricultural occupation which became next to nil due to the drought. The State Government lost no time in launching on 'relief works' which could provide employment to the able-bodied. These relief works were in the form of road works, digging of wells, repairing of irrigation tanks, etc., which would also confer lasting benefits to the people.

Such relief works engage able-bodied men and women and provide employment for them. But the countless old and infirm people, children, expectant mothers and other disabled persons have also to be provided with food. For this purpose the State Government have opened 1,878 gruel centres, distributing free gruel (a porridge like food prepared from grains) to more than five lakhs of people a day.

The help of the Army was sought and the Army units did a splendid job in deepening in all 134 wells in the Rayalaseema areas. Though there was a ray of hope when timely rains afforded a short spell of relief in those areas, the South-West Monsoon failed and conditions which promised to brighten up, began to deteriorate. The relief work in Rayalaseema is estimated to cost nearly ten crores of rupees, and the State Government have so far spent nearly six crores.

Community Projects.—The Community Projects in Madras State were inaugurated on 2nd October 1952, Gandhi Jayanthi Day.

(Continued on page 53)

Development Projects in Madras

Irrigation Projects.—Madras State has a perfectly developed irrigation system and particularly so in the Godavari, Krishna, and Cauvery deltas and in parts of Cumbum and Tambaraparni valleys.

9,056,312 acres come under the irrigation system of this State. Of this area 4,625,920 acres are irrigated by Government canals, 50,351 acres by private canals, 2,548,051 acres by tanks, 1,541,676 acres by wells and 290,314 by other sources, as springs, etc.

The major irrigation projects under execution are :—

The Tungabhadra Project is a joint undertaking of the Madras and Hyderabad Governments and will irrigate an area of 2½ lakhs acres and is expected to be completed by the middle of 1953.

The Lower Bhavani Project which is expected to bring about 207,000 acres of land under irrigation in Coimbatore District is expected to be completed shortly.

The Malampuzha Project in Malabar will benefit 45,500 acres and will be ready by 1954.

The Mettur Canals Schemes will irrigate 27,000 acres in Salem District and 18,000 acres in Coimbatore District will be ready next year.

Power Development

Madras State ranks third in power supply, Bombay and West Bengal leading. But, in the matter of hydro-electric power output, the State stands second only to Bombay. Seventy-five per cent of total power output in this State is from hydro-electric stations and the rest from thermal stations.

The Southern Grid comprises the three hydro-electric stations of Pykara, Mettur and Papanasam and the two thermal steam stations at Madurai and Madras. There are three more thermal stations at Visakhapatnam, Vijayavada and Nellore and a number of small diesel electric stations. The transmission system consists of about 6,000 miles of high tension transmission lines and about 5,300 miles of low tension distribution lines. The total installed power capacity in the Government undertakings is 196,079 K.W. and in the licensee undertakings is 1,731 K.W. This power is used by 339,605 consumers in 141 towns and 2,087 villages. Industries in the State used 62 per cent of the power produced. Next came Irrigation and Agriculture using 13.5 per cent. For domestic lighting 10 per cent of the power was used. For commercial purposes 7 per cent of power was used, for street lighting 2.5 per cent, traction 3 per cent and miscellaneous 2 per cent of power.

Seventy-five per cent of the power produced in this State, it would be seen, is consumed by Industries and Agriculture. Thus 75 per cent of power directly helps towards producing more wealth. The industries that use power in this State are :

- 90 textile mills,
- 50 tea factories,
- 5 cement mills,
- 3 rolling mills,
- 2 railway workshops,
- 1 shipbuilding yard,

Besides these, the Madras Electric Tramways and the Southern Railway Suburban traction also get supply from our State Grid.

Future Plan.—Under the five-year plan, the Government have taken up (i) Moyar Hydro-Electric Scheme; (ii) Machkund Hydro-Electric Scheme; (iii) Nellore Thermal Scheme and (iv) Tungabhadra Hydro-Electric Scheme; (v) Extensions to Pykara, Papanasam and Madras Stations. When all these schemes are ready the installed capacity will be doubled in this State.

State Owned Industries

To serve as model institutions and as training centres for technical personnel, Government are running certain enterprises. These industries and other trading schemes are :—

(a) *Industries manufacturing articles needed by Government themselves or public are the following :*

The Kerala Soap Institute, Kozhikode, the Government Oil Factory, Kozhikode, the Andhra Paper Mills, Rajahmundry, the Government Ceramic Factory, Gudur, the Government Silk Filatures, Kollegal, the Government Coir Factory, Beypore, the Industrial Engineering Workshops, Madras, Pearl and Chank Fisheries, and the Government Cinchona Plantations and the Quinine Factory, Naduvattam.

(b) *Public utilities owned by the Government are*—The Government Bus Service and the Government Electrical undertakings.

(c) *The State trading activities are :*

(1) Grain supply schemes which relate to the transactions in rice, wheat, and wheat products, millets, pulses and other grains, sugar, jaggery, groundnut, potatoes, etc.

(2) Purchase and distribution of paddy and other seeds.

(3) Purchase and distribution of manures and fertilisers.

(4) Purchase and distribution of iron and steel for agricultural purposes.

Technical Training

The importance of technical education in this era of large-scale industrialisation can hardly be over-emphasised.

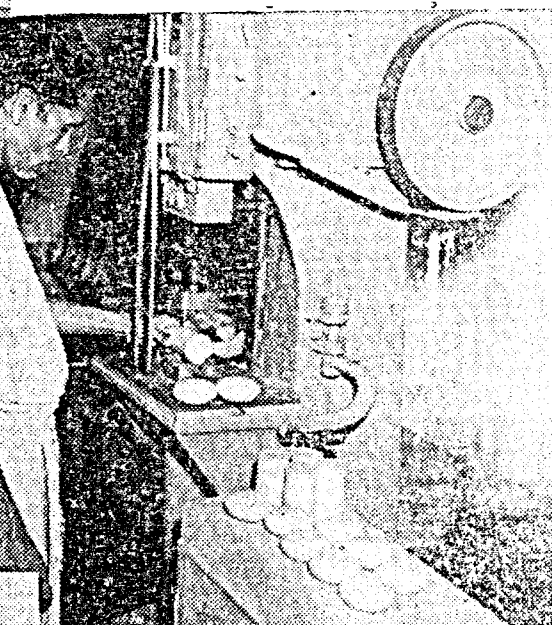
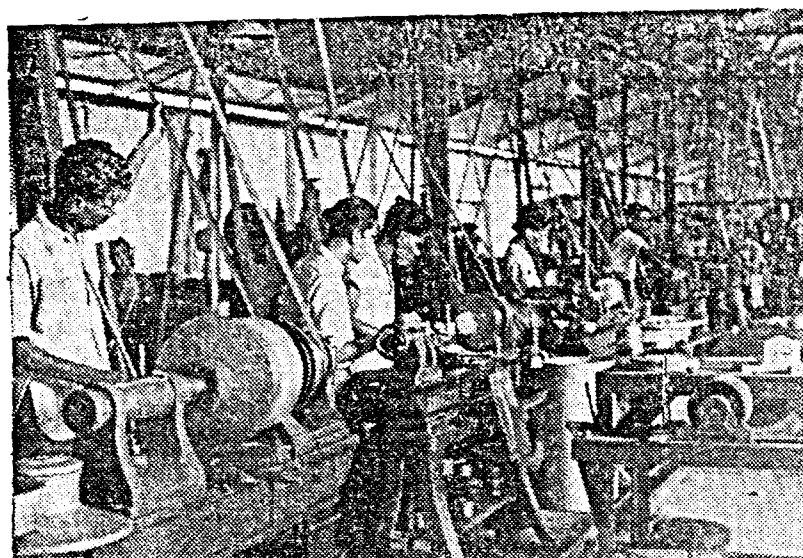
Eight Polytechnics are run by Government at Madurai, Kozhikode, Mangalore, Kakinada, Madras, Bellary, Coimbatore and Vuyyuru. Instruction of Diploma standard is imparted in these institutions in Civil, Electrical, Mechanical, Sanitary, Automobile, Radio and Chemical Engineering, Printing Technology, Food Technology, Fisheries Technology and Navigation, Cinematography and Sound Engineering, etc.

Besides these institutions, the Government are running a number of industrial schools and other training institutions at Madras, Madurai, Kozhikode, Bellary, Mangalore, Coimbatore and Kakinada where instruction of certificate standard is imparted in general mechanism, cabinet making, electric wiring, toy making, light metal casting, etc.

INDUSTRIES

Left (top to bottom): Row of machines in an industrial workshop; At the Government Coir Factory, Beypore; Silk industry at Kollegal.

Right: At the Government Soap Factory, Kozhikode; Women workers in a Coimbatore cotton mill.



The other important industrial institutions in the State run by the Government are:

The Institute of Leather Technology, Madras, which imparts instruction in leather goods manufacture and leather technology.

The Government Textile Institute, Madras, which conducts special courses in weaving, bleaching, dyeing and printing, and knitting, etc.

The School of Arts and Crafts, Madras, which teaches fine arts painting, commercial art, enamelling, jewellery design, carpentry, etc.

The Government Coir School, Beypore, which provides training in coir manufacture.

The Pottery Training Centre at Rajahmundry which trains students in the manufacture of stoneware jars and porcelain utility articles.

The Glass Training Centre at Kalahasti which offers training in the glass bead industry and is the only one in South India.

Labour Welfare Schemes

The problem of Industrial Labour has come very much to the forefront in recent years. The declared policy of the Government is to encourage internal settlement to external ones in industrial disputes. The officers of the Labour Department strive their utmost to settle industrial disputes by conciliation. If settlement by mediation is not found feasible then the dispute is referred for adjudication.

The Madras State has constituted a Labour Advisory Board consisting of representatives of workers, employers and Government for the purpose of referring labour problems for the considered opinion of the tripartite Board.

More works committees as laid down in the Industrial Disputes Act, intended to promote measures for securing and preserving amity and good relations between employees and the workmen, were formed. The importance of these committees is that they associate labour and capital at the basic level, creating a better understanding of each others' difficulties and of the common interests of both.

Unit production committees have been formed in several industrial establishments for promoting the efficiency of workers and improving production.

The Government recently granted certain concessions to the Government Bus Transport Workers. The concessions include payment of gratuity to workers on retirement up till 10 completed years of service, at one month's salary for each completed year of service.

Housing

The problem of housing in the context of increased population has assumed large proportions. Not only in urban areas but even in rural areas, the need for well ventilated cheap houses to replace the old fashioned cottages is felt increasingly.

In this State this problem is tackled with the aid of the co-operative organisations.

A network of co-operative societies is in existence in this State, providing their members with long-term loans for the construction of houses on sites owned by them. Twenty-six thousand two hundred and forty-four members

are benefited by these societies in the State and loans outstanding against the members up to September 1952 roughly totalled rupees three crores.

Industrial Housing

To encourage industrial concerns to build good houses for their workers, the Government of India have sanctioned interest-free loans and a sum of Rs. 9 lakhs has been allotted to this State. The loan will cover two-thirds of the cost of housing schemes for the workers of the concerns, the remaining one-third to be advanced by the employers. The Government have allotted the amount to the following four applicants: (1) Lakshmi Mills, Coimbatore, (2) Andhra Sugars, Limited, Tanuku, (3) Dalmia Cement, Ltd., Dalmiapuram, (4) K. C. P., Limited, Vuyyuru. But the companies have not commenced the construction of houses so far though they were asked to do so.

Subsequently the Government of India finalised a subsidised industrial housing scheme under which they propose to give to the companies 25 per cent of the total estimated cost of the construction of houses including the cost of land as subsidy and 37½ per cent of the total cost of construction including the cost of land as loan at 4½ per cent per annum repayable in 15 years.

Considering that the new scheme is more advantageous to them than the old one, all the companies have expressed their desire to take advantage of the subsidised housing scheme, abandoning the old scheme. As the companies whose plans, etc., were approved by the Government of India under the old scheme dropped out of the scheme, the Government of India have been informed that no progress can be achieved under that scheme. The first company to drop out of the old scheme in favour to the subsidised scheme is the Dalmia Cement (Bharat), Limited, and their application has been recommended to the Government of India for consideration. The application of the K.C.P., Ltd., Vuyyuru, also is being forwarded to the Government of India for approval. The applications of the Andhra Sugars, Ltd., and the Lakshmi Mills, Ltd., are under examination.

Canna Fibre as a Jute Substitute

Canna orientalis can be a source of both starch and fibre, according to the results of investigations recently undertaken at an industrial laboratory in Calcutta.

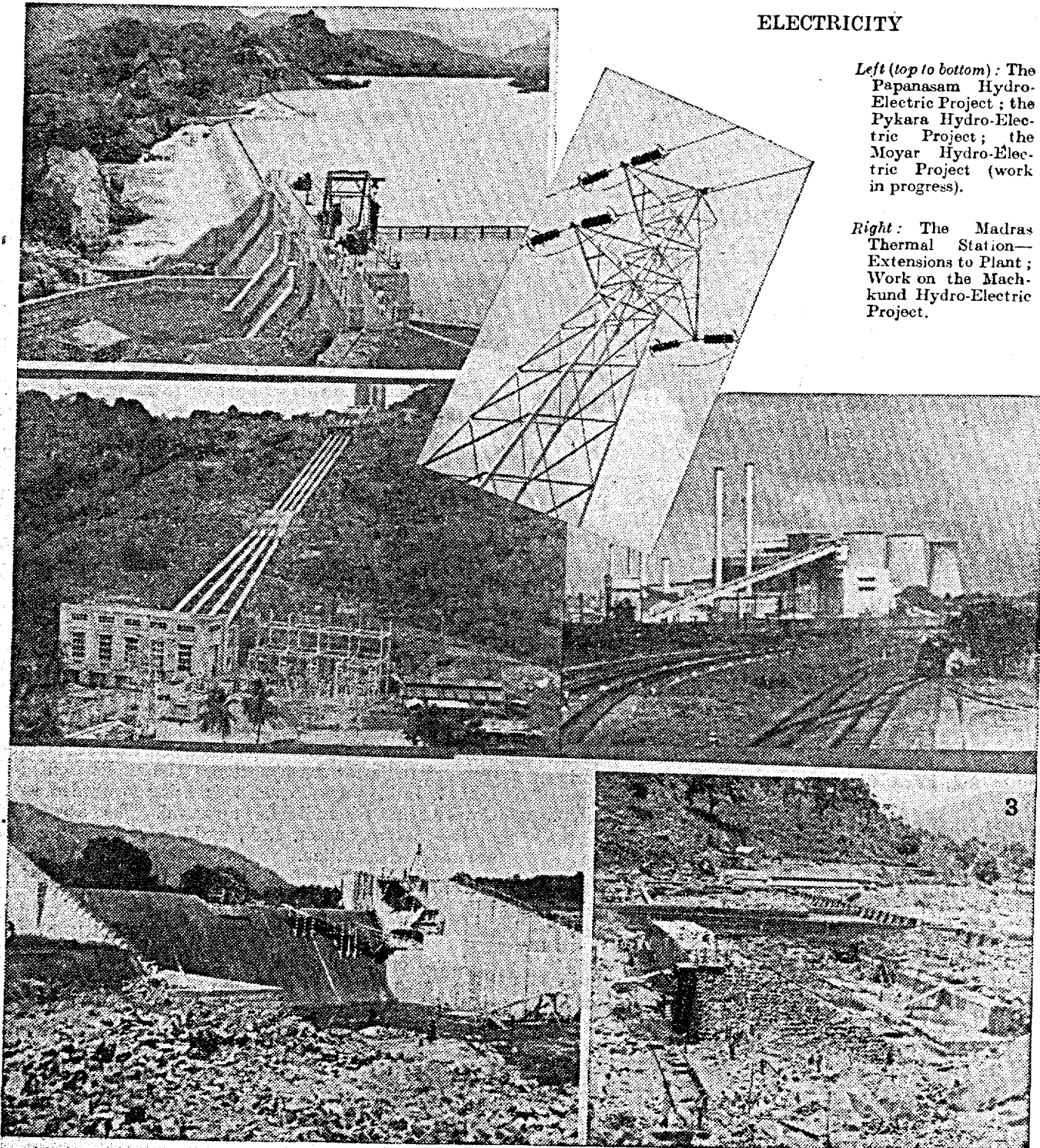
Canna orientalis and Canna edulis are cultivated in India and in other tropical, sub-tropical and temperate countries. Unlike the more common fibre yielding plants, these species are perennials and require replanting only once in four or five years. The plants grow well in warm and rainy regions and in marshy lands where the soil is sufficiently sandy to allow rapid spreading of rhizomes. Canna orientalis can be a source of both starch and fibre and it can be grown on land unsuitable for the cultivation of jute or rice. The plant grows quickly and the stem can be retted to yield fibre which can be used along with jute in the production of fabrics. The fibre can also be used for the production of paper pulp and viscose.

The results of the investigation are reported in the December issue of the *Journal of Scientific and Industrial Research*.

ELECTRICITY

Left (top to bottom): The Papanasam Hydro-Electric Project; the Pykara Hydro-Electric Project; the Moyar Hydro-Electric Project (work in progress).

Right: The Madras Thermal Station—Extensions to Plant; Work on the Machkund Hydro-Electric Project.



Effects of Food Decontrol

By DR. B. NATARAJAN, Economic Advisor to the Government of Madras

A momentous step in the history of food administration in this country was taken on June 15th last, when the Government of Madras decided to decontrol. There was little doubt that it was received with a sign of relief and even some jubilation by the vast majority. It is now about six months that the liberated economy has been in working, and it is too soon yet to attempt an assessment of some of the major effects of the measure. But there has been such wild guesses and strange rumours of price rises, often conjuring up for a parallel the lurid picture of conditions that followed the decontrol measure of November 1947, that some factual data will be worthwhile.

Consumption Maintained

Firstly, there is the problem of transition. The transition from an over-rigid control economy to a free one has to be effected smoothly. There was to be no violent dislocation of market and no upsurge of anti-social cornering of production. Towards this end, the fair price shops were let in to take the place of ration shops. These fair price shops have not only made increased supplies available, but have also made them uninterruptedly. The average monthly offtake from these shops has increased by 12.5 per cent. The maximum number of cards registered with fair price shops has also increased from 500 to 750 and, on the whole, there has been no total reduction in the number of cards, offtake and consumption. The per capita consumption has been maintained and the scale of rations has remained the same as in the last year. In other words, the precautionary steps taken in the decontrol transition have been ample and unreserved.

All this has been effected, in spite of the fact that the total supplies including imports in 1951-52 have been less than that of the previous year by 400,000 tons. Stocks have come to the rescue, but they have not been depleted to any dangerous extent. In 1952 they varied between 195,000 tons to 632,000 tons. This is a much better position than in the previous control period when they varied between 132,000 tons and 518,000 tons, and definitely better than in the year 1951 when in the last weeks of the months stocks varied between 176,000 tons to 341,000 tons. The rice portion in the foodgrains reserve is also better than in the corresponding month of the last year.

Prices Sober

Contrary to all expectations, prices have not shot up abnormally this time. On the previous occasion during the decontrol interlude of December 1947 to November 1948, prices of rice shot up in all places by over 100 per cent in five months from 105 per cent in Manaparai to 163 per cent in Ramanathapuram. The price of cholam rose from 156 per cent in Rasipur to 329 per cent in Perundurai and of cumbu from 111 per cent in Namakkal to 282 per cent in Perundurai. As against this, the behaviour of prices this time is highly sober. The open market prices today are lower than the black market prices that prevailed prior to decontrol in several centres. In Yellamanchili it is now Rs. 19-8-0 per maund against Rs. 20-12-7 in the black market in May 1952, in Chittoor District it is Rupees 25-8-0 against Rs. 30. In a few centres, the price has

risen but the highest rise is in surplus districts where there is a great buying pressure; for instance, the price has risen from Rs. 16 to Rs. 23 in Eluru, from Rs. 15-12-0 to Rs. 21-6-0 in Narsapur in December 1952 (West Godavari), from Rs. 18-5-0 to Rs. 27 in Tanjore or about 50 to 55 per cent.

In Bellary there is a decrease from Rs. 45 per maund of rice in the black market prior to decontrol to Rs. 27 in the open market and in Cuddapah from Rs. 32 to Rs. 24 (on 6th December 1952).

The conclusion is obvious. In most deficit centres prices are coming down. The only place where prices have notably risen are in the surplus areas and even here, it has been only 50 to 52 per cent as against 200 per cent last time. There is hardly any cause for concern at these sectional rises. It is an evidence of the law of demand and supply asserting itself with the lifting up of inter-district ban on movements. The consumers in deficit areas suffering for long have definitely found much needed relief. And in the surplus areas the rise is the passing phase occasioned by temporary causes. The equilibrium is bound to be reached ere long.

Working Class Cost of Living Unaffected

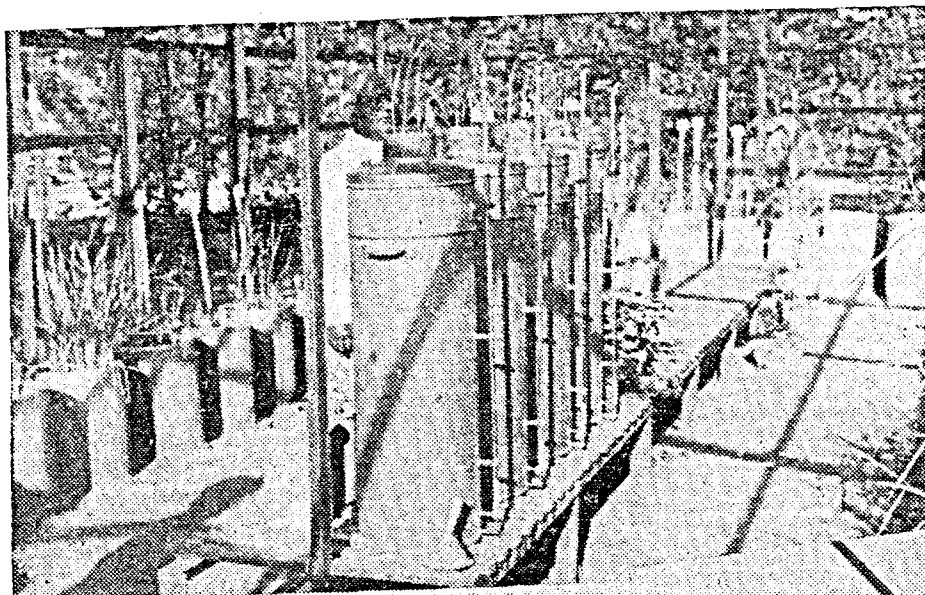
Cost of living has closely followed the price level. In the brief decontrol period from December 1947 to November 1948, the cost of living index number for working classes in Madras City registered a sharp rise. It was 284.5 in the pre-decontrol month of November 1947 and rose to 322.9 in December 1948 or by 38 points. In Visakhapatnam it rose from 293.7 to 357.9 or by 64.2 points. In Eluru it rose from 333.8 to 392.2 or by about 60 points. In Cuddalore from 311.8 to 376.4 or by 65 points. In Tiruchirappalli from 305.3 to 380.3 or by 75 points. In Madurai from 302.6 to 353.4 or by 51 points. In Coimbatore from 307.5 to 354.6 or by 47 points. In Kozhikode from 350.7 to 408.9 or by 58 points. In the mofussil urban centres the rise in cost of living index has varied from 47 points to 75 points. After the present decontrol, the cost of living index has remained almost the same in two centres, Madras City and Coimbatore. It has fallen by 1 to 12 points in three centres and has risen only in four centres by 1 to 23 points.

In Madras City the cost of living index number has risen from 329 in May to 331 in July and has now come back to 327 in December 1952. In Visakhapatnam it has risen from 353 in May to 379 in November or by 26 points. In Eluru, it has fallen from 443 to 439 or by 4 points. In Bellary it has fallen from 387 to 372 or by 15 points. In Cuddalore it has risen from 360 to 370 or by 10 points. At Tiruchirappalli it has risen from 347 to 369 or by 22 points. At Madurai from 354 to 382 or by 28 points. At Coimbatore it has been 401 in May and 402 in November. At Kozhikode it was 435 in May, 444 in August and declined to 434 in October and November or a fall by one point.

The announcement by the Government of India of the withdrawal of food subsidy has made March a crucial month in respect of studies of food prices and cost of living



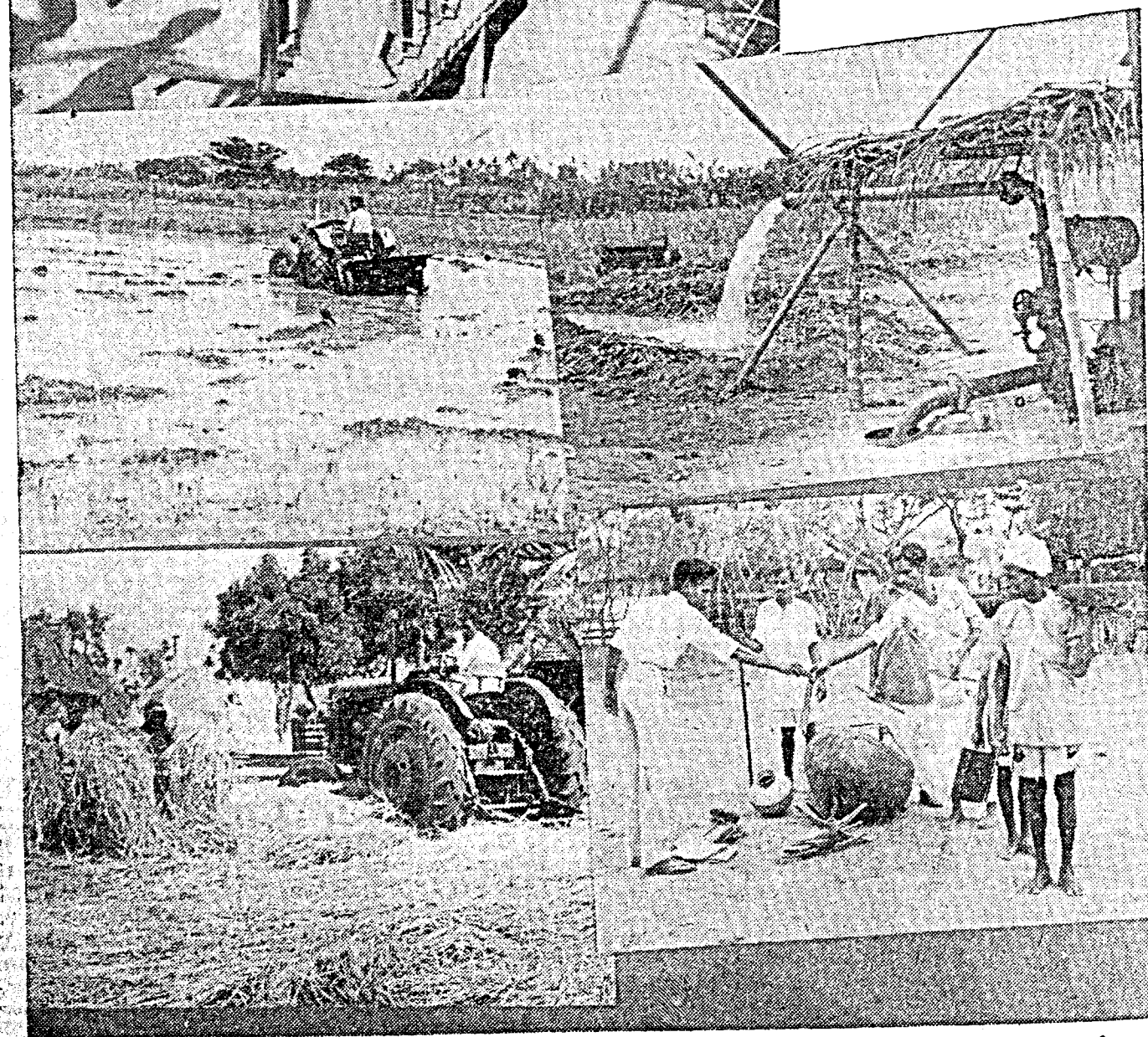




AGRICULTURE

Left (top to bottom): Agricultural research at Coimbatore; Puddling by tractor in wet fields; In mechanised farming threshing is done by tractor.

Right: Pumpset for irrigation; Distribution of improved types of implements to agriculturists.



index numbers. The percentage rise in November 1952 in the cost of living index with March 1952 as base is tabulated below :—

	Madras City.	Visakhapatnam.	Eluru.	Bellary.	Cuddalore.	Tiruchirappalli.	Madurai.	Coimbatore.	Kozhikode.
March ..	333	355	446	390	364	350	355	407	433
November.	328	379	439	372	370	369	382	402	434
Rise or fall in points.	— 5	+ 24	— 7	— 18	+ 6	+ 19	+ 27	— 5	+ 1
Percent- age of difference.	— 1.5	6.76	1.57	4.61	1.65	5.43	7.6	1.23	0.23

According to a recent computation, the average amount of ration drawn from the fair price shop is 8.99 ounces out of the daily-adult intake of 12.36 ounces. (This estimate is based on the real offtake by registered cardholders from the fair price shops.) This means that 3.37 ounces of the daily adult intake of cereals come from the open market, obviously at a higher cost. Even if this higher cost is taken into account, the cost of living index number would rise by about 23 points or by 7.3 per cent.

This of course does not take into account the fact that the consumer would have in the pre-decontrol days gone into the black market to supplement his official ration. Then he would have paid much more than what he pays now in the open market as may be seen in Bellary, Cuddapah and other centres where open market price of today is about 40 per cent below the black market prices that ruled before. If the cost of living index number is revised to include this factor in the control period, apart from being a rise, there will be a fall.

Have States which have not Decontrolled Fared Better?

Cost of living index has risen by 12.38 per cent in Kanpur (surplus State), by 9.06 per cent in Bombay (deficit State), 6.2 per cent in Delhi and 6.96 per cent in Jubbulpore (surplus State) and 1.35 per cent in Ludhiana (surplus State) and 7.06 per cent in Calcutta. In Madras City alone it has declined by 1.5 per cent. In the eight mofussil urban centres in Madras State for which cost of living index numbers are constructed, the highest percentage rise is 7.6 per cent in Madurai as shown earlier. This is a clear proof that dangers predicted from a policy of decontrol have not materialised in Madras State even in the months prior to the kuruvai harvest in Tanjore known as the most critical period in the Food Year.

Madras has been the first to decontrol and some other States like Bihar, Uttar Pradesh, Madhya Pradesh and Hyderabad followed. The effects of decontrol in Madras would be best understood by comparing the variations in the cost of living indices in Madras City with some centres in other States in the Indian Union. Price of foodgrains has been influenced by two important factors since March 1952, (1) the withdrawal of subsidy estimated at Rs. 26 crores in the interim budget and at Rs. 10 crores in the revised budget and (2) decontrol. The direct and immediate consequence of the former is to push up the price of foodgrains, a phenomenon that happened all over the country; this increase, almost in proportion to the sub- withdrawn, is of universal significance. But the

effects of the latter, viz., decontrol, would be noticed only in the States that have decontrolled. If decontrol had taken off the bid over prices and prices have really soared, the cost of living index would obviously sustain a second increase wherever decontrol has taken place. Elsewhere there would be only one increase. A comparison of the cost of living in various centres in India with Madras would throw light on the magnitude to which decontrol has been responsible for rise in prices, if any :—

	March 1952.	September 1952.	Percentage rise (+) or fall (—).
Madras ..	333	328	— 1.50
Bombay ..	298	325	+ 9.06
Calcutta ..	340	364	+ 7.06
Kanpur ..	412	463	+ 12.38
Nagpur ..	378	380	+ 0.53
Delhi ..	355	377	+ 6.20
Jubbulpore ..	145	155	+ 6.90
Ludhiana ..	148	150	+ 1.35

It is well known that in the past control has been responsible for distorting the price level as between foodgrains and commercial crops and so diminished the lands under foodgrains. It is a truism to say that a freer market awakens more of the peasant's incentive and energy. Between 1946-51 the acreage under foodgrains in Madras decreased by one million and in Mysore by 400,000 while in Bihar it increased by four millions and in U.P. and Punjab by one million. It is too early now to assess the effects of the decontrol measure on acreage and production.

Also it is difficult just now to associate the effects of natural factors like the late arrival of the north-east monsoon and the fury of the cyclone from other factors purely economic, but already the bridge between price levels of foodgrains and commercial crops is getting narrowed, presaging a reversion to a healthy balance in land utilisation.

Sale of Rice in Madras City

The Government have had to increase the selling price of rice in Madras City recently. This is due to the fact that they are importing high priced rice costing over Rs. 20 per maund from Punjab and Madhya Pradesh. Transport and incidental charges all the way from Punjab and Madhya Pradesh to this State also add considerably to the cost. As it is not possible to subsidise the sale of this rice, the Government have directed that the rice imported from Punjab which is now being sold through fair price shops in the City should be released on a no-profit no-loss basis. This accounts for the increase in the selling price of first sort rice in the City.

The Government also wish to announce that with immediate effect, they have decided to reduce the selling price of wheat, so that it may be available to the consumers drawing rations through fair price shops at a price of about Re. 0-10-0 per Madras measure. Though the Government stand to lose a large sum by this reduction, they have decided on this course in order to popularise the use of wheat by the public of this State. They are also taking steps to convert a small quantity of wheat into brokens for supply through fair price shops and if the offtake is encouraging, they propose to adopt this practice in future. (December 23, 1952.)

The Library Movement

By SRI R. JANARDHANAM NAIDU, B.A., L.T., D.E. (Oxon.), D.L.S. (Lond.), F.L.A.
Librarian, Madras University Library

A library is an institution for self-education. In the schools and colleges the students learn the methods to acquire knowledge. When they leave them they have to make use of these methods for the gathering of more and more knowledge throughout their lives. They should, therefore, be provided with institutions to which they can resort, where they can obtain books and periodicals either to read within them or to borrow books for home study; otherwise, the vast sums of money spent by the Governments of the States and the energy and the time put forth by the students will prove an utter waste, as most of them for want of provisions to keep alive their knowledge will soon lapse into partial or total illiteracy. Such institutions go by the name of libraries, that is, places where are kept stored books and periodicals arranged according to a system. The library movement aims at impressing upon the people of any country the need to establish libraries throughout its area in proper form for them to acquire more and more knowledge and thereby to progress steadily all round from day to day.

As regards the genesis of the library, it is seen from the history of the world that quite a long time ago man began to record in an indelible form his observations and experiences for the benefit of his contemporaries and posterity. At least between 20 and 30 thousand years ago or even much earlier than that, Old Stone Age men depicted on the cave walls of the hills several aspects of the life which they saw around them. About 5,000 years ago man began to make use of written language and with the discovery of more and more materials for writing down their history, they began to collect their written records. It is very probable that these collections were at the outset gathered and preserved by priests in their temples as well as by kings in their palaces. There is evidence to show that such collections date back to 2,500 years ago. These collections may be taken as ancestors to what came to be known later as libraries.

Rapid Multiplication of Books

With the birth and growth of different kinds of culture and the rise and fall of one civilisation after another, the volume of the record of man's history went on increasing and that led to the vast increase of the collections gathered and preserved in temples and in palaces. These collections included clay tablets, papyrus sheets and parchment rolls. In the 11th century man invented the art of the manufacture of paper which was followed by the invention of printing press from moveable types in the 15th century. These two inventions, the first affording a cheaper and easily available material for preserving knowledge and the other opening the unlimited possibility of multiplying books rapidly at a cheaper cost, enormously increased the number of printed material which had to be looked after. Naturally, therefore, places for the functions such as the proper purchase, classification, cataloguing and making available to the public for use and return, of the printed materials became indispensable. These functions have been steadily developed and greatly improved during the past few hundred years.

Notwithstanding the long history of the written record, as shown above, libraries and librarianship as we know them today date only from the last century. In the United Kingdom the library movement began to function actively with the passing of the First Public Libraries Act by the Parliament in 1850, the centenary of which was celebrated in 1950. In the United States of America also, the movement started at about the same time as in the United Kingdom. It was towards the close of the 19th century that both these countries started a university course for the training of librarians.

Trained Librarians Needed

The library movement can be successful only in the countries wherein the librarians are adequately equipped with the technique needed for the profession. Due to the large increase of printing presses books have enormously multiplied and are multiplying. Departments of knowledge have greatly increased during the last and the present century. The view as to how a library is expected to function has also changed. A library is no longer a place for the protection and preservation of books for the few: it is an educational storehouse of knowledge, guiding and inspiring many. Like the followers of other professions, a librarian has to acquire knowledge for his profession only by formal schooling and not by mere apprenticeship. It has been found by over half a century of library service in advanced countries that if a modern library is to prove it is not a mere collection of books but that it should give guidance and inspiration to readers, it must employ a formally trained librarian well equipped for his profession, as also the other members of the library's technical section.

In a country where the library movement is a success any library in it can come forward boldly with the following utterance:—

"There is no segment of the population, whether considered by age, religion, occupation, personal interests, sex, political belief, or social or economic level, which the library cannot and should not reach; in this respect at least the potentialities of the library are second to those of no other social institution in the structure of the society. The child, the youth and the adult; the labourer, the businessman and the savant; the rich and the poor; the devout and the disbeliever; the liberal and the conservative—all these may be expected to seek in the free library, information, education, guidance and recreation."

Way to International Understanding

If the library movement is successfully established in every country it can easily yield the means to create and to ensure a stable, peaceful world by bringing about good international understanding in the way quoted below:—

"This means that people everywhere must be given an opportunity to become intelligently informed about other countries and about the great social, economic and political questions and problems of our times. The modern library adequately staffed and stocked, is in a unique position to make a vital contribution to their great

cause, for nowhere else can the citizen expect to find full and impartial information. The role and value of the library assumes, thus, a peculiar significance in the world today."

In a country where the library movement has realised its mission the librarians working in it perform the following duties:—

(1) They make printed matter of all types (books, periodicals, pamphlets, maps, legislative reports and historical documents) readily available for the use of students, research workers, legislators, Government officials and the public generally. (2) They investigate the reading interests and demands of the people served by the library, and adjust the services of the library to suit the needs of the community. (3) They publicise the library services by means of bulletins, bibliographies and newspaper announcements. (4) They select and purchase books and other materials; use established methods for classifying, cataloguing and circulating books; and assist readers to find books and information best suited to their individual interests. (5) They help children and young people in or out of school to broaden their acquaintance with books and to acquire a taste for reading. (6) They give special service to adults as to which books may entertain them or give them desired information.

Movement takes Firm Root

The library movement in the State of Madras, thanks to the indefatigable efforts of the different library associations

New Personnel for Import Advisory Council

The Government of India have nominated the following persons to serve on the reconstituted Import Advisory Council:

- 1 Sri L. D. Kilikar (Cochin).
- 2 Sri C. C. Saha (Calcutta).
- 3 Sri K. R. Sundaram Iyer (Madras).
- 4 Sri Mohamed Yusuf (Calcutta).
- 5 Sri S. M. Shah (Bombay).
- 6 Sri T. K. Gupta (Bombay).
- 7 Sri K. E. Chandran (New Delhi).
- 8 Sri Z. R. Irani (Delhi).
- 9 Sri Shrinivas Mallaya (New Delhi).
- 10 Sri Prabhudayal Himmatsinh (Calcutta).
- 11 Sri H. R. Moharary (Hubli).
- 12 Sri E. P. W. Da Costa (New Delhi).
- 13 Sri Shridhar V. Naik (Hyderabad-Deccan).
- 14 Sri A. R. Bhatt (Poona).
- 15 Sri P. A. Narielwal (New Delhi).
- 16 Sri S. Venkatarangam (Madras).
- 17 Sri A. R. MacGillivray (Calcutta).

in the State, has taken a firm root. As the result of that the State passed the Madras Public Libraries Act in 1948 and the provisions of the Act came into force in April 1950. According to the provisions of the Act the City of Madras and all the districts are empowered to levy a library cess of six pies in the rupee on the property tax raised by the Corporation of Madras, the Municipalities and the Panchayats. The State Government contributes to each district except to the City of Madras a grant equal to the money raised by way of cess referred to above.

The districts have begun to make use of the provisions of the Act. In every district there is a committee known as the Local Library Authority to give effect to the provisions of the Act, to establish libraries throughout its area. The Director of Public Instruction, who is the ex-officio Director of Public Libraries, assisted by the Special Officer for Libraries, is the executive authority to see if the libraries functioning in the State comply or not with the provisions of the Act. There is also the State Library Committee of which the Minister for Education is the President, to give such guidance as may be necessary for the efficient working of the Act. If the provisions of the Act are properly availed of then the library movement in the State is bound to do a lasting service to its people.

More Books and More Benefactors

The library movement in the State of Madras or for that matter in the whole of India can yield the best results, as indicated above, provided the following services are also rendered to the movement: (1) The present supply of books and periodicals in the indigenous languages is quite inadequate to meet the demand. Learned authors have, therefore, to come forward in large numbers to write books and periodicals in regional languages on literary and on scientific subjects to suit the needs of young and old, the scholars and the lay public, for light reading and for intensive study. (2) Another service required is, help from the generous public to contribute the much needed finance for bringing out publications by authors who come forward with valuable manuscript treatises, as well as gifts of books and buildings to the libraries.

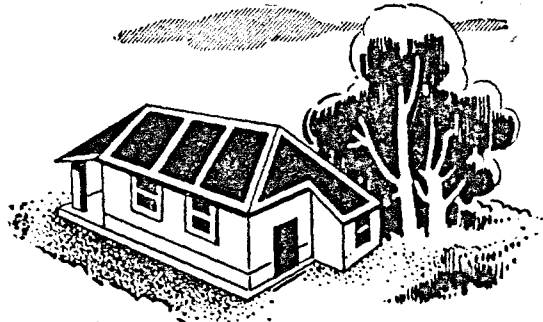
The funds at the disposal of the States can never be adequate to meet such growing demands. In advanced countries like the United Kingdom and the United States of America the library movement has done much yeoman service to the people of the land on account of the munificent benefactions generously bestowed upon the movement by philanthropists like Andrew Carnegie and others. India eagerly expects her generous benefactors to come forward to confer upon the people of the land several gifts to give the much need momentum to the library movement so that the library service in this land may be as efficient as in any other advanced country in the world.

Sale of Salt in Madras City

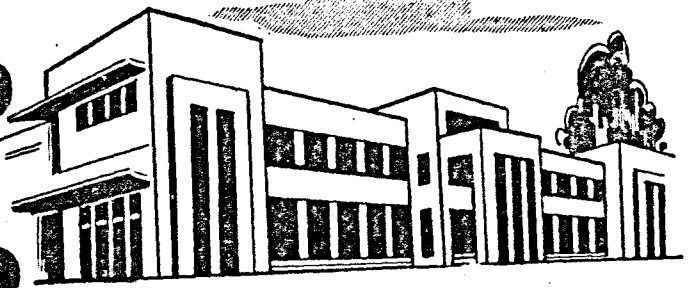
The Government have directed, under the Madras Weights and Measures Act, 1948, that with effect from January 1, 1953, no transaction, dealing or contract relating to the sale of salt in the City of Madras shall be made or had except by weight only and that no weight other than the weights specified in Part I of the Schedule to the said Act and that no weighing instrument other than that defined in Section 2 (6) of the said Act, shall be used.

A PAGE FROM AN ARCHITECT'S DIARY...

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Approach to Labour Welfare

By SRI C. G. REDDI, Commissioner of Labour, Madras

Labour welfare is an essential and integral part of social welfare. Such welfare is in the interest of society. The health and happiness of such a large productive sector of the community has become one of the important responsibilities of the State. The approach to this problem must be scientific and practical and must take into account the conditions and circumstances as they exist today.

There are very few indeed to question the need for such welfare. The present system of production has resulted in a worker being regarded as a commodity rather than as a human being. Insanitary living conditions, lack of opportunities for recreation and development, and facilities for proper education and healthy living are some of the more important things to which increasing attention has to be given.

Investigation and Legislation

Labour welfare as such is of recent origin in our country. In the early years of industrialisation, little or no attention was given to the amenities for labour and in those days it was characterised by longer hours of work, low wages, bad working and living conditions and absence of any welfare facilities. Such miserable conditions as these led to many labour investigations which in turn resulted in the enactment of legislation to control hours of work, to prohibit employment of children and to provide for the regular payment of wages. The Factories Act, the Indian Mines Act, Workmen's Compensation Act, the Maternity Benefit Act and Payment of Wages Act are some of the early enactments which deal with these problems. The scope and object of legislation have been gradually extended. In the very nature of things, legislation has so far sought to obtain the minimum benefits to them and have mitigated to some extent the extreme hardships to which workmen were subject.

Some enlightened industrialists have taken great interest in providing housing and various other amenities to their workmen, but their numbers are very few. A majority of the employers have yet to accept labour welfare work as an integral and indispensable part of industry. Labour welfare in our country is yet feeling its way. The meagre progress so far is largely due to lack of a scientific and practical outlook, the suspicious attitude of the workers, the lack of requisite amount of co-operation from the employers, the inadequate resources of the State and the dearth of trained welfare workers.

Agencies for Welfare Work

The future programme in regard to labour welfare must first determine the objectives and fix the agency which has to provide for the welfare of the working class. The employers, trade unions, Governments, local bodies and other public organisations should all take a leading part in this activity. The State has already shouldered this responsibility, and this no doubt is a step in the right direction. Welfare work so far has been inspired by the anxiety to conciliate and placate labour. Though this may show an appearance of success, in the long run it has no chance to succeed as it lacks the essential spirit of welfare work.

Welfare activities ultimately are bound to raise the efficiency of workers and place industry on a secure basis, but the real urge should be to help the worker to get over the hindrances and handicaps and realise his personality and make him a worthy citizen. Such welfare work can flourish only in an atmosphere of mutual trust and goodwill. The workers must participate in this activity and this they will do when they have confidence and appreciate the sincerity behind such programmes. The employers must therefore accept labour welfare work as an integral part of industrial management and recognise the dominant part played by labour.

Low wages and want of leisure are the two factors which can never enable the workers to maintain a decent standard of life and can never provide the opportunity to devote their time to education, cultural and social life.

Export Advisory Council Reconstituted

The Government of India have nominated the following persons to serve on the reconstituted Export Advisory Council:

- 1 Sri K. P. Madhavan Nair, Ernakulam.
- 2 Sri Nazir Hussain, Madras.
- 3 Sri T. M. Rangachari, Madras.
- 4 Sri Maddi Sudarsanam, Madras.
- 5 Sri Ratilal Mulji Gandhi, Bombay.
- 6 Sri Ramdas Kilachand, Bombay.
- 7 Sri Neville N. Wadia, Bombay.
- 8 Sri D. C. Kothari, Madras.
- 9 Sri Jehangir P. Patel, Bombay.
- 10 Sri Naranji L. Kara, Bombay.
- 11 Sri M. Somappa, Yemmiganur.
- 12 Sri W. B. Moneur, Calcutta.
- 13 Sri W. A. Foges, Bombay.
- 14 Sri Shree Lal Agarwal, Calcutta.
- 15 Sri S. C. Gupta, Calcutta.
- 16 Khwaja Ahsanullah, Trade Commissioner to Jammu and Kashmir Government in New Delhi.
- 17 Sri Lachmi Chand Challani, Secunderabad.

Several Steps taken by Government

In the brief space of this article, an attempt is made to give a short review of the several steps taken by the Government in this direction. The earlier Factory Acts confined themselves to merely limiting hours of work, prohibiting employment of children and night employment of women. Enforcement of even these limited provisions was not effective on account of paucity of the inspecting staff. In course of time, this defect has been remedied and now in every State, there is a full-fledged Factory Inspecting Service. The general provisions of the Factories Act, 1948, for the larger factories, have resulted in bringing the standards of safety and of the safe working of plant up to the accepted standards of industrial nations of the West not only in the safeguarding of dangerous machinery but also in securing safe methods of working in the case of hoists and lifts, lifting gear, safe means of access to places of work, protection against dangerous fumes and dusts and explosions of gases and vapours.

It is now necessary that plans must first be submitted for approval to the Chief Inspector of Factories when new factories are constructed or any extension or alteration made to existing factories. This would enable the Factory Inspectorate to see that the erection of new factories should not only be on sound economical and efficient lines but that they should fulfil modern requirements that make for the safety, health and comfort of their workers. Provision has also been made for a more adequate examination of young persons before they can be employed by requiring that the Certifying Surgeon must see or be familiar with the actual place of work and the processes in which the young person is to be employed. Workers in certain specified dangerous processes are to be protected by periodical medical examination and strong provision is made to control processes that are known to produce industrial diseases, and powers are given to State Governments to extend these provisions by regulations.

Enforcement of Regulations

That part of the Act dealing with welfare is most important in our country, as the workers are still unable to look after their own interests on account of widespread illiteracy and the absence of strong trade union membership. It is now obligatory to make provision for pure adequate drinking water in all factories. Definite requirements regarding sanitation, accommodation, washing facilities, canteens and rest places have been laid down and a higher standard fixed. Establishment of Welfare Officers is also compulsory where the number of workers employed justifies such provision. The carrying out of these provisions, as well as those set out in many other sections of the Act, will depend mainly on the internal supervision provided for in the factory.

Government supervision can never provide the detailed day-to-day inspection that is required for the maintenance and proper use of the safeguards and amenities required under the Act. To provide for such supervision, power has been given to State Governments to require the appointment of such officers in the factories where it is considered essential. The question regarding the number of Welfare Officers to be employed, their duties and qualifications for such posts is under the consideration of the Government.

Most forms of employment involve some risk to limb or life; and workmen and their families are given by the Workmen's Compensation Act insurance against the financial effects of accidents. It is obligatory on the part of the employer to compensate workmen for injury by accident or industrial disease. The Employees State Insurance Act, 1948, provides to a limited extent medical benefits to workmen during periods of sickness and cash benefits during such periods. The Employees State Insurance Corporation with a Director-General, consisting of representatives of Central and other State Governments, employers and employees has been established, and the scheme has been brought into force in Delhi and Kanpur in the first instance. Regional offices have been set up in all States and it is expected that the benefit provisions of the Act will be brought into force in all parts of the country in the next few years.

Under the Minimum Wages Act, 1948, minimum wages have been fixed by State Governments in respect of the following scheduled industries :—

- (1) Employment in any woollen carpet making or shawl weaving establishment.
- (2) Employment in rice, flour or dhal mill.
- (3) Employment in any tobacco (including bidi making) manufactory.
- (4) Employment in plantations.
- (5) Employment in oil mills.
- (6) Employment under local authorities.
- (7) Employment in road construction and building operations.
- (8) Employment in stone breaking and crushing.
- (9) Employment in mica works.
- (10) Employment in public motor transport.
- (11) Employment in tanneries and leather manufactories.

In respect of agriculture, draft minimum rates have been published calling for suggestions from the public. Enforcement of this Act has been entrusted to the Factories Department.

The idea of constitution of Welfare Trust Funds in all industrial units has been engaging the attention of the Government for some years past and it was not possible to make constitution of such funds a statutory liability on account of disagreement between capital and labour. Government have commended this idea to industrialists for their acceptance and it is hoped that before long a definite percentage will be set apart for the provision of the various amenities to workmen.

Housing and Education

The provision of housing and the responsibility to provide educational facilities have been cast on the employer under the Plantation Labour Act of 1951 for the first time. Though the Act has not yet been brought into force this is a pointer to show which way the wind is blowing. The present depression in the Tea market has of course resulted in the employers demanding postponement of the implementation of the Act. The Conference on Plantations held at Calcutta considered the problem and recommended that Government should explore other ways of helping the Tea industry and that it should not delay the implementation of the Act.

Housing is one of the most essential requisites for a decent standard of living to labour and this subject has been engaging the attention of both the Central and State Governments for some years now. The Central Government have now finalised a scheme known as the "Subsidised Industrial Housing Scheme" under which the Central Government grant 50 per cent of the actual cost of construction including the cost of land as subsidy and the remaining 50 per cent of the cost as loan repayable in 25 years, at 4½ per cent interest if undertaken by State Governments or Statutory Housing Boards, and up to 25 per cent of the actual cost of construction including cost of land as subsidy and 37½ per cent of the cost of the construction repayable in 15 years as loan, if undertaken by private employers. They have also laid down certain standards of accommodation and also limited the cost of the tenements for the purpose of calculation of the amounts to be given as loans or subsidies. The Central Government have also fixed the rent to be charged for the houses constructed. A sum of Rs. 9 crores has been set apart for this purpose. In our State several concerns have taken advantage of this scheme.

Welfare Centres for Workers

The State Government had also a proposal to start Welfare Centres in the three big industrial cities of Madras, Coimbatore and Madurai, to provide recreational facilities like indoor and outdoor games and medical facilities in the shape of a mobile dispensary and also to have classes for the training of workers' wives and children in certain handicrafts like tailoring, knitting, etc. On account of financial stringency Government had to defer the implementation of this proposal for the time being.

With the amounts given as a grant by the Central Tea Board for the benefit of the plantation workers, proposals have been submitted to Government to set up a demonstration centre at Kullakamby, Nilgiris District, and train workers in basket making. A Lady Welfare Officer has been specially posted at Coonoor to study the conditions of labour in plantations and to be in constant touch with the managements for the improvement and extension of the existing welfare facilities.

Towards Peace and Progress in Industry

Some employers have in their turn given greater attention to the problem of labour welfare and of their own accord provided housing and other facilities to their workmen. The Co-operative Housing Colony at Harvey-patti (Madurai), established by the Madura Mills, Ltd., is often held up as a model for the other managements to follow. The management of the A.C.C. have constructed a model canteen. They have also provided a cinema and playing fields for their workmen. A large percentage of their workmen have been provided with rent-free quarters. Similar facilities have been provided by several employers and the details are found in Appendix III to the Administration of the Factories Act for 1950.

A review of what has been done in this State by Government and employers in regard to the welfare of labour shows only how much still remains to be done. Labour is increasingly coming into its own. The employers should read the signs of the times and treat labour as a dominant partner in industry and the worker as a human being with his likes and dislikes, with his wants and needs. Any

further indifference or neglect in this regard is bound to give rise to specific demands by labour for the provision of these basic amenities. It will be the part of wisdom for employers to provide for their workmen decent living conditions. The resulting contentment and happiness apart from increasing the efficiency of workmen will also lay the foundations for peace and progress in industry.

Government's Review of Work of Harijan Welfare Department for 1950-51

Reviewing the administration of the Harijan Welfare Department during 1950-51, the Government have observed that steady progress has been maintained in the ameliorative work pertaining to the eligible and other backward communities under the control of the Harijan Welfare Department. The Government add that generally there has been an increase in the number of scholarships and the amount spent on them during the year as compared with those in 1949-50. A sum of Rs. 15,80,682 has been sanctioned by Government to the managements of 436 hostels for the maintenance of 10,643 pupils reading in them.

The following are the other salient features of the Government's review :

Education.—There were 1,286 Harijan Welfare schools at the beginning of the year under review. Sixty-six schools were newly started during the year and three were closed. There were 98,007 pupils in the Harijan Welfare schools. A sum of Rs. 1,13,269 was spent on the construction and repair of school buildings. The supply of mid-day meals was continued in 1,315 schools out of 1,349 schools. The number of Harijan pupils fed in the Harijan Welfare schools was 87,003. The expenditure under this head was Rs. 15,72,395-1-4. Seventeen thousand seven hundred and thirty-two scholarships were given during the year amounting to 7,12,136 rupees. A sum of Rs. 1,99,865 was spent on the maintenance of Government hostels.

Assignment of lands.—In East Godavari District, an extent of 3,967-99 acres was leased out to the Scheduled Castes and other landless poor under the Grow More Food Scheme up to the end of the year since the introduction of the scheme. In this district, an extent of 6,411-01 acres of lanka lands was leased out to the registered societies composed of Adi-Andhras and converts to Christianity for a total rental of Rs. 1,07,376 during the fasli 1360.

Kallar Reclamation—Madurai District.—There were 250 Kallar schools including 11 schools managed by Christian missions at the beginning of the year. The strength of the children during the year was 17,773, out of whom 12,258 were Kallar children. The Department continued to maintain the two boarding homes for the benefit of the Kallar boys studying in the District Board High Schools at Uttamapalayam and Usilampatti. Boarding grants were sanctioned to Kallar pupils admitted in the several institutions under the management of the Christian missions and other private agencies. The total number of boarding grants sanctioned was 1,098.

Reclamation of Koravars, Yenadis and Sugalis.—As usual, Koravar reclamation work was carried on in the districts of Salem and Ramanathapuram, and Yenadi and Sugali reclamation work was continued in the districts of Nellore, Kurnool, Chittoor and Anantapur.

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ANIMAL HUSBANDRY

Livestock Products and Human Nutrition

Human nutrition depends not only on agricultural produce but also on the supply of those foods which directly originate from livestock, like milk, meat and eggs.

This fact is emphasised in a memorandum prepared by a joint meeting of the Animal Nutrition Committee of the Indian Council of Agricultural Research and the Nutrition Advisory Committee of the Indian Council of Medical Research.

The problem of maintaining the efficiency of cattle by proper nutrition is therefore of paramount importance, "because ultimately the care taken of animals is reflected in the increased supply of different types of necessary foodstuffs required by man".

The memorandum has been sent to all the State Governments for wider circulation among officials and non-officials, representative institutions and heads of departments interested in agriculture and animal husbandry. When all the comments have been received in the form of replies to a questionnaire that has been sent round, the Committee will meet again to revise the memorandum and lay down a clear-cut final policy.

Causes of Food Scarcity

The Committee state that the acute scarcity of foodstuffs for human beings over a number of years and the imperative need for self-sufficiency, commensurate with adequate nutrition, as early as possible "have brought them to the unpleasant conclusion that all is not well with our production methods and allocation of the available food to different classes of consumers, both human as well as animals. The Grow-More-Food campaign is a move in the right direction, but as it is concerned mainly with increasing the cereal production, "it is unlikely to prove of lasting benefit, because a balanced diet, which alone can provide adequate nutrition, requires other things besides cereals".

The Committee deprecate the recent tendency to concentrate attention on the needs of the human population alone, leaving the animals entirely to fend for themselves on such materials as would be available as byproducts of produce cultivated mainly for human consumption. As cattle are the sole motive power to keep agriculture going and perhaps the main source to sustain it by maintaining the fertility of the land, they "have a justifiable demand on a certain proportion of our arable acreage and particular attention is required in their balanced feeding".

At present, there appears to be a competition between human beings and animals, not only for arable land but also for certain types of foodstuffs, and "men, being in a position to appropriate all the supplies, have gradually deprived the animals of their share, so much so that an attempt at encroachment is now being made upon some foodstuffs which till now were considered natural food for animals".

In view of the overwhelming human demand, maize, barley and gram have become rare articles for cattle feeding. Besides, due to the restriction on the milling of wheat bran, which is a desirable food for animals and can be much better utilised by them than human beings, has actually become a part of the human dietary without being of much physiological benefit. This tendency,

the Committee emphasise, "portends sure and gradual deterioration of animals, which will eventually upset the agricultural balance and thereby all hopes for future recovery in food production".

Modified Plan

In their memorandum, presented to the Advisory Board of the Indian Council of Agricultural Research, the Joint Committee have indicated the direction in which efforts should be canalised. Their modified plan of human and animal nutrition, based on the available statistics, has been prepared after considering the current practices in agriculture and animal feeding and human dietary habits in the country. In making their recommendations, they have been guided by practical considerations of utilisation, to the fullest possible extent, of the available resources in the country.

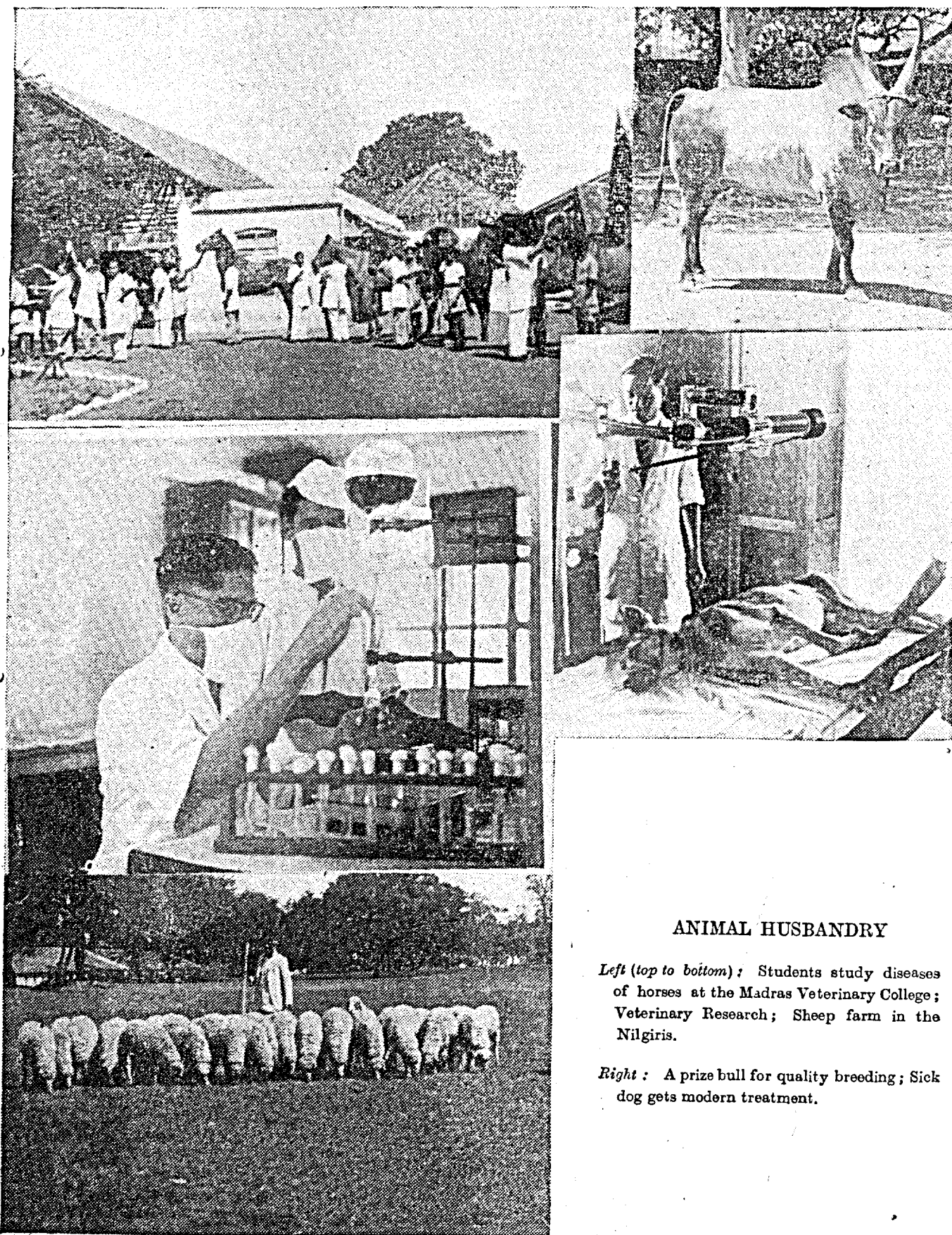
In preparing the memorandum, the Committee have kept in view the fact that all foods required for both human beings and livestock must come from land and that animal husbandry is but a means to an end, the end being improvement in the living standard of the people. The final solution of the food problem, they stress, will depend on the success achieved in the integration of the requirements of the human and animal population.

They lay emphasis on a high preference being given to adequate fluid milk production, because without this essential food, the question of nutrition loses all its significance. It is, therefore, essential that the milch animal must, throughout the year, be guaranteed in her ration a reasonable quantity of green fodder, which has to be specially cultivated in land compulsorily appropriated from the irrigable acreage.

Oilcake and Bran

Oilcake is one of the major concentrate foods in the nutritional plan for animals. At present, the average annual production of edible oilcakes in the country is roughly two million tons, of which about 50 per cent are used as manure in the cultivation of cash crops like sugarcane, tea and coffee. For the feeding of livestock, therefore, the present availability of oilcakes is limited only to one million tons annually, though, under a rational plan of feeding with the utmost economy in concentrate foods, at least eight million tons of oilcakes are required. As the existing practice of using large quantities of edible oilcakes as manure is bound adversely to affect the maximum potentiality for animal production, the Committee suggest the possibilities of utilising the cakes from non-edible seeds.

The Committee consider bran an important concentrate food. In addition to supplying a fairly large amount of nutrients, it is a mild laxative and is reputed to stimulate milk production in all lactating animals. When the food shortage began, the milling of wheat was banned, only *atta* being allowed to be prepared. Whereas the pre-war product left a large proportion of bran, the present-day *atta* leaves behind ordinarily not more than five per cent, and in many cases not even two per cent of it. The bran which was available to cattle before the war, now goes into human consumption.



ANIMAL HUSBANDRY

Left (top to bottom): Students study diseases of horses at the Madras Veterinary College; Veterinary Research; Sheep farm in the Nilgiris.

Right: A prize bull for quality breeding; Sick dog gets modern treatment.

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Resettling the Uprooted Millions

NEW CITIZENS OF INDIA
By HORACE ALEXANDER
Oxford University Press.

Pages viii+130. Price Rupees five.

Horace Alexander has been described by one who knows him well as "an Indian with a white skin". This is a well-earned tribute to a great social leader who has so closely identified himself with India's troubles and aspirations. His years of dedicated service in India, his fraternal association with Mahatma Gandhi, and above all, his active participation in the gigantic task of rehabilitation of the displaced millions from the Pakistan areas, have given him the right to comment on how we have tackled the job; it is to our everlasting credit that his report is in the main an extremely favourable one.

Imagination boggles at the magnitude of the problem. The massacres following the Partition of India in 1947 launched wholesale flights of almost entire communities, and millions sought the safety across the border, using every conceivable form of conveyance, but mostly trekking with the pathetic remnants of their possessions. To India came more than eight millions, 5,000,000 from West Pakistan and 3,085,000 from East Pakistan. The problem was not merely to resettle these uprooted millions by providing them with new roots, adequate accommodation and alternate means of livelihood; the vision of our leaders went beyond that—these displaced persons must also play a dynamic role in the building of New India.

But such ideals are easier expressed than achieved. The experiences of the Kurukshetra Camp revealed the immense difficulties even in providing temporary shelter to the ever-increasing number of refugees, let alone adequate facilities to open out a new way of life to these victims of misfortune. But, as the author points out, the hour produced the men. Sri S. K. Dey ("an anonymous farmer's son with the training of an engineer") created Nilokheri, "the fulfilment of a dream", on the outskirts of the sprawling Kurukshetra Camp. Prime Minister Nehru cried out in raptures that he wanted to see "springing up across the expanse of India a thousand townships humming with the music of the muscles as at this centre". But Horace Alexander is also conscious of the pertinent fact that while Nilokheri is now the pet of the powers that be, Rajpura, a step-child some fifty miles off, is forlorn and neglected.

Other townships have also sprung up, like Faridabad (near Delhi) and Fulia (in Bengal) and little settlements strewn round Delhi, like Sardarnagar, Sarojinagar, Lajpatnagar, Malaviyanagar and Rajendranagar. For Sind refugees in Bombay there are the new centres of Ulhasnagar, Sardarnagar and Gandhidham. In all these townships, development can only depend on the enthusiasm of the inhabitants, and their will to better their lot. That is the lesson of Nilokheri. That is why the author criticises the Hastinapur Scheme in U.P., where the authorities are building a beautiful little town for "refugees in general". Mr. Alexander says: "Work first; houses later"; for he places prime significance on mental rehabilitation. To achieve this, he underlines the need for the marriage of two human qualities,—vision and practical competence, idealism and commonsense. Since, after spending (till 1950)

a sum of Rs. 68,96,00,000, only a million have been given land, 100,000 financed to start shops and 50,000 have received technical training, we might do well to heed Mr. Alexander's advice.

THE PAVEMENT DWELLER
By SRI S. R. VENKATARAMAN

The Servants of India Society, Royapetta, Madras-14.

Pages 23.

Price Annas six.

This tiny booklet contains reprints of two radio talks given by Sri S. R. Venkataraman at the A.I.R. Station, Madras. It is not merely a restatement in vivid terms of the complexities of a burning problem, but also a fine composite picture of the individual in question—the pavement dweller. The significance of the portrayal lies in the fact that the good social worker engaged in slumming can scarcely afford to ignore the human aspect. Further, he will derive great encouragement from this booklet, for, as the author so clearly delineates, the pavement dweller is a thoroughly likeable character, a hardy type, cheerful, uncomplaining, talented, affectionate, filled with a lively interest in life and imbued with a great spirit for service.

HYDROPONICS
The Bengal System.

By J. SHOLTO DOUGLAS

Oxford University Press.

Pages xii+147.

Price Rupees six.

Mother Earth may become as unnecessary as a stud bull at an artificial insemination centre, if the science of hydroponics develops, for now the technique of growing crops without soil is no longer a laboratory experiment, but a practical system in everyday agriculture. "Digging for Victory" thus becomes an outmoded slogan, for even inaccessible terraces can now be converted to roof-top "hydroponicums" (or should it be "hydroponica"?)

Mr. Sholto Douglas is the originator of the Bengal System of Hydroponics, and in his little book he explains in lucid manner the technique of soilless culture. The author not only speaks with the confidence born of constant lab trials; he has unbounded enthusiasm for the new science, by which Dr. Gericke of California University grew tomato vines 25 feet in height, in 1929. This was the actual beginning of hydroponics (the name coined by Gericke from Greek, means 'water-working'); but scientists had been working on the idea for over a century.

Hydroponics reached India in 1946, and the local inhabitants of Darjeeling District denounced it as the work of devils and flung stones at the hydroponicums after dark! But soon zealous research made for the evolution of the Bengal System of Hydroponics. The author assures us that it is inexpensive to instal, simple to maintain and economical to operate. He also emphasises the point that "it does not depend on freak or sensational results: instead, its real merits are based on its value as a steady, controlled and reliable method of intensive crop production, and the very stable and important advantages to be gained from its employment."

IN THE SERVICE OF THE NATION

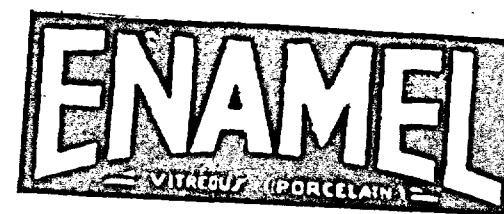
Railways have a proud part to play. They are the arteries through which the life-stream of commercial and economic prosperity of the country flows. They are performing a great and difficult task in rehabilitating the country's economy and look forward to rendering still greater services in the future. Serving the nation as they do, they solicit the hearty co-operation of the public for

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- Reducing the incidence of claims by proper packing, labelling, and marking of packages booked by rail.

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MADRAS INFORMATION

The book gives detailed notes on the practice of hydroponics, touching on apparatus, nutrient mixtures, general techniques, commercial possibilities, common deficiencies, and the future of hydroponics. Technical advice is given in the simplest language, to enable the veriest layman to follow the instructions. Tables, charts, formulæ, and photographs have been included in plenty, and in the discussions at every stage the question 'what to do if things go wrong' is tackled in a straightforward manner. The appendices include notes on other systems, list of institutions engaged in soilless culture research, and a comprehensive bibliography. The index is exhaustive.

This book will most certainly be one of the oft-referred to volumes in the libraries of all those who are engaged in solving the problem of India's food shortage.

DIRECTORY OF WELFARE AGENCIES IN MADRAS CITY AND STATE

Prepared under the direction of the Directory Sub-Committee
of the Indian Conference of Social Work, Madras
Branch.

Pages 230. Price not stated.

In 1933 a Directory of Social Service Agencies in the City of Madras was brought out, and in the Foreword thereto the late Rt. Hon'ble V. S. Srinivasa Sastri observed that the publication would be useful to social workers seeking suitable agencies, a guide to philanthropists and a yardstick to measure the adequacy of social service organisations. The present Directory, the third attempt of its kind, is a comprehensive reference volume covering the welfare agencies at work in the State and in the City.

More than 2,000 agencies are listed, and aims and objects, activities, addresses, year of establishment, and telephone numbers are given in most cases.

WOMEN'S WELFARE JOURNAL.

Special Annual Number, January 1953.

Published by the DEPARTMENT OF
WOMEN'S WELFARE.

7, Aramudu Gardens, Egmore, Madras-8.

Pages 134. Price annas eight.

The Annual Number of the *Women's Welfare Journal* provides sumptuous fare for eye and mind; zeal and care have been lavished to produce this extremely neatly got up issue replete with pictures, photos and interesting articles. Sri H. V. Ram Gopal's superb cover page picture "The Labourer's Midday Meal" gives a flying start to the magazine and the illustrations and textual matter of the inside pages creditably keep up the high standard of artistic and literary achievement.

The contributors form a galaxy of personalities famed in the social service sphere, and the subject of the articles cover a wide range of interests—family life, nursery, education, social ethics, food, social service, national education, cottage industries, rural sanitation, status of women, ancient culture and Carnatic music. The contributions provide enough food for thought to serious

readers, and will certainly provide talking points for social service discussion groups. The regular features include co-operative kitchens, recipes for sweets, embroidery designs, home remedies, children's corner, book reviews and departmental notes. The number also includes Malayalam, Kannada and Hindi supplements.

Eleven art plates, besides many drawings and photographs, enhance the value of the number which has been designed with purpose to publicise an aim succinctly expressed by Shri Sri Prakasa, Governor of Madras: "The home is the nexus round which a nation revolves, and persons outside in the world are what they initially are in the home; and woman, whatever the nature of society may be, is essentially the head of the home".

—P.V.S.

Experimental Cultivation of Belladonna

Attempts at preliminary experimental cultivation of *Atropa Acuminata*, the chief source of Indian belladonna, in Kashmir have proved successful, according to a report from the Drug Research Laboratory, Jammu Tawi, published in the December issue of the *Journal of Scientific and Industrial Research*.

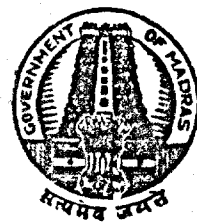
This plant grows wild in the Western Himalayas from Kashmir to Simla at altitudes from 6,000 feet to 11,000 feet above sea level. The bulk supply of the drug comes from the forests of Kashmir. Excessive extraction of the drug, however, from these forests for the last two or three decades, has greatly decreased the output and the quantity now available falls much short of the demand of the growing Indian pharmaceutical industry.

In order to ensure steady supply of the drug, cultivation was started in two nurseries, one in Srinagar (5,000 feet) and the other at Yarikah (7,000 feet). Attempts to grow the plant as a winter crop in Jammu Province at an altitude of 1,000 feet above sea level have also met with success. Preliminary work on the cultivation of the plant by different methods of propagation has given encouraging results with respect to the alkaloidal content of the leaves (3 to 76 per cent) and the yield of the crop per acre (500 lb. dry weight).

Madras Drug (Control) Act

The Government have declared the following drugs to be drugs to which the Madras Drug (Control) Act, 1949, shall apply, in addition to the drugs already notified:

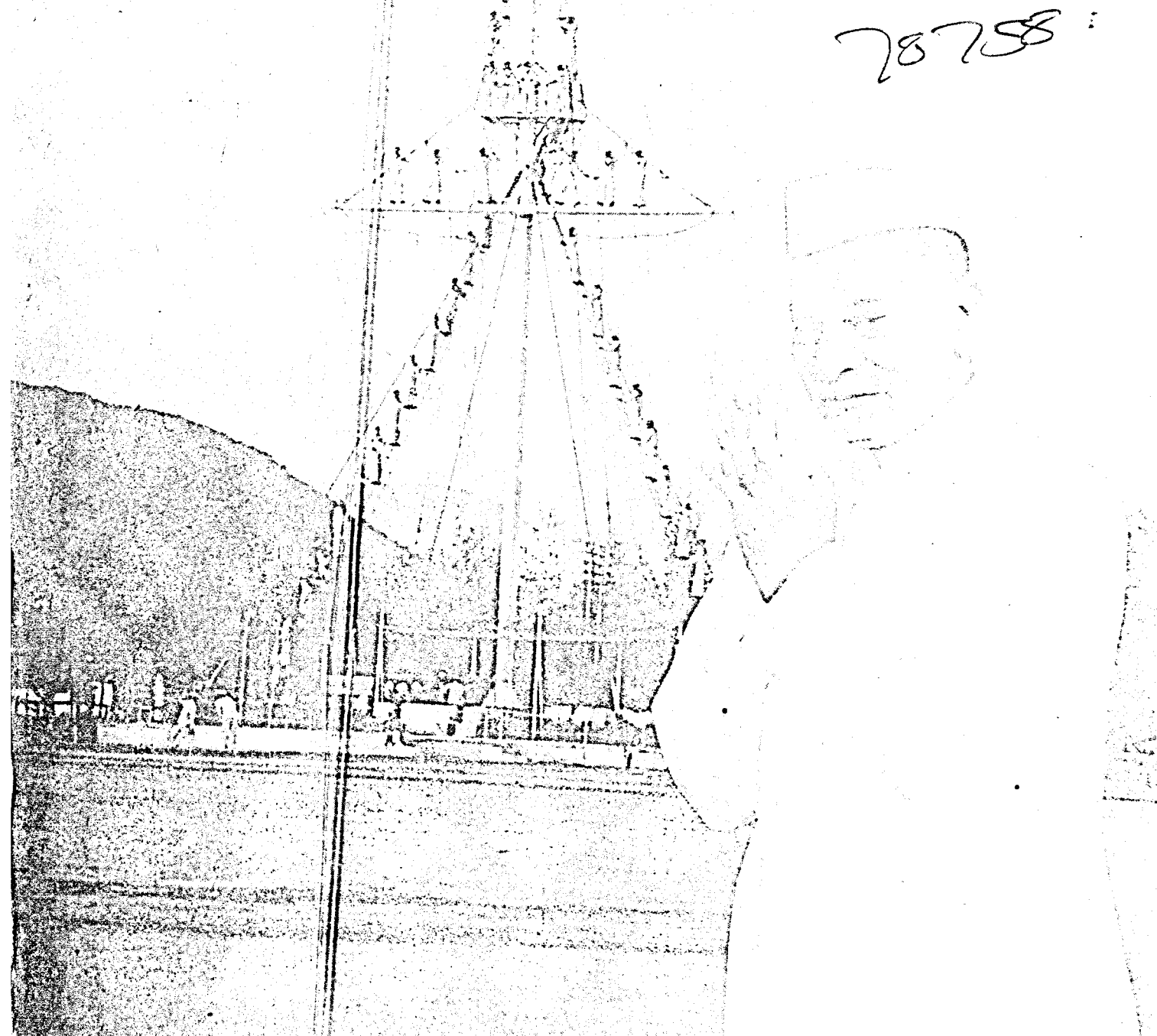
Preparations containing Hydrazine derivatives of Isonicotinic Acid. Terramycin ointment 30 mg. per gm. ½ oz. (14.2 gr.) tube. Terramycin Nasal solution 25 mg. Terramycin with 5 cc. of Diluent. Terramycin soluble Tablet 50 mg. Terramycin per tablet package of 24 tab. Terramycin Dental Paste 30 mg. Terramycin per gm. jar of 5 gm. (Messrs. Chas Pfizer and Company Inc., New York.)



MARCH 1953

Price 3 annas

MADRAS Information



Madras Information

The President's Tour of Madras State

A pictorial record of the recent tour of Madras State by Dr. Rajendra Prasad, President of the Indian Republic, is presented in this supplement.



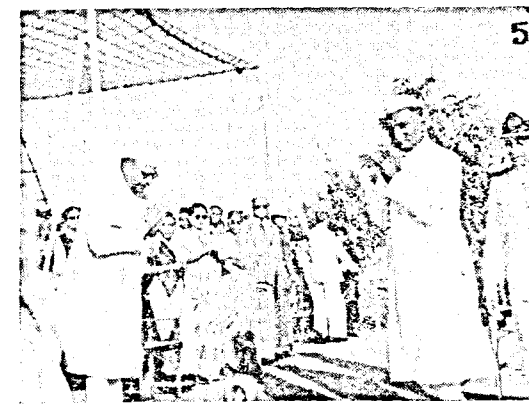
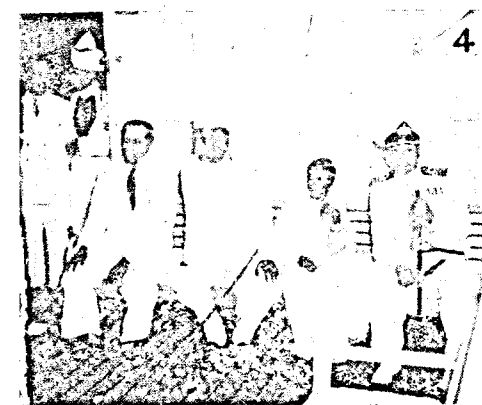
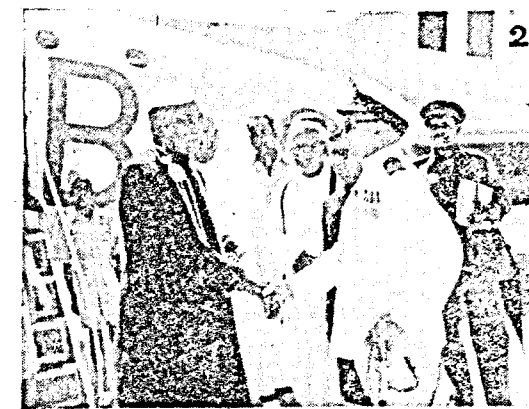
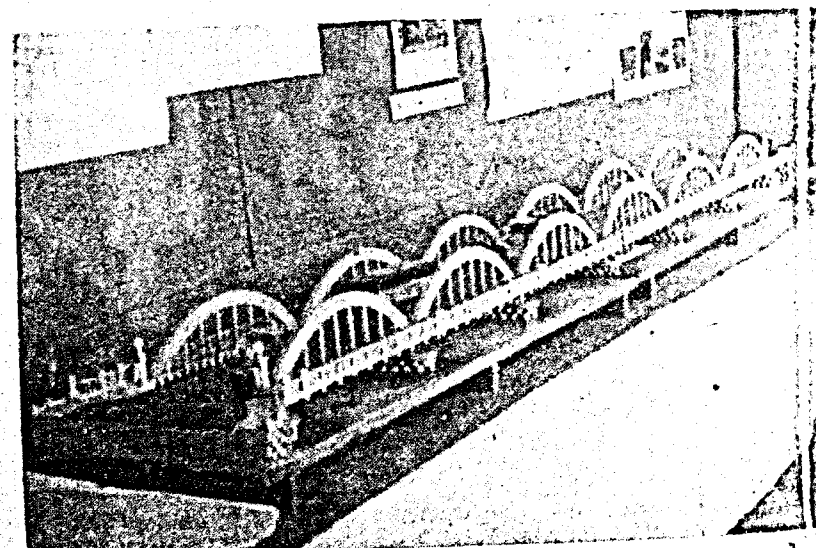
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The 17th Session of the Indian Roads Congress was held recently at the Rajaji Hall, Madras City. Sri N. Ranga Reddi, Minister for Public Works, Government of Madras, inaugurated the Session, and Sri T. Mitra presided.

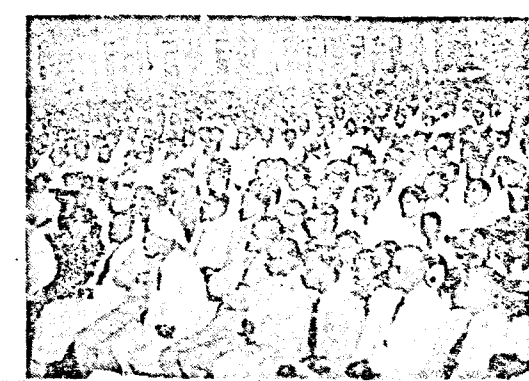
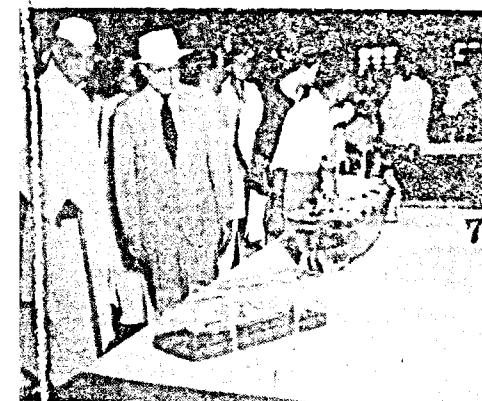
The Minister for Public Works in his opening address (*top*) pointed out that in Madras State the expenditure on roads had risen from Rs. 375 lakhs in 1946-47 to more than Rs. 800 lakhs in 1951-52.

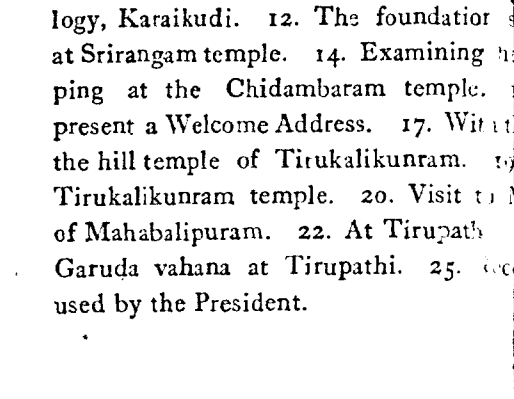
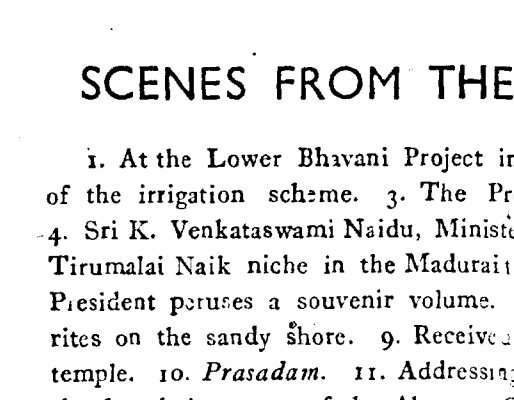
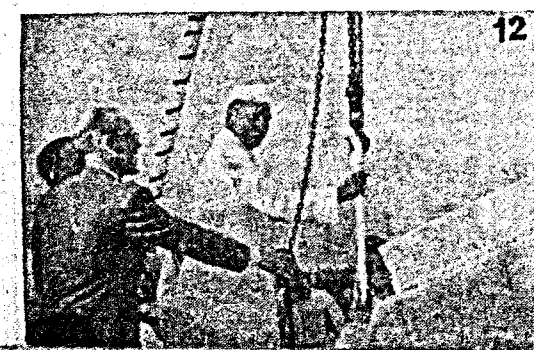
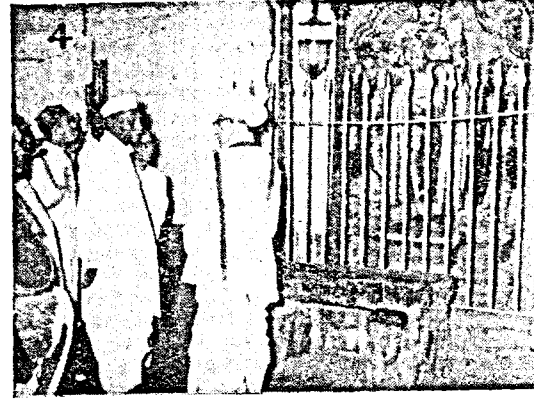
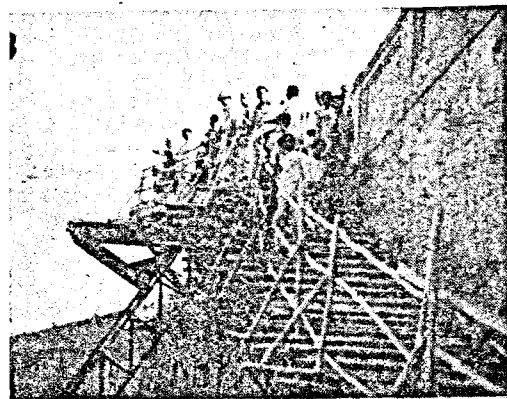
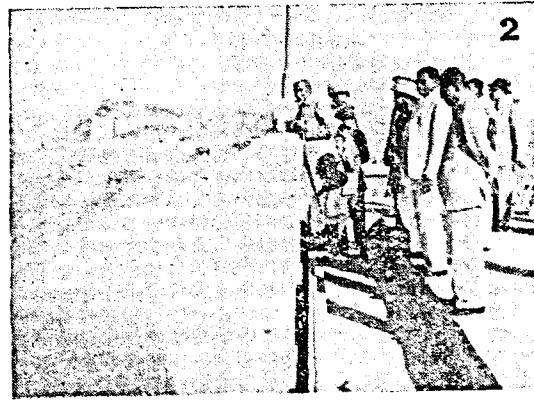
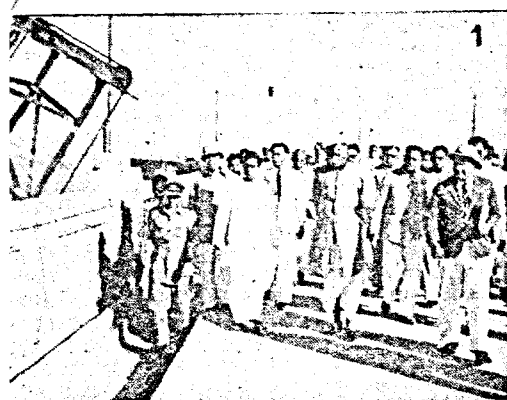
Sri C. Subramaniam, Minister for Finance, opened an exhibition organised in connection with the Roads Congress (*centre*). The Exhibition contained various machines and equipment used in road-making, models and layouts, and a wide range of technical information on road development, including the results of research.



ARRIVAL IN VISAKHAPATNAM

1. The President alights from the aircraft at Visakhapatnam Airport.
2. Greetings on arrival.
3. Guard of Honour by the trainees of I.N.S. Circars.
4. The President is taken round Visakhapatnam Harbour in a motor-launch.
5. Shri Sri Prakasa, Governor of Madras, receives the President at the I.N.S. Circars, the shore training establishment of the Indian Navy.
6. The President distributes prizes to the winners among the naval trainees.
7. Inspection of ship models at the Hindustan Shipyard.
8. Advances in ship-building techniques are explained to the President.
9. Addressing a gathering of Andhra University professors and students at the University campus.
10. A view of the gathering.





SCENES FROM THE

1. At the Lower Bhavani Project in of the irrigation scheme. 3. The Pre 4. Sri K. Venkataswami Naidu, Minister Tirumalai Naik niche in the Madurai. President peruses a souvenir volume. rites on the sandy shore. 9. Received temple. 10. Prasadam. 11. Addressing the foundation stone of the Alagappa College, Karaikudi. 12. The foundation at Srirangam temple. 14. Examining piping at the Chidambaram temple. present a Welcome Address. 17. With the hill temple of Tirukalikunram. 19. Tirukalikunram temple. 20. Visit to of Mahabalipuram. 22. At Tirupathi Garuda vahana at Tirupathi. 25. used by the President.

Madras Information

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Fort St. George

Vol. VII, No. 3

"WE SEEK TO SERVE AND NOT TO COMPETE"

March 1953

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COVER PAGE : Dr. Rajendra Prasad, President of India, recently toured Madras State. The background picture on the cover shows trainees of the I.N.S. *Circars* (The Indian Navy shore training establishment at Visakhapatnam) "manning the mast", a Nautical Salute to a distinguished personage.

Financing the Five-Year Plan

By SRI C. SUBRAMANIAM, Minister for Finance

The Five-Year Plan is an expression of our determination to capitalize the totality of our human and material resources, so that the political democracy which we have achieved is matched by economic democracy, which is its natural counterpart. The long period of foreign rule, the large changes following the Second Great War and Partition had left the country in a state which required purposive appraisal and organization for realization of the scattered and unused potentials. That the Five-Year Plan has achieved this is the general testimony, even of foreigners, who have studied it.

The Five-Year Plan for India involves in terms of money an expenditure of Rs. 2,069 crores of which the share of the Madras State is Rs. 140.84 crores. The importance of these figures may be gauged from the fact that the expenditure on developmental projects of our State in the previous five years, which itself is a great increase on the period preceding, was only Rs. 59.37 crores. The increase which is of 237 per cent is not only evidence of the Government's determination to do their best, but of their confidence in the capacity of the people and country to respond suitably. All planning involves current sacrifice for future returns. For national planning the sacrifice is of current consumption, which is expressed in larger measures of savings and taxes.

The Madras Plan accordingly provides for loans in the open market of Rs. 17 crores, and additional taxation of Rs. 20 crores. The measures of taxation, which are already before the legislature, aim at drawing part of the benefit, which certain land and classes have received from Government activities and fortuitous circumstances, in order to improve the interests of the whole community. The sacrifice therefore is largely of what can be spared, in favour of those who require it. In the resultant prosperity, both those who give and take will be benefited, because individual property increases in value from general enrichment.

Accent on Agriculture

The Madras Plan, like the all-India Plan, is largely an agricultural plan, the expenditure on Agriculture, Irrigation and Electricity being of the order of Rs. 100 crores. For Agriculture as such, the gross expenditure is Rs. 53.76 crores and the net expenditure Rs. 15.94 crores. The schemes included are of land development and reclamation, minor irrigation and supply of services and articles required for better production. A net additional production of 8.60 lakhs tons of rice and millets is expected at the end of 1955-56, inclusive of the production of 1.67 lakhs tons from irrigation schemes. An increase of 7.5 lakhs of bales of cotton is also expected. The expenditure on Irrigation is Rs. 35.08 crores on 14 schemes, including the three major schemes of Lower Bhavani, Malampuzha and Tungabhadra. The Planning Commission have provided for a major scheme on the Krishna. The provision for Electricity is Rs. 50.24 crores which will provide for an increase of 176 thousand kilowatts. As the anticipated demand is 232,000 KW, the Government are pressing for the inclusion of the Periyar and Kundah Hydro-Electric Projects also.

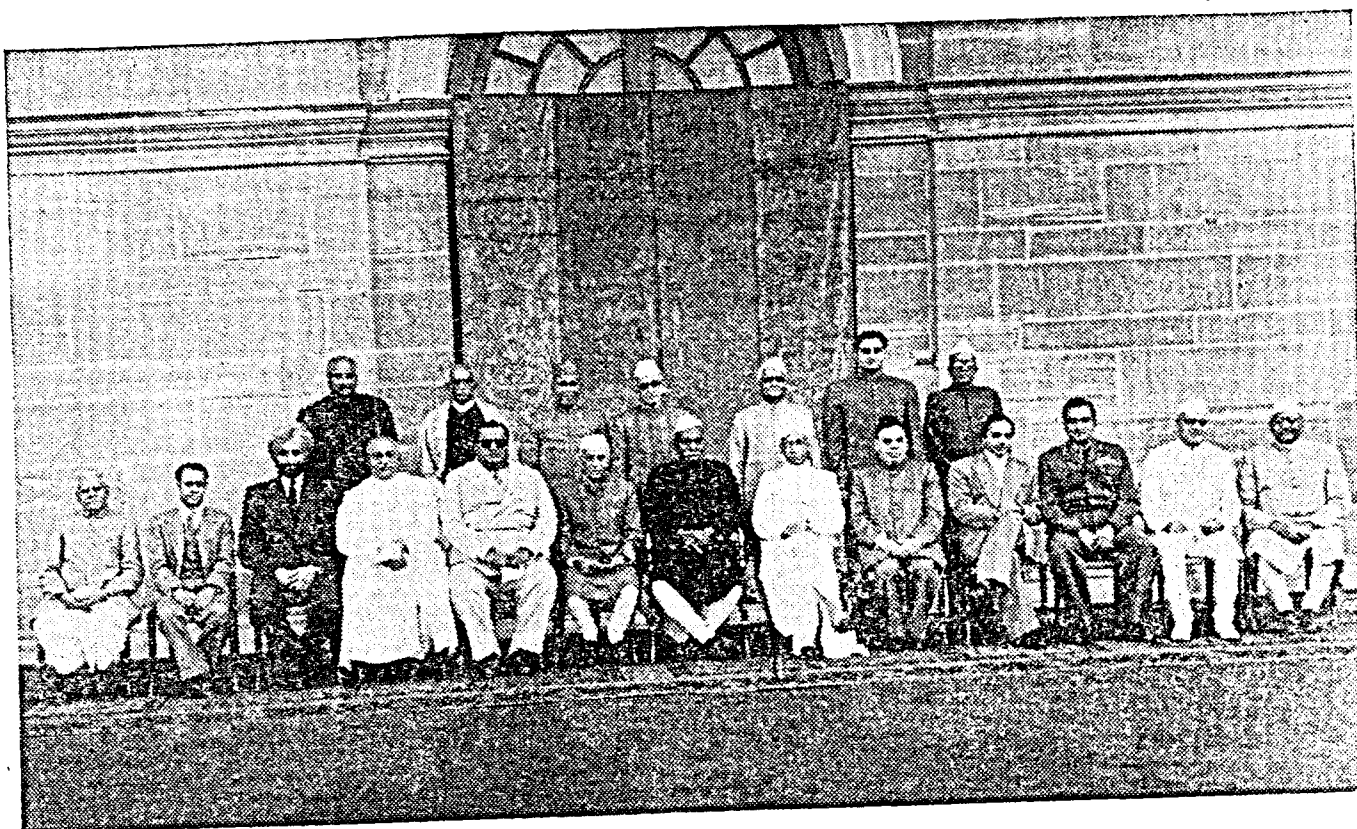
Connected with Agriculture are Animal Husbandry, Dairying, Forests, Fisheries, Co-operation and Rural Development. The provision for Animal Husbandry is Rs. one crore. This is rather less than what the subject demands in view of the poor condition of our cattle population. Nearly 10 per cent of India's cattle are unserviceable and unproductive, for which provision must be made in special areas to relieve the pressure on fodder resources required for serviceable cattle. For upgrading stocks the key village schemes have been initiated. There is provision for Veterinary education, research and for opening of a veterinary centre in each taluk. For Dairying the provision is Rs. 50 lakhs which include items for increasing milk-supply to Madras City and other urban centres and for the Vattambedu Salvage Farm and the Karunghuzhi Creamery Society. The average yield per cow in India is only 413 pounds which is only a fraction of what is achieved in other countries and what can be achieved in this country, by more attention to the feeding and breeding of cattle.

For Forests the provision is Rs. 38.8 lakhs which includes schemes for resumption of panchayat forests, soil conservation and casuarina plantations. For Fisheries the provision is Rs. 100 lakhs which includes provision for supply of salt, yarn and other materials at subsidized rates, installation of ice plants and cold stores, organization of quick transport and distribution of fish seed for inland waters. At present the availability of fish is as low as 3.4 ounces per annum, which can be increased many times that quantity by deep-sea fishing on the one hand and increase of stock in inland waters on the other.

Socio-Economic Development

The Five-Year Plan considers Co-operation to be basic for rapid socio-economic development on democratic conditions. In almost every field of development, the Plan emphasizes the role of co-operative organization. With the growing interest of the Reserve Bank and the assistance which the Bank is already giving to the movement, prospects of co-operative development during the next few years are most favourable. A provision of Rs. 100 lakhs has been made for Co-operation in the State for various schemes, including co-operative farming, co-operative workshops, land colonization societies and multi-purpose societies for distribution of items required for intensive cultivation.

Allied to Co-operation is Rural Development, for which an expenditure Rs. 2 crores is contemplated. The Plan for development is to demonstrate in a chain of centres comprising firkas the best method of working and living. Emphasis is laid on the development of the spirit of co-operation and self-reliance which is a condition precedent to State help in various matters like communications, water-supply, sanitation, irrigation, livestock improvement, development of Khadi and other cottage industries. In addition to this provision, under the U.S. Technical Aid, provision is separately made for six community project centres which will demonstrate in an intensified form the possibilities of revitalising village economy by planned expenditure on crucial items.



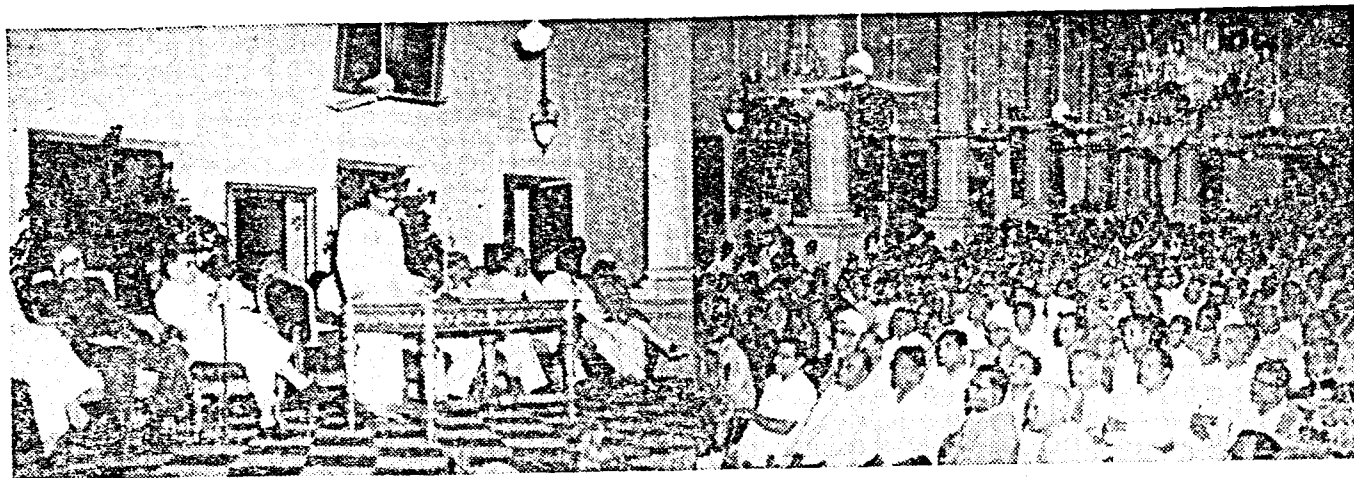
GOVERNORS AND RAJPRAMUKHS MEET: Group photo taken at the commencement of the Annual Conference of Governors and Rajpramukhs of States at Rashtrapati Bhavan, New Delhi, on February 4, 1953. The President presided over the Conference which was also attended by the Vice-President and the Prime Minister.

Left to Right: (Sitting) Dr. H. C. Mookherjee, Governor of West Bengal; H.H. the Rajpramukh of Travancore-Cochin; H.H. the Rajpramukh of Pepsu; H.H. the Rajpramukh of Saurashtra; H.H. the Rajpramukh of Mysore; the Prime Minister Sri Jawaharlal Nehru; the President, Dr. Rajendra Prasad; the Vice-President, Dr. S. Radhakrishnan; Sri Chandulal Trivedi, Governor of Punjab (I); H.H. the Rajpramukh of Madhya Bharat; H.H. the Rajpramukh of Rajasthan; Sri Jairamdas Doulatram, Governor of Assam, and Shri Sri Prakasa, Governor of Madras.

Left to Right: (Standing) Maj.-Gen. Himattsinhji, Lt.-Governor of Himachal Pradesh; Dr. Pattabhi Sitaramayya, Governor of Madhya Pradesh; Sri Saiyad Fazl Ali, Governor of Orissa; Sri K. M. Munshi, Governor of Uttar Pradesh; Sri R. R. Diwakar, Governor of Bihar; Sri Karan Singh, the Sadar-i-Riyasat of Jammu and Kashmir, and Sri K. Santhanam, Lt.-Governor of Vindhya Pradesh.



CIVIC RECEPTION TO IRANIAN PRESSMEN: A Civic Reception was accorded to members of the Iranian Press Delegation. Here there are seen with Sri T. Chengalvarayan, Mayor of Madras, and Srimathi Saraswathi Pandurangam, Deputy Mayor.



NATIONAL SAVINGS SCHEME: The National Savings Fortnight organised by the Provincial National Savings Organization was inaugurated at a public meeting in Rajaji Hall, Mount Road. Sri C. Subramaniam, Minister for Finance, who presided on the occasion, told the gathering: "It is the patriotic duty of every Indian to save as much as possible and contribute to Savings Scheme."

Cottage and small-scale industries have received benevolent attention for the reason that they have a central place in the rural development programme. It is considered that unless the deficiencies which have led to the decline of these industries are removed, the village population will not only be deprived of cheap and suitable supply of their requirements, but they will be deprived of employment which has in the past supplemented agriculture. The general plan is directed to the co-ordination and integration of cottage and large-scale industries to be achieved by equalization of conditions of production and distribution. The Madras Plan contains a provision of Rs. 116.9 lakhs for development of cottage industries.

Supplementing Private Enterprise

For large-scale industries, the policy of the Plan has generally been to supplement the advances already made by private enterprise. The all-India Plan estimates an investment of Rs. 94 crores by Government and Rs. 233 crores by private enterprise during the period of the Plan. In the Madras Plan, provision has been made for Rs. 85 lakhs which will enable the opening of polytechnics, workshops, factories and laboratories.

Transport and communications are the lifelines of economic development. The all-India Plan contains a provision of Rs. 400 crores for railways, Rs. 50 crores for port development, Rs. 100 crores for roads and Rs. 9.5 crores for civil aviation. The provision in the Madras Plan is Rs. 5 crores, the ultimate aim being to bring every village within two miles of a district road or highway.

Housing has been recognized as a subject very much in arrears. A provision of Rs. 48.69 crores has been made in the all-India Plan principally for housing in industrial centres which will be encouraged by the grant of subsidies and loans to State Governments and private employers. In the Madras Plan the provision is Rs. 3 crores for construction of houses on the co-operative basis. This is exclusive of industrial housing for which loans and subsidies will be received according to the demand of Government and private employers.

Importance of Social Services

The Plan has wisely recognized the importance of social services. For Education, provision in the Madras Plan is Rs. 8 crores which will be used for improvement of primary and basic education, university education, technical education, social education and education of defective children. For Medical and Public Health, the provision is Rs. 12 crores which will enable expansion of the facilities of medical education, improvements to hospitals, dispensaries, sanatoria, clinics and medical colleges. On the Public Health side, provision has been made for water-supply and drainage schemes, anti-malarial schemes, rural sanitation, nutrition research, health propaganda and publicity. A generous provision of Rs. 4.67 crores has been made for the amelioration of the backward classes.

It is not pretended that the Plan will introduce any large or sudden transformation of the existing conditions. Basically, the Plan consolidates the expansion of various Government activities which arose with Independence. Generally the momentum of this expansion will be maintained by the Plan. If it has not been possible to add to the size and speed of the previous programme, the reason is largely financial. The question of all questions is how to find finance or a substitute for it, to more fully utilize the human and material resources of the State. Unfortunately, famine conditions and cyclones which necessitated large-scale expenditure have reduced even the finances envisaged for the Plan. The slump conditions have acted in the same direction.

Democratic Process

The Planning Commission envisages for the all-India Plan, public savings of the order of Rs. 738 crores, loans of the order of Rs. 520 crores and deficit finance to be balanced by foreign aid to the extent of Rs. 290 crores. Obviously the Planning Commission cannot envisage anything more favourable than this for the finances of the Plan. Correspondingly, the Madras State cannot envisage financial provision of an order higher than what has been provided.

(Continued on page 35)

The Sporting Spirit

By RAJA SRI SHANMUGHA RAJESWARA SETHUPATHI, Minister for Rent Control and Sports.

In our everyday speech, we use a number of phrases borrowed from sporting parlance, like 'playing the game', 'it is not cricket', 'straight shooting', 'flying colours'. If we but pause to ponder over these terms, we can realise how significantly these phrases express a code of upright living. Sports play a vital, dynamic role in character-building, simply because on the sports field there is just no room for the cheat, the grouser, or the bad loser. Games and athletics help the participants both young and old to develop many qualities that go to make the perfect balance between the physical and mental attributes of human personality. But the greatest virtue that can be ascribed to sports is the development of the 'sporting spirit'.

What is this 'sporting spirit'? While a comprehensive definition is not possible, we might say it is the realisation in the sportsman of the purpose and justification of sport, the moral function of competitive endeavour. Of course when we play any game, or take part in any athletic meet, we do not consciously attempt to realise this ideal. But, by following the unwritten code of the sporting world, we instinctively develop those qualities that go to make the sporting spirit—we play for the team; we seek to win, but take our defeats graciously; we spurn an unfair advantage; we make allowances for a weaker opponent; we never yield till the contest is over; we obey the skipper; we are alert, cheerful and active on the field.

Moral Value in Work and Play

Thus we see that sports have a moral influence both off and on the field. Here I would like to quote the significant observations of Commander C. B. Fry, a great cricketer and one who has done yeoman work in training youth for leadership. Referring to a peculiar fallacy connected with sport and pastime which assumes that such pursuits are entirely outside the intellectual sphere, Commander Fry says: "Pastimes that require for success qualities intellectual, moral or physical which are in themselves valuable, help to give us these qualities, or to develop them in us for all the purposes of life whatsoever. A persevering character comes from activity with perseverance, and whether the activity occurs in the sphere of sport or of work is after all not very material." Fry's remarks will therefore make it clear that the best man is he who combines in himself both the intellectual and sporting types.

Sports, games and athletics have, from time immemorial, been very popular in India and it may be mentioned that the game of Polo has been India's contribution to international sport. While many forms of athletics, like wrestling, swimming, fencing and so on, have come down to us, many varieties of indigenous games and sports have unfortunately either completely died out or have survived only in remnant form in remote areas.

Even athletics suffered due to exclusive development and over-specialisation in this country. Some types of physical culture became the prerogative of the martial classes, and the common people were thus cut off from the exercises the soldiers practised. Further, gymnastics

became a close cult, and exclusive schools of physical culture with instructors popularly known as 'Vustads' presiding over a small coterie of hand-picked disciples, were set up. The rivalry between these schools led to competitive dynasties or 'Parambarais' and the 'Vustads,' reluctant to yield their top positions, were loath to teach their young disciples all their secrets. The pity of it is that these departed 'Vustads' have left only a legendary reputation, instead of concrete evidence of their cult in the successive generations of trained athletics.

Influence of the West

The impact of western civilization is a potent factor which has influenced the development of sports and games in this country for more than a century. We learnt new games, and forgot old ones. Many of the new games like cricket, football, hockey, tennis and the like became very popular in cities and towns. In hockey, India has become the world champion, while in other games, we are putting up a fairly good show. But while we are acquiring greater skill in these imported games, we cannot lose sight of the fact that many of these foreign games are costly, and in a poor country like ours not all institutions can afford to encourage them. However, with the co-operative effort and the support of enthusiasts, it should be possible for large establishments like schools, colleges, major clubs and athletic associations to provide facilities for games like hockey, football, cricket, volley-ball, ring tennis and basket-ball. Though of foreign origin, these games have taken root in our land.

Along with the advent of Independence, a vigorous nationalistic fervour has swept the country and we see the welcome revival of many customs and activities absent during the years of tutelage. In the sphere of sports this has led to the encouragement and development of indigenous sports like chadugudu (kabaddi in Northern India), kilithattu, kho-kho, kummi and kolattam. These games had persisted through the ages, but now they have received official recognition. For instance, there is an All-India Association for Kabaddi, and it is a matter for pride that Madras won the Kabaddi championship in the 15th Indian Olympiad held in February 1952.

There are at present official State Associations for every major and minor game and the future development of these games will be considerably influenced by these Associations. The Government also aid these Associations in various ways.

Physical Education in Madras

In our State all matters relating to physical education which include sports, physical training, games and outing activities are controlled at departmental level by the Director of Public Instruction through the Chief Inspector of Physical Education. There is also a Woman Specialist in Physical Education to assist the Director of Public Instruction. The State has been divided into six regions, each comprising six to eight districts, each under a Regional Inspector of Physical Education. In each district there is an Inter-Schools District Athletic Association consisting

Warning: Unauthorised Lotteries Constitute Offence

The prevalence of numerous unauthorised lotteries or raffles for various objects has come to the notice of the Government. Several of the promoters of such unauthorised lotteries seem to be ignorant of the law on the subject. The Government therefore wish to inform the public generally that whoever keeps an office or place for the purpose of drawing any lottery, not being a lottery authorised by Government, is liable to prosecution under Section 294-A, I.P.C. The publication of any proposal, to pay any money, or to deliver any goods, or to do or forbear from doing anything for the benefit of any person on any event or contingency relative or applicable to the drawing of any ticket, lot, etc., in a lottery is also an offence under Section 294-A, I.P.C. Further, the delivery or sale to any person of a ticket, which gives particulars of the scheme for the award of prizes in a lottery will also amount to sufficient publication within the meaning of Section 294-A, I.P.C. and will render the persons selling such tickets liable to prosecution.

representatives from each school, to organise and control sports and games in accordance with the rules laid down by the International Olympic Association. Every high school student is required to attend two Physical Education classes during the working hours of the school and two classes outside. The periods during the working hours are devoted to instruction work and the participation periods are those periods outside school hours when the pupils take part in games and sports.

According to existing rules, it is incumbent on every high school for boys to have a minimum of five acres of playground, while middle schools should have three acres. For all girls' schools, the minimum is three acres for high schools and for middle schools two acres. The schedule of work for Physical Education has been laid down as one hour for every 250 pupils with a graduate Physical Education officer if the strength of the school exceeds 750.

Pioneering Work

It may be recalled that Madras State was the first State to introduce a scheme of Physical Education in all the schools as far back as 30 years ago. Again Madras State sponsored the formation of the All-India Olympic Association and the first State Olympic Association. It was in this State that the first college of physical education in India was started 32 years ago—the Y.M.C.A. College of Physical Education. Recently another college has been started at Vijayawada known as the Andhra Training College of Physical Education. These institutions have been recognised by Government.

The construction of stadia at important centres of the State is a matter that has been engaging the attention

of the Government and suitable steps to implement the scheme will be taken up as and when funds permit. Madras City already has a fine sports centre in the Corporation Stadium which was the venue of the 15th Indian Olympiad in February 1952 and has again been the meeting place of sports lovers during the 26th Madras State Olympics. But for building stadia, private enterprise is most essential in order to augment the resources of Government. In the matter of athletic meets also, Government have shown interest.

Planned Programme

In a planned programme of sports development it is necessary to take into consideration many vital factors like regional preferences, weather conditions, local proficiency, etc. For instance, where there is heavy rainfall for over five months in the year, as for example, in the districts of the West Coast, it would be well-nigh impossible to have any of the major field games during the monsoon season. A stadium and playing fields, therefore, will be quite useless for a considerable part of the year. But there is a good scope for building well-equipped indoor gymnasiums, with facilities for physical culture, wrestling, boxing and games like basket-ball, volley-ball, tennikoit and the like. In this manner, sports enthusiasts should plan for regional requirements, so that at no place are the local inhabitants denied facilities for participating in some sport or other.

It is gratifying to note that more and more women are coming forward to take part in sports. Games are always popular in schools and colleges, but in recent years women have entered for many representative matches in games like tennis, hockey, badminton, table tennis, and athletic meets like the Olympics and inter-school, inter-college, inter-university or inter-State sports. The doughty indomitable struggles in the women's sports events, the timings they have clocked and the records they have knothed clearly indicate that sports are not the monopoly of men. The only note of dissent in their participation is of sartorial origin; many observers criticise the use of sari on the sports field as too cumbersome. However, gradually more women are taking to approved uniforms.

Sporting Envoys

In recent times, with the increasing participation in international sports and games, more and more young men and women of India are being selected to represent the nation in these events held both in India and abroad. These young people should view their selection both from a national as well as international angle. It is a great thing to be selected to play for one's country and one should strive to put one's best foot forward to bring glory to the mother-country. The young sportsman must never forget that as a representative of a nation, he is also an unofficial ambassador of his country, bound on a goodwill mission.

The member of an all-India team, therefore, has a dual role to perform, that of a patriot and an envoy. The task should be easy enough, for he is already schooled in the greatest of classrooms—the playing fields, and he is actuated by the noblest of feelings—the sporting spirit.

(A.I.R., Madras.)

Encouraging Children's Art

On November 27, 1951, Sri Jawaharlal Nehru, Prime Minister of India, inaugurated the Government-sponsored National Art Gallery, the first of its kind in Madras. To celebrate the completion of its first year the Madras Government sponsored a Children's Art Exhibition. The spate of pictures sent by juvenile artists to the Exhibition—about 1,500 from 120 schools all over the State—set a refreshing and invigorating tone to the celebration.

The Children's Art Exhibition was opened by Dr. M. V. Krishna Rao, Minister for Education, at the Centenary Exhibition Hall, Madras Museum, on February 1, 1953.

At the inaugural function, Sri K. M. Unnithan, I.C.S., Chairman, National Art Gallery Committee, welcoming the gathering to the children's own show, referred to the "glorious" first year of this "belated but beloved baby" born on the occasion of the centenary of the Museum, and expressed the hope that the Exhibition would fulfil the two-fold aim of encouraging the child-artist who had attained some stage of achievement in art; and of stimulating the interest of the would-be child-artist.

Sri Kuruvilla Jacob, Headmaster of the Madras Christian College High School, speaking on 'Art and Schools', referred to the progressive outlook in art education in the schools and to the attempts made to understand the child and encourage self-expression through art.

Srimathi Rukmini Devi, who spoke next, stressed the need for drawing out art interest in the child and pointed out that beauty in surroundings would serve to improve the creative art instinct in the child.

Self-Expression Through Art

Dr. M. V. Krishna Rao, Minister for Education, then addressed the gathering. In the course of his address, the Minister observed that with the spread of the movement of art education for children launched by Dr. Caizek of Vienna, children were enabled to express fully their imaginative lives. "The result is that," he continued, "in the frequent exhibitions that are held of the paintings by the children, one often came across works that are 'rapturous in their daring harmonies of colour and exhilarating in their uninhibited rhythms.' One may say without fear of contradiction that children alone know how to 'translate their half-conscious fantasies into visual terms and that they can do it with complete and apparently effortless assurance.'"

The Minister then declared the Exhibition open. Srimathi M. V. Krishna Rao distributed the prizes to the winners. At the end of the function Dr. A. Aiyappan, Superintendent, Government Museum, proposed a vote of thanks.

Exhibits and Prizes

Twenty-three prizes—12 first and 11 second—were awarded. The prizewinners were 15 boys and eight girls. Of these 12 belonged to City schools and 11 to schools from the districts.

About 1,500 entries from 120 schools all over the State were received. A committee consisting of Sri P. V.

Rajamannar, Chief Justice, Miss Ismena Warren, Art Teacher, Christian Literature Society, and Sri Ravi Varma, Registrar, University of Madras, judged the entries. The entries, which were divided into eleven age-groups, were from children of ages five to sixteen.

The Exhibition was kept open till February 12, 1953, and attracted nearly 24,000 visitors, most of them children from City and suburban schools.

A reference may be made in this connection to the report of the Committee of Judges, as this contains interesting observations both from the educational and technical points of view. Here is an extract:—

"It is very encouraging to have received drawings from so many schools from so many parts of the State. The lower sections representing the age groups 5-6, 6-7, and 7-8, were not adequately represented. The Committee wishes to point out that in future the children of these age groups should be better encouraged, since they are at that stage naturally more gifted with imagination than at a later age.

Prize Scheme for Best Books Extended

The Government have sanctioned the continuance of the scheme for the award of prizes for the best books in the regional languages for a further period of five years from 1952-53.

The prizes will be awarded for the best books in the various subjects in the following groups:

1. Poems and songs,
2. Prose works (Art, travel and autobiography).
3. Short Story.
4. Novel and Drama.
5. Research work (language, history, old classics).
6. Physics and Chemistry.
7. Natural Science and Agriculture.
8. History, Economics, Politics and Sociology.
9. Mathematics, Astronomy and Engineering.
10. Children's literature.
11. Educational methods, Philosophy and Psychology.
12. Medicine and Hygiene.

Six prizes of the value of Rs. 500 each for the best books in Tamil and Telugu and three prizes of Rs. 500 each for the best books in Kannada and Malayalam will be awarded to the authors of these books.

"The Committee has not considered eligible for competition anything that is obviously recognised as a copy. While the entries for the age groups above 10 were many and varied, the judges have had to discard several as they were not original or had been touched up by the teacher.

"The aim should be to make the children observant of the varied life around them, namely, the villages, farms, bazaars, seashore, etc., and allow them freedom to express, in their own way, their emotional reactions through pictures. It is felt desirable that in future the minimum size prescribed for the entries be 12" x 16" and that more attention should be paid to composition so as to fill the required space. Larger brushes and poster colours (or powder colour available in bazaars mixed with gum and water) would give more satisfactory results. Newsprints or newspapers could be used with advantage when the schools cannot afford to buy costly paper. Similarly, squirrel hair brushes available locally would meet the need where the cost has to be kept low."

Fostering the Work of Artists

In his welcome speech, the Chairman of the National Art Gallery had observed: "Who knows, the greatest artist of the next generation may well be one of the competitors." This tribute not only underlines the significance of children's art, but also highlights the value of the National Art Gallery, in fostering the work of artists, past, present and future.

Before closing, it will be appropriate to refer to the remarks of appreciations left on record in the Visitors Book in the National Art Gallery.

"....a real delight to visit this gallery and think of the days of long ago when men could conceive so grandly and create so magnificently." (Shri Sri Prakasa, Governor of Madras).

"...impressed with the neat arrangements and choice selection of sculptures and textiles and paintings." (Dr. C. P. Ramaswami Aiyer).

"....the arrangements and display of your wonderful collections, most especially in the Art Gallery, seem to be the best in India" (D.E. Barrett, British Museum).

"....admired the wonderful pieces here shown and the beautiful way in which they are presented." (Daniel H. Hingalles, Harvard University).

"....appreciate greatly this insight into the great culture of India." (Alfred G. Fisk, San Francisco State College).

"....Quite the best picture gallery we have seen in India so far." (Mr. & Mrs. T. H. Burchett, Australia).

"....magnificent collection of India's treasured art." (A.L. Schezer, c/o U.S. Embassy, Rangoon.)

The National Art Gallery has been attracting a large number of visitors. The daily average attendance is about 200.

A list of the prizewinners in the competition classified under different age groups is given below:—

Serial number.	Age Group.	Prize.	Name of the student.	School.	Register number.
1	5—6	I	Seshadri	Besant Theosophical School, Adyar ..	586
2	6—7	I	Martin John	Government Training School for Women, Mangalore.	88
3	7—8	I	Bellamkonda Nirmala Devi	Jai Hind High School, Masulipatnam ..	1,496
		II	Gudupalle Sayababa ..	Schade Girls' High School, Rajahmundry.	850
4	8—9	I	R. Nirmala	St. Philomena High School, Bellary ..	1,141
		II	Usha	Besant Theosophical Schol, Adyar ..	574
5	9—10	I	Jambukeswari	Besant Theosophical School, Adyar ..	585
		II	Maman Matthai	C. S. M. Preparatory School, Kilpauk ..	786
6	10—11	I	P. Thangam	B.E.M. Girls' High School, Kozhikode ..	495
		II	P. Ambigapathi	St. Paul's High School, Vepery	1,050
7	11—12	I	M. P. Saradamani	Besant Theosophical School, Adyar ..	609
		II	K. V. S. Seetha	Do.	582
8	12—13	I	P. N. Kumar	Do.	576
		II	Nidamarti Koteswar Rao ..	Jai Hind High School, Masulipatnam ..	1,467
9	13—14	I	A. Nagarajan	Besant Theosophical School, Adyar ..	593
		II	Arya Krishna Kumar	Jai Hind High School, Masulipatnam ..	1,457
10	14—15	I	A. Narayanan	Board High School, Kumaranallur ..	1,015
		I	Ninan P. Ninan.	Madras Christian College School ..	314
		II	Girija	Anandashram High School Kotcher, South Kanara.	744
		II	K. Valsalan	Azhikode High School, Azhikode P.O., Malabar.	836
11	15—16	I	A. V. Dhanushkoti	Madras Christian College School ..	319
		II	V. Kolandaivelu	Kellet High School, Triplicane, Madras.	1,337
		II	Padala Ramalinga Reddy ..	V.T.H. School, Rajahmundry,	973

Students in Uniform

The future of a nation depends on its youth. If the youth is sound the country is assured of progress. It is, therefore, essential that our young men should be given such training at an early age as would stand them in good stead later in life and would make them worthy citizens of their country. The aim of such training should be to develop in them qualities—moral, mental and physical—that would fit them for any role in the service of the country that they may be called upon to play in later years. The best place to catch them young for this purpose is the schools and colleges, where is to be found the cream of our society and the future builders of the nation.

One of the organizations that has addressed itself to this task is the National Cadet Corps which is doing a service to the country the full benefits of which will perhaps be appreciated only after some years. The boys and girls who have received training during the last four years or who are now receiving training in the National Cadet Corps will take their place in different walks of life and it is then that the qualities inculcated in them by their training will come into full play and have a bearing on our national life as a whole. The N.C.C.'s special value, in fact, lies in the fact that it does not cater to any particular profession or service, but lays firm foundations for a useful and healthy future.

No Dearth of Volunteers

Created in 1948, the National Cadet Corps soon caught the nation's fancy and after its aims and objects had been fully understood by the people, there was no dearth of volunteers from schools and colleges who wanted to join it. Had finances permitted, the organization perhaps could have expanded much more than has been possible so far. As it is, its progress has been rapid and it is a tribute to the training given by the National Cadet Corps that a large number of cadets at the National Defence Academy, Dehra Dun, which trains officers for the three Services, are N.C.C. trained boys. These are in addition to those who are taken directly from the N.C.C. for the seats reserved for them. They have come through the regular selection channels.

But the National Cadet Corps does not aim at making soldiers of the boys and girls it trains. Its aims and objects are: firstly, to develop character, comradeship, the ideal of service and capacity for leadership in young men and women; secondly, to provide service training to young men and women so as to stimulate interest in the defence of the country; and thirdly, to build up a reserve of trained personnel to enable the Armed Forces to expand rapidly in a national emergency. It will thus be seen that by supplementing education that the boys and girls get in their respective institutions with military training, the National Cadet Corps adds an important new element to their training.

Divisions and Wings

The National Cadet Corps consists of three Divisions, namely, Senior Division, Junior Division and Girls Division. The Senior and Junior Divisions are composed of three wings—Army, Naval and Air Force. The Army Wing has units of the Armoured Corps, Artillery, Engineers, Signals, Infantry, Electrical and Mechanical Engineers and Medical Corps. In addition to the normal basic training, cadets interested in technical subjects join the technical units

where they receive specialised training. The Naval units of necessity are raised in coastal towns where facilities for naval training are easily available. In the Air Wing units, theoretical and practical flying training is imparted, and with the help of the Flying Clubs cadets obtain 'A' flying licence at Government expense. Various types of units have been raised throughout the country, in colleges and universities. The present strength of the Senior Division is about 800 officers and 25,000 cadets. An important development during the past year has been the creation of a Naval Wing with two Senior Division and 26 Junior Division Units.

The Junior Division units have been raised mostly in high schools and public schools where boys of the right age could be found. The present strength of this Division is about 1,500 officers and 52,000 cadets.

Discipline and Character-building

The object of the Girls Division is to develop the personality of the girls, to make them more self-reliant, to build up their physique and enable them, in a national emergency, to take upon themselves some of the duties normally carried out by men. At present, there are very few units of the Girls Division, but it has become extremely popular and it is hoped to raise more units. The present strength of this Division is about 17 officers and 500 cadets.

The main emphasis in the training given in the National Cadet Corps is on discipline, qualities of leadership, corporate life and building of character. The health of the cadets is given due attention and care is taken to see that they are physically strong. With that object in view, ample provision is made for games and other forms of healthy recreation, particularly when the cadets are in camp. One of the Corps' most important contributions is the development of corporate life amongst the cadets. The training gives them scope for working as a team and creates in them an *esprit de corps*. Differences of religion, caste and creed vanish as if they had never existed.

Social Service by Cadets

The cadets of the N.C.C. have, on various occasions, already shown that they can do useful social service. At various international conferences held in India, they have given valuable assistance to the organisers and, during national emergencies, such as famines and locust-invasions, they have risen to the occasion and given aid to the people. Voluntarily they have gone out to the villages during their stay at their annual camps and have helped the people to construct roads and create healthier conditions in these villages. At a place near Gauhati, 300 cadets constructed a one-mile road and thus earned the gratitude of the tribal people who inhabit this village. Reports of similar help given to villagers have been received from Bombay, Madras, Delhi and other States.

To sum up, it may be said that the National Cadets Corps is an organization of great national importance with a great bearing on the future of our country. Its success depends entirely on the keenness of our youth and the help and co-operation it receives from the public. It augurs well for its future that so far both the youth and the rest of the nation have shown for the N.C.C. the enthusiasm that it deserves.

The Story of a Farm that Grew Up

Over 200 years ago, Jonathan Swift wrote that whoever could make two ears of corn or two blades of grass grow where only one grew before would deserve better of mankind than the whole race of politicians put together. In the present conditions obtaining here, this observation is also applicable to those who could bring even a small area of vacant land under the plough. Increase in the production of agricultural crops depends not merely on more yield being got out of the land already under cultivation, but also on more uncultivated areas being brought to yield.

A British woman traveller who recently moved about in this country wondered how people could talk of food scarcity when she saw vast stretches of vacant land lying dormant waiting perhaps for the skilful hands of enterprising farmers. No doubt, the population of India has increased since 1901 by 34 per cent, while food production recorded only an increase of five per cent. But this wide disparity between the rate of the growth of population and the increase of food production need not cause alarm so long as there is plenty of vacant land remaining to be cultivated.

While Government can only provide facilities for increasing the area under cultivation, it is up to the farmer to exercise his enterprise and resourcefulness in extending the area of cultivation. In countries which have achieved distinction in agriculture like America, Denmark, Belgium, Japan, etc., it is the individual farmer's initiative and enterprise fortified by the assistance of the State that had brought about a marked increase in food production.

This is not, however, to say that farmers in this country are lacking in those virtues which had brought success to their counterparts in the West. During the period

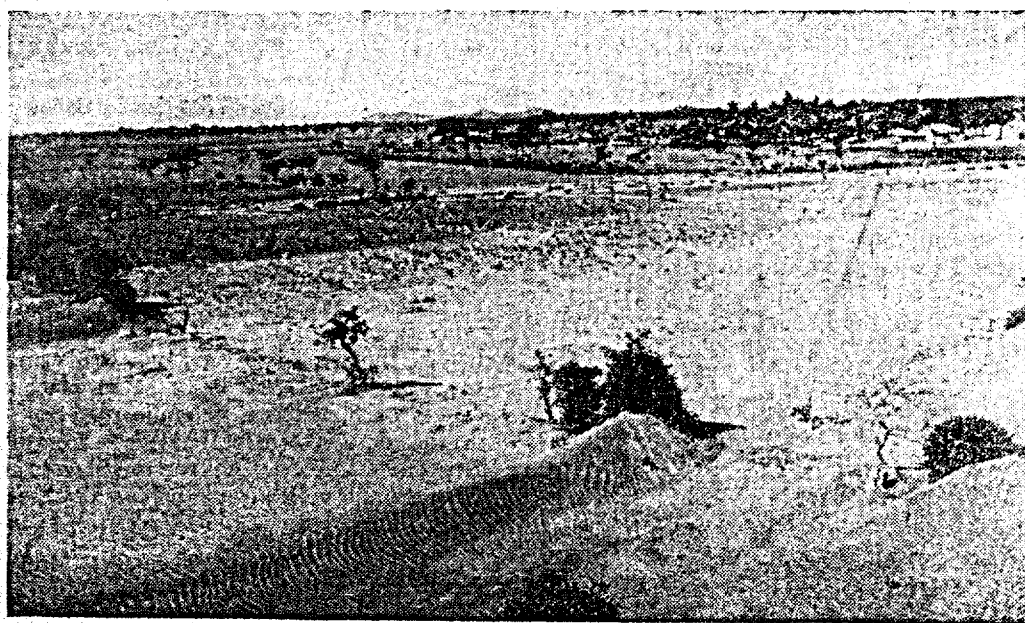
since the close of World War II, many farmers in different parts of India have been able to win spurs in the matter of agricultural production under the stimulus provided by the Government incentives.

Industrialist Turned Farmer

This is the story of an industrialist who turned his attention to farming and put his education, experience and resources to fruitful purpose, by bringing a large tract of fallow land under cultivation. Sadasivam belongs to a well-known family with keen interest in industrial enterprises. Though himself an industrialist, Sadasivam turned his resourcefulness to farming and tapped the possibility of converting an arid waste of 300 acres in Pachipalayam village into land smiling with crops of different kinds.

As to how he went about accomplishing this business is an interesting story. To the average farmer, a block of 300 acres of waste land may seem too big to tackle with the plough. But Sadasivam was no average farmer; he was not baffled by the immensity of the task. As an industrialist he had experience of large-scale operations in production. So he set about the task of bringing this vast tract of fallow land under cultivation with modern scientific methods.

The land in question had a forbidding appearance showing evidences of neglect, and extensive erosion is one of the greatest menaces that beset agriculture in this country; protection from it is one of the essential preliminaries advocated by agricultural economists before land is cultivated. In essence as everybody knows, erosion takes the best part of the upper strata of the soil and thereby undermines gravely its productive capacity.



SOIL EROSION: A spread of 300 acres of barren land at Pachipalayam in Coimbatore district subjected to soil erosion.

Erected Contour Bunds

Sadasivam was fully alive to the evils of erosion and in order to protect his block from it, he erected contour bunds as well as cross bunds which apart from ensuring security from erosion, conserved rain water which ultimately helped to produce a greater yield. After safeguarding the land from soil erosion, Sadasivam devoted his attention to the question of levelling it. Bulldozers and tractors hired from the Government Agricultural Department were used for the purpose and they performed the task in a record space of time. Buckscraper were also used wherever feasible to level up small gradients. The land was then divided into smaller units with the help of bund-formers. Sadasivam found this a much less expensive method which at the same time produced quicker results.

The next step was only to raise crops on the well-prepared and arable land. Sadasivam had imagination enough not to confine himself to one particular crop. So he sowed paddy, chulam, cotton, sugarcane and ragi on the land. Manuring was the next problem he tackled. Its importance in producing greater yields cannot be overemphasised. Earlier in this century, Sri G. K. Gokhale said that Indian agriculture was a progressive deterioration of the soil, implying thereby that the Indian ryot paid little attention to the use of manures. The cultivators of the present day are fully cognisant of the fundamental role of manure in agricultural production.

Sadasivam raised manure plants of several kinds. Where green manure was not available, he found that it was advantageous to have green manure plants grown and have them ploughed into the soil before cultivation. He also used farmyard manure. The assistance of the Agricultural Department under the extension service scheme was utilised at every stage of the agricultural operations.

Water is one of the chief problems of the Indian farmer. This perhaps the reason why an American writer characterised Indian agriculture as a gamble on rain. Dependence on rain has to be minimised by tapping of available local sources. Sadasivam replaced the old mholes with 15 H.P. motors for drawing up water from four wells which had been sunk in the land for the supply of water. This proved successful and plenty of water become available.

Sadasivam's farm at present grows paddy, cotton, sugarcane, chulam and ragi strains evolved in the different Research Stations in Coimbatore. It has lost completely the old abandoned appearance and now shines in green grandeur with its luxurious variety of crops.

The example of Sadasivam must serve as an inspiration to less industrious farmers whose traditional conservatism makes them shy at obstacles in the process of agriculture. If others follow the trail blazed by Sadasivam then food shortage will cease to be the nightmare it is today.



LEVELLING: Buckscraper levelling up small gradients

Crop Forecast Reports

Paddy

The area sown with paddy in the Madras State up to the end of November 1952 is estimated at 8,761,000 acres. Compared with the corresponding estimate of 8,866,000 acres for the State for the previous year, this is a decrease of 1.2 per cent.

A decrease in area is estimated in all the districts of the State except West Godavari, Chingleput, South Arcot and South Kanara where there was an increase, and the Nilgiris where it was the same as in the previous year. The decrease in area is marked in Chittoor District (— 20,000 acres), Guntur District (—15,000 acres) and Tiruchirappalli District (— 13,000 acres). The decrease in area is due mainly to the failure of seasonal rains.

The harvest of paddy crop is concluding in East Godavari and West Godavari Districts and progressing in Guntur, Chingleput and Chittoor. The harvest is also progressing though on a restricted scale in Srikakulam, in parts of Visakhapatnam, Krishna, Bellary, Kurnool, Cuddapah, South Arcot, Salem and Coimbatore Districts. The yield per acre is expected to be below normal in all the districts of the State due, in general, to inadequate rains during the growing period.

The standing crop is reported to be not faring well in parts of Kurnool, Anantapur, Chittoor, Madurai, Ramanathapuram and South Kanara Districts due to insufficient rains. The crops in parts of Nellore, Chingleput, South Arcot, Salem and Coimbatore Districts are reported to have been benefited to some extent by the recent rains. The crop is reported to have withered in parts of Nellore not benefited by the rains, in parts of a taluk in Tirunelveli District and is reported to be either withering or beginning to wither in most of the taluks in Malabar District. A severe cyclone crossed the coast at Nagapattinam and struck Tiruchirappalli and Tanjore Districts causing heavy rainfall in these districts. Some areas along the coast in Tanjore District were inundated by salt water due to the recent cyclone. The crops which were in flowering or harvesting stage were damaged by the cyclone in Tanjore and Tiruchirappalli Districts. The crop is reported to have been affected by insect pests in parts of the districts of Srikakulam, Krishna, Guntur, Cuddapah, Nellore, Chingleput, South Arcot, Tiruchirappalli, Tanjore, Madurai, Ramanathapuram and Tirunelveli. Remedial measures have been taken to prevent loss to production.

The Seasonal Factor for the State as a whole works out to 76 per cent of the average as against 82 per cent for the corresponding period of the previous year. On this basis the total yield is estimated at 3,357,000 tons in terms of rice as against 3,654,000 tons estimated for the corresponding period of the previous year, representing a decrease of 8.1 per cent.

The average wholesale price of paddy II sort per standard maund of 82.2/7 lb. (equivalent to 3,200 tolas), as reported from some important market centres on 22nd November 1952 was Rs. 8-2-0 in Cuddalore, Rs. 8-7-0 in Eluru and Mangalore, Rs. 8-9-0 in Nagapattinam, Rupees 8-2-0 in Kumbakonam, Rs. 9-6-0 in Vijayawada and Rs. 9-10-0 in Vizianagaram.

Cholam

The area sown with cholam (jowar or *Sorghum Vulgare*) in the Madras State up to the 25th September 1952 is estimated at 2,048,200 acres. Compared with the area of 2,024,600 acres estimated for the corresponding period of the previous year, this is an increase of 23,600 acres of 1.2 per cent.

Cholam has not been sown in the districts of South Kanara and the Nilgiris. The area estimated is the same as that for last year in the districts of Visakhapatnam, Bellary and Malabar. An increase in area is estimated in the districts of Srikakulam, Guntur, Anantapur, Cuddapah, Nellore and Chittoor and decrease in the other districts. The sowings were delayed in the districts of Guntur, Bellary, parts of Cuddapah, South Arcot, Tiruchirappalli and Ramanathapuram due to want of timely rains.

The condition of the standing crop at the time of the report was below normal in the districts of East Godavari, Bellary, Anantapur, Nellore, Chittoor, Coimbatore and Tiruchirappalli due generally to want of timely rains.

Cumbu

The area sown with cumbu or bajra (*Pennisetum Typhoideum*) is estimated at 1,472,300 acres. Compared with the area of 1,431,000 acres estimated for the corresponding period of the previous year, this is an increase of 41,300 acres or 2.9 per cent.

Cumbu has not been sown in the districts of Malabar, South Kanara and the Nilgiris. The area sown in the districts of West Godavari, Guntur, Kurnool, Tiruchirappalli and Tirunelveli is estimated to be the same as that in the previous year. An increase in the area sown is estimated in the districts of Visakhapatnam, East Godavari, Anantapur, Cuddapah, Nellore, Chittoor, Salem and Coimbatore and a decrease in all the other districts of the State. The early-sown crop has been harvested in the districts of West Godavari, Bellary, Chittoor and Coimbatore and the yield obtained was generally below normal.

The condition of the standing crop at the time of report is reported to be generally unsatisfactory except in the districts of Guntur, Coimbatore, Madurai, Ramanathapuram and Tirunelveli due to inadequate rainfall.

Samai

The area sown with Samai (*Panicum Miliare*) in the Madras State up to the 25th September 1952 is estimated at 261,000 acres. Compared with the area of 288,000 acres estimated for the corresponding period of last year, this is a decrease of 9.4 per cent. The decrease is attributed generally to want of timely rains.

The area estimated is the same as that for last year in the districts of Chingleput and South Kanara. There was no samai crop in the districts of Krishna, Guntur and Tanjore. An increase in the area is estimated in the districts of Srikakulam and Visakhapatnam and a decrease in area in the remaining districts of the State.

The crop is reported to have been affected to some extent due to drought conditions in most districts.

Korra

The area sown with Korra (Tenai or *Setaria Italica*) in the Madras State up to 25th September 1952 is estimated at 1,041,500 acres. Compared with the area of 1,051,100 acres estimated for the corresponding period of the previous year, this is a decrease of 0.9 per cent.

Korra is not cultivated in the districts of Tanjore and South Kanara. Sowings have not yet commenced in Tirunelveli District. The area estimated is the same as that for last year in the districts of Tiruchirappalli, Ramanathapuram, Malabar and the Nilgiris. An increase in area is estimated in the districts of Anantapur, Cuddapah, Chittoor and Salem and a decrease in all the other districts of the State. The decrease is generally due to want of timely rains.

Varagu

The area sown with Varagu (*Paspalum Scrolicuiatum*) in the Madras State up to the 25th September 1952 is estimated at 378,400 acres. Compared with the corresponding figure of 396,400 acres estimated for the previous year, this is a decrease of 4.5 per cent.

Varagu is not cultivated in the districts of Malabar, South Kanara and the Nilgiris. The area estimated is the same as that for the last year in the districts of Bellary

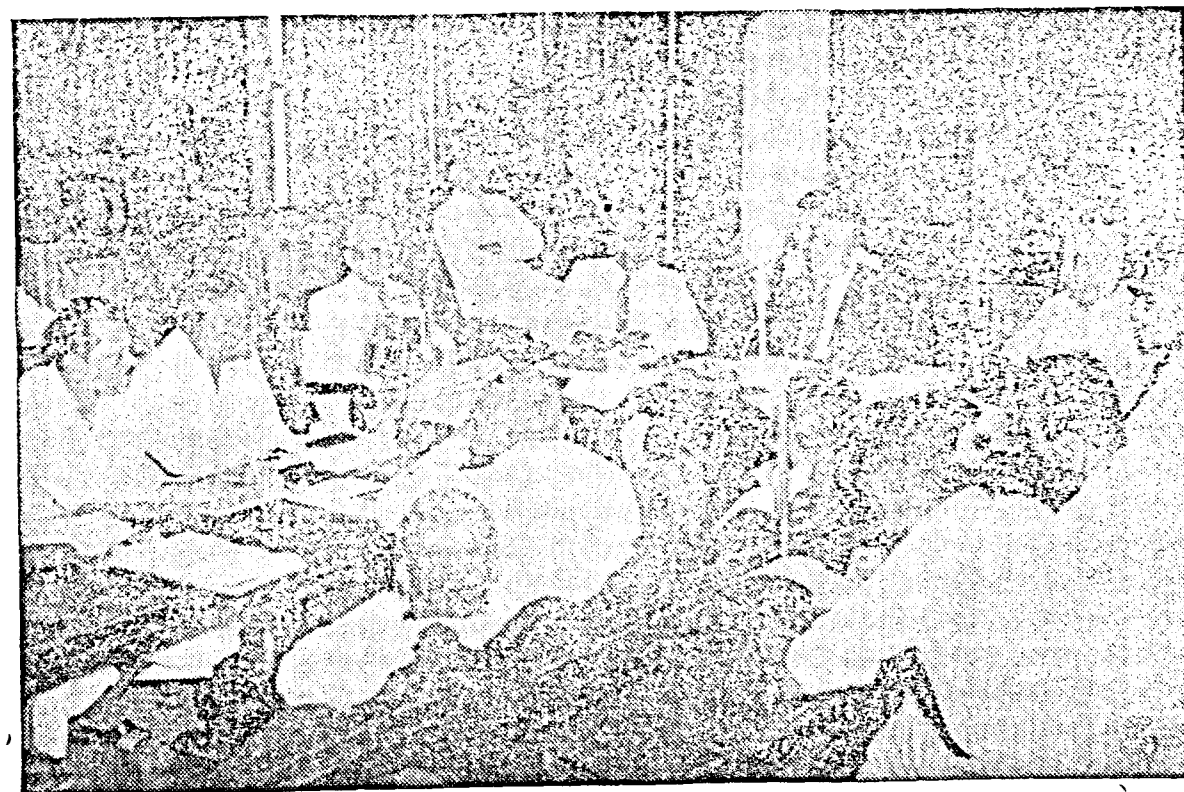
and Tanjore. An increase in area is estimated in Cuddapah District and a decrease in area in all the other districts of the State. The decrease was due generally to inadequate rains in the sowing periods.

Ragi

The area sown with Ragi (*Eleusine Eorocina*) in the Madras State up to the 25th September 1952 is estimated at 822,800 acres. Compared with the area of 831,400 acres estimated for the corresponding period of the previous year, this is a decrease of 1.0 per cent.

The estimated area is the same as that for the last year in the districts of Krishna, South Arcot and South Kanara. An increase in area is estimated in the districts of Srikakulam, Bellary, Anantapur, Cuddapah, Nellore and Chingleput and a decrease in area in the other districts of the State. The decrease is due mainly to inadequate rains.

The condition of the standing crop at the time of the report is reported to be below normal in the districts of East Godavari, West Godavari, Krishna, Kurnool, Bellary, Chingleput, North Arcot, Salem, Coimbatore and South Kanara. The early-sown crop in the districts of Anantapur, Chittoor, Malabar and the Nilgiris has been harvested and the yield is reported to be below normal. The condition of the crop in the other districts of the State is reported to be generally satisfactory.



SPICES ENQUIRY: A meeting of the Spices Enquiry Committee was held recently at Fort St. George, Madras City.

Work of Agricultural Department

Reviewing the administration of the Agricultural Department during 1951-52, the Government have observed that the record of work of the Department during the period under review was on the whole satisfactory and that the achievements would have been more striking but for the adverse seasonal conditions.

The other salient features of the Government's review are:

Food Production.—The Three-Year Intensive Cultivation Plan was merged into the Five-Year Plan of the Planning Commission. The year under review was the final year of the Three-Year Plan and the first year of the Five-Year Plan. The target of additional production of foodgrains set for attainment during the year through agricultural schemes was 378,294 tons. The following agricultural schemes, worked during the previous year, were continued during this year also, namely, mechanised cultivation by tractors and bulldozers, mechanical aids for lift irrigation by supply of oil engines, electric motors and river-pumping installations, supply of manures, improved seeds, iron and steel, propaganda and publicity, and control of pests and diseases of crops. Under the scheme of mechanised cultivation, an area of 51,983 acres was brought under cultivation by utilising 293 departmental tractors (154 with bulldozer attachments) as against 66,720 acres brought under cultivation during the previous year by means of 268 tractors (136 with bulldozer attachments); 1,201 oil engines and 191 electric motor pumpsets were issued to ryots under the hire-purchase system which has become popular, as against 1,075 oil engines and 189 electric motors distributed during the previous year. One thousand one hundred and seventy-nine oil engines and 546 electric motors were hired out to ryots as against 706 oil engines and 555 electric motors during the previous year.

Cotton Extension Plan.—The cotton extension scheme continued to be in force during the year as part of an all-India Plan for increasing the production of cotton. The plan aimed at an increased production of 155,000 bales of cotton during the year. The main lines of extension work were reclamation of fallow lands for raising cotton, diversion of certain lands under food and other crops to cotton, double and inter-cropping of cotton with commercial crops, application of fertilisers and distribution of improved seeds. The total estimated production of cotton in the State during the year is 3.6 lakhs bales as against 3.38 lakhs bales during the previous year.

Agricultural Education.—One hundred and thirty-eight graduates passed out of the Agricultural Colleges at Coimbatore and Bapatla. The number of admissions to each of the two Agricultural Colleges was raised from 80 to 96. The number of applications for admission into the two Agricultural Colleges fell to 392 from 466 in the previous year. The third session of the Diploma course in Horticulture was completed and all the 20 students who attended the course, passed out successfully.

Agricultural Research.—The work in the several research sections of the Department has been satisfactory. Soil studies regarding the reclamation of alkaline lands in the Cauvery-Mettur Project area have shown that the soils lack nitrogen and can be reclaimed and made fertile by

heavy dressing of green leaf. Experiments have also shown that heavy or light irrigation did not affect the salt concentration in the top layers in the black soil of the Tungabhadra Project area and hence there is no fear of rise of salts to the surface by irrigation. Some studies of the foliar diagnosis of nutrient elements in the soils were also started.

Crop Improvement.—Seven improved strains of paddy found promising in district trials during the year were released for distribution. These strains are expected to benefit about a lakh of acres. The evolution of suitable strains for submergible areas covering about two lakhs of acres in the State was in progress at the newly opened Rice Research Station at Pulla in West Godavari District. Five new millet strains were released for distribution during the year. One strain of groundnut (TMV 4) and an improved strain (MU 2) of Uganda cotton, which has been very popular, were released.

Crop Sampling.—During the year under review, crop-cutting experiments were conducted on paddy, cholam, cumbu, ragi, castor, gingelly and groundnut.

Agricultural Engineering.—The Agricultural Engineering Branch was engaged in arranging supply of implements, oil and electric driven pumpsets and mechanical cultivation units such as tractors and bulldozers. The application of mechanical aids considerably helped to increase food production and there is increasing demand for them from ryots.

Propaganda, Publicity and Extension Work.—The Grow More Food monthly journals in the regional languages continued to be very popular and 106,819 copies were circulated towards the close of the year. At the instance of Government, a number of illustrated popular brochures on principal crops were got printed and made available to the public at a nominal price of annas three per copy. The Department took part in 201 exhibitions held during the year.

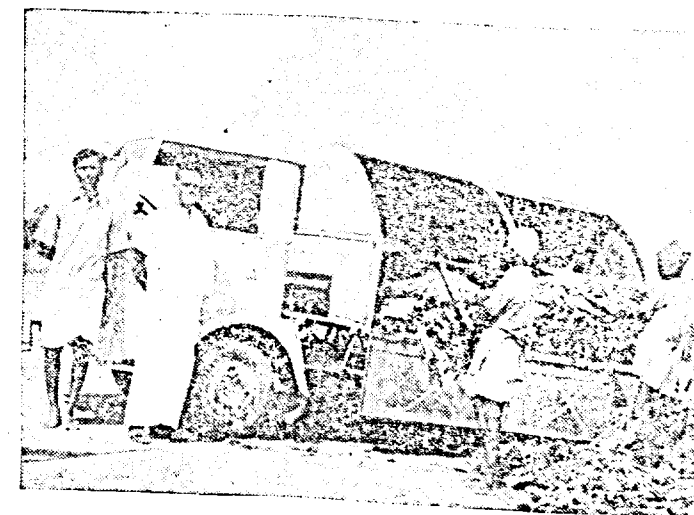
Agricultural Marketing.—The main items of work of the marketing section were survey of new products, revising the market reports already published, rendering help in grading commodities, organising regulated markets, furnishing market information on important agricultural commodities and giving advice and help in marketing agricultural produce. A new grading station for ghee was opened at Ongole during the year. New Market Committees were constituted in Tirunelveli District for cotton and in Ramanathapuram District for cotton and groundnut. Including these, there are now 13 regulated markets and five grading stations in the State.

Finance.—The expenditure on Agriculture during the year increased to Rs. 316.49 lakhs as against Rs. 275.35 lakhs during the previous year. An increase of about Rs. 24 lakhs in expenditure was due to seed multiplication schemes, control of crop and plant protection, multiplication and marketing of cotton seeds and demonstration and propaganda. The Agricultural Engineering activities accounted for an increase of about Rs. 13.4 lakhs. The receipts during the year were Rs. 110.95 lakhs as against Rs. 117.95 lakhs in the previous year. The decrease in revenue was due to the fact that the receipts in 1950-51 included a large recovery from the Central Government on

COMPOST WEEK CELEBRATED IN KARUR



WEALTH FROM WASTE: Compost Week was celebrated recently by the Karur Co-operative Marketing Society (Tiruchirappalli District). Local officials, non-officials and ryots joined in the drive to produce wealth from waste. Picture shows town refuse and rubbish taken in country cart being unloaded in the depot.



REFUSE RECLAIMED: Rubbish collected in the Municipal lorry is also brought to the depot.

MANURE HEAPS: Compost manure heaps spread out, with instruments recording temperature.



Profile of a Paddy Pest

Mr. Leptocorisa—he got his first scientific baptismal certificate way back at the turn of the 19th century—is one of the most distinguished and well-known figures amongst God's low creation. Perhaps you know him more intimately by his other popular name, Mr. Rice Bug.

As in the case of many wonderful things, the original home of the Rice Bug is shrouded by the miasma of speculation. But many believe that he had his ancestral home somewhere in Asia. Today, however, he has developed cosmopolitan habits, and is found in almost all parts of the Asian Continent. He could, indeed, be called an Oriental.

The Rice Bug likes paddy, especially when the grains are in the milky stage. Recently, his community ate up a good bit of the paddy crop in Bihar, Madhya Pradesh, Uttar Pradesh and Orissa. Normally, he destroys about 10 per cent of paddy crops. But in an aggressive, epidemic form, his community can be depended upon to destroy something like 70 per cent of the total crop.

In profile, or in an aerial view, the Rice Bug presents a long lean lanky appearance. Normally, he is just about an inch long and his body is superbly fitted for moving around the paddy grains with great care. His complexion is greenish-yellow, matching with the paddy head; and with the wings he has, he goes in for occasional flights from field to field or from one State to another.

A voracious eater, the Rice Bug consumes the milky juice of the paddy grains so much that nothing but the chaff remains. The left-over is not good either for human consumption or for seed purposes.

Mrs. Bug lays brownish, seed-like eggs in rows of 10 to 20 on the leaf-blade of paddy. These are hatched in about a week, and the quite young ones are ready to take on the full-time occupation of destroying paddy grains. Within a fortnight, they develop wings for major operations involving flights.

As in the case in the insect world, the Rice Bugs have their own natural enemies, the Tiger Beetle, some types of spiders and plant protection officers—in that order.

But normal life comes to a sudden close for the Rice Bug when a chemical with a double-barrelled name assails him. The chemical? Benzene Hexachloride!

Tilapia Culture in Madras

By SRI D. D. PETER DEVADAS, Deputy Director of Fisheries, and SRI P. I. CHACKO, Assistant Director of Fisheries, Department of Fisheries, Madras.

At the suggestion of the senior author who attended the recent seminar on fish culture held in Indonesia under the auspices of the Indo-Pacific Fisheries Council of the F.A.O., a consignment of 500 fry (0.5 to 1.5 inches in size) of *Tilapia mossambica* was imported from Ceylon on 8th September 1952. The fish were transported without any casualty in a tin container sealed with oxygen. As this is the first introduction of this exotic fish to India and as its effect on the autochthonous fish fauna has to be watched carefully, we discuss below the possibilities of culture of this species in South India with due reference to its bionomics in waters of the neighbouring countries of Indonesia, Malaya, Ceylon and East Africa.

In Indonesia, this fish is largely cultivated in fresh waters along with the common carp and other fishes, the average composition of this association being *Cyprinus carpio*—40 per cent, *Tilapia mossambica*—30 per cent, *Osteochilus hasseltii*—10 per cent, *Puntius javanicus*—10 per cent and *Helostoma temminckii* and *Osphronemus goramy*—5 per cent (1). *Tilapia* is also cultured in brackish waters with *Chanos-chanos* and prawns; and it makes up the greater part of landings from Central Java swamps which formerly were practically non-productive (2). It is reared as a secondary crop in rice fields with *Cyprinus carpio* and *Trichogaster pectoralis* (3), and is also being used with success for keeping ditches and pools free of filamentous algae which cause prevalence of malaria (4).

In Malaya and Ceylon

In Malaya *Tilapia mossambica* is now being favoured by the professional Chinese fish culturists as it breeds throughout the year at intervals of about six weeks, the eggs and fry being carried by the mother in its mouth for about 10 days. When grown along with other kinds of fish, it attains a weight of $\frac{1}{2}$ lb. in about four months. In one fish pond in Singapore the total yield was 7,000 lb. per acre per year, of which 1,200 lb. were *Tilapias*; and another pond stocked exclusively with this species yielded more than a ton per acre per annum (5).

In Ceylon encouraging results have been achieved by the use of *Tilapia mossambica* and Gourami in association with and without the inclusion of the common carp (6). The best results have been obtained in Africa with species of *Tilapia*, where they contribute to the bulk of the fisheries of several of the larger lakes (7, 8, 9). The males of *Tilapia mossambica*—complex grow faster and larger than the females, the males growing to 25 cm. and females to 21 cm. in fifteen months.

Non-cannibalistic habit, rapid growth and propagation, harmless association with other species, adaptability to different types of fresh and brackish waters (even up to six per cent salinity), capacity to withstand handling and transport, algicidal and mosquito larvicidal propensities, and high yield make *Tilapia mossambica* an ideal fish suited for culture in South Indian waters, many of which dry during the summer. Within a period of eight to ten

months, the fish will produce several generations; and therefore seasonal and long-seasonal waters can be stocked with it without incurring any expenditure on their preparation and improvements. The expensive and laborious method of collection and transport of fry of carps from the rivers and canals during the rainy season and of *Chanos* from some of the coastal areas can also be partly overcome by the breeding of this newly introduced fish in a chain of fish farms.

As stated by Panikkar (10), no species which would grow to marketable size within three or four months of really reliable period of water-supply seem to exist in our country. Besides, about 2½ lakhs of fallow backwaters that are available in the Madras State can now be used profitably for fish culture. *Tilapia mossambica* can be expected therefore to give satisfactory results in our inland waters.

The fish is at present stocked in the Chetpet fish farm in Madras City, Ippur fish farm in Nellore district, in two ponds in Madurai and one tank in Karkal in South Kanara District. Its thriving and establishment in the new environmental conditions are being studied closely.

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Grants for Unemployment Relief

During December 1952, the Government sanctioned grants amounting to Rs. 10,09,550 to the District Boards of Cuddapah, Kurnool, Anantapur and Chittoor for expenditure on road works in connection with unemployment relief.

Planning for Food Emergency

By Dr. V. SUBRAMANIAM, D.Sc., F.R.I.C., F.N.I., Director, Central Food Technological Research Institute, Mysore.

The main component in our diet is starch which forms about 60 per cent of the food of the majority of population. If we are to avert a famine, we should first obtain substantial quantities of starch-bearing materials. Starch has also various industrial uses and we require very large quantities of starch even at the present time.

Apart from the grains, tubers and particularly tapioca and sweet potato are two very rich sources of starch and of these two, tapioca is generally the more acceptable. In the delta districts an yield of 10 to 12 tons of tapioca per acre can be obtained. Even on poor soils in other parts of the country, a minimum yield of 2 to 3 tons can be obtained. In other words, we can obtain anywhere from 3 to 10 times as much of starchy food per acre in the form of tapioca as we can do in the form of grains.

Good Growth Response

We have, during the past two years, carried out intensive studies on the effect of replacing cereals in our diet to the extent of 25-50 per cent with tapioca and sweet potato flour. In spite of the lowering of the portion content of the diet, we found that the growth response of experimental animals was as good, if not slightly better, than on cereals alone. We have ourselves repeated the experiments four times and two other laboratories in the country have also repeated them independently, with similar results. This remarkable phenomenon is due to the high calcium content of the tuber which is four to six times that present in rice. We have recently done human feeding experiments with the same materials and have found that the protein balance is unaffected through replacement of rice with tapioca to the extent of 25 per cent.

Nutritive Value of Tuber Flours

Consequent on the acute short supply of cereals, particularly rice and wheat, it has become increasingly necessary to provide other subsidiary foods to make up for the deficiency in food ration, particularly for the urban population. Among such goods, the most promising are tubers which could be produced in greater abundance than cereals. The tubers are by themselves poor substitutes for cereals and are particularly deficient in proteins. It has been shown that incorporation of groundnut cake flour to the extent of 20 per cent makes up for the deficiencies in tuber flours and enhances their nutritive value to a higher level than that of rice.

Incorporation of groundnut cake flour, however, presents certain practical problems and attempts are being made to overcome them. At the same time, it is of importance to know whether incorporation of a low percentage (about 25 per cent of tuber with a cereal) will have any pronounced effect on the overall nutritive value of the mixture. The

We have succeeded in suitably combining tapioca with good quality groundnut flour and producing a synthetic grain which is nutritionally as good as rice. We demonstrated the production of the grain on a pilot plant scale in Travancore-Cochin. The State is keenly interested in the production of at least a hundred thousand tons of grains in the near future. The grains that we now make are round, but given the necessary mechanical equipment, we can make beautiful, white rice-shaped grains which can satisfy even the most fastidious consumers.

Overcoming Prejudice

At the present time, there is considerable amount of prejudice against the use of tubers and particularly of tapioca over a large part of the country. The public have, however, learnt to use the flour and the soji both of which can be easily prepared out of tapioca. About a year ago, I made bold to suggest that in view of the impending emergency we should make the flour or soji or both as a part of our ration at least to the extent of 1 oz. per capita. If people are compelled to buy at least a small quantity, as a pre-requisite for obtaining their normal grain ration, we will automatically create a definite demand for the products and the increased production will automatically follow. This proposal is a safe and a practical one and is supported by the scientific evidence that is steadily accumulating.

Judging from the trends, one cannot help feeling that whether we like it or not we will soon have to choose one of the two alternatives; either to produce and consume more tuber products and thus be prepared for an emergency or to face the grain famine which is bound to come sooner or later. The choice is obvious.

present shortage in regard to cereals is only of the order of about 10 per cent and even allowing for an increased demand consequent on the inevitable rise in population, it will not be necessary to incorporate more than 20 per cent of a tuber together with cereals, which will continue to be the staple food of a large section of the people.

In the present enquiry, the effect of replacing rice or wheat to the extent of 25 per cent by one of the following has been studied: (1) tapioca flour, (2) sweet potato flour, (3) a mixture of sweet potato flour (80 per cent) and groundnut cake flour (20 per cent), and (4) a mixture of tapioca flour (80 per cent) and groundnut cake flour (20 per cent).

Experimental

The chemical composition of the foodstuffs were determined according to the A.O.A.C. methods. The overall nutritive value of the different diets, thus prepared, was

determined by the rat growth method as described in the earlier investigation (Murthy et al loc cit).

Replacement of 25 per cent of rice or wheat with tapioca or sweet potato flour, has not led to any deterioration in the overall food value of the diet. Incorporation of groundnut cake flour together with tapioca or sweet potato flour leads to a further improvement. The animal experiments would show that the inclusion of 25 per cent of tapioca or sweet potato flour in a predominantly cereal diet will not appreciably lower the food value of the diet.

Provide Essential Foods

The nature and extent of supplementation between cereals and tubers at different levels is an important subject which will require further systematic study. When incorporated at a low level the two tubers, viz., sweet potato and tapioca, though highly deficient in regard to protein, do nevertheless seem to provide the essential food constituents which are lacking in the cereals. Both the tubers are richer in regard to calcium than rice and it has been found that, whereas rice used for the experiments contained only 10 mg. of calcium in 100 mg. the mixture with 25 per cent tapioca contained 20 mg. and the one with sweet potato, 40 mg. in 100 mg. The incorporation of extra calcium may not full account for the effect, because, as may be seen from the results, sweet potato has not produced a better response than tapioca.

The exclusive use of tapioca or sweet potato as the main ingredient in the diet does not promote any growth, and as the effect of supplementation is seen only at low levels, it may be naturally inferred that as the proportion of tapioca or sweet potato in the diet is increased, there may be a steady deterioration in the growth response. This aspect of the subject would require systematic study both with experimental animals and with human subjects. It will help to show the extent to which the tuber can be incorporated in the cereal diet without any appreciable lowering of the overall food value.

Improvement Observed

Contrary to normal exceptions, substitution of rice or wheat by tapioca or sweet potato flour to the extent of 25 per cent in a poor vegetarian diet does not lead to any deterioration in the overall food value of the diet. On the other hand, there is some improvement in the growth response. The incorporation of groundnut cake flour together with the tuber flour produced further improvement. The average weekly increases (plus) or decreases (minus) of the body weight of rats fed on diets based on different cereals, tubers and blends made with them, were as follows:—

Tapioca (—0.5 g.); sweet potato (—8.8 g.); raw milled rice, plus 4.8 g.; rice (75 per cent), plus tapioca (25 per cent), plus 7.3 g.; rice plus tapioca plus groundnut cake, plus 0.2 g.; rice plus sweet potato (25 per cent), plus 6.2 g.; rice plus sweet potato plus groundnut cake flour, plus 9.4 g.; wheat, whole, 8.6 g.; wheat plus tapioca (25 per cent), plus 9.8 g.; wheat plus tapioca plus groundnut cake, plus 11.3 g.; wheat plus sweet potato (25 per cent), plus 9.4 g.; wheat plus sweet potato flour plus groundnut cake flour, plus 9.9 g.

(By courtesy, Central Food Technological Institute, Cheluvamba Mansion, Mysore.)

Food Value of Wheat

Everybody in our State is talking about an overall shortage of rice in our country. The choice of an additional cereal has become a necessity. When you choose, why not choose the best? Wheat has nearly 12 per cent proteins, 1.5 per cent fat and 1.5 per cent minerals, whereas raw milled rice has only 6.5 per cent proteins, 0.4 per cent fat and 0.5 per cent minerals. This means that there is nearly twice as much protein and thrice as much fat and minerals in wheat as compared to raw milled rice. The notorious ill-balance of the South Indian diet is due to its rice content. The chief way, and perhaps the cheapest way of avoiding malnutrition, is to replace a portion of the rice by wheat.

When occasion demands, we should change our habits, instead of clinging fast to likes and dislikes. It is a fallacy to imagine that one is 'used' to a particular kind of food and any other kind of food is harmful. When there is a national call, we should be prepared to welcome a change in our food habits. The choice between one grain and another is largely a matter of availability. When rice is in short supply, we should welcome wheat into our diet and thereby ensure an equitable distribution of the available stock of rice to all.

We should immediately welcome wheat into our dietary. When it is also available, there is no second thought needed. About five ounces of rice of the daily meal may easily be replaced by wheat. This will make a good beginning. Wheat has very few of the disadvantages of milled rice. Diseases like Beri-Beri due to deficiency of the vitamin lost during the milling, polishing and washing of rice, are unheard of in wheat-eating countries. Wheat is now being made available in our State even more readily and cheaply than rice.

Broken wheat can be cooked just as rice or as wheat congee or wheat porridge. "Uppuma" made of broken wheat is already much in use and more popular than rice "uppuma". Wheat pongal, sweet or savoury, wheat puttu, wheat payasam, wheat iddili, rava laddu, wheat adai, wheat kesari, etc., can easily be prepared to suit our tastes. In the place of rice flour, usually used in the preparation of 'bajji, pagoda, dosai, kolukattai, pancake, bonda, parotta, murukku, etc., wheat flour could easily be substituted. Wheat bread has already formed part of the middle and upper middle-class dietaries.

Wheat chappathi is one of the best and easiest preparations with whole wheat flour and is most popular among wheat-eaters in North India. In fact, it requires only some mental re-adjustment of established dietary habits, to substitute wheat, partially or wholly, in all the common rice preparations. One meal in a day may chiefly consist of wheat preparations which may be of any variety or type made according to taste.

Many people have taken with relish to either chappathis or other wheat preparations which can be made as palatable, and even more tasty, than the monotonous rice food. It is only a matter of change of habit and getting over prejudices and predilections. Details for the making of different wheat preparations can be had from the publication *Simple Food Recipes* by the Madras Public Health Department.

Science in Old Madras

By SRI V. SRINIVASAN

It was natural that South India's record in the field of biological research was warmly appreciated by Prof. J. B. S. Haldane during his brief sojourn in Madras in January 1952. That a medical college was the venue of the savant's address to the University scholars was also appropriate, as many scientists in our bead-roll of honour have been men of medicine whose catholicity of interest we find splendidly exhibited through several distinctive contributions to natural science.

If history records a Francis Day as founding Madras in 1639 and building a fort, we have another Francis Day (1829-1889) in recent times who was a surgeon-major and a naturalist. Dr. Day's special field was ichthyology and his instructive monographs on the fishes in Malabar and other parts of the peninsula earned him undying fame. He appears to have recommended as a measure of help to fisherfolk that salt be sold from Government depots free of duty for fish-curing. His famous book *The Land of the Perumals or Cochin—Its Past and Present* (1863) is an excellent account of the Dutch transactions in India proper.

First Physician-General

The eminent Dr. James Anderson who was put in charge of the Medical Department of Madras when it was constituted in 1781, thus becoming the State's first Physician-General and Director of Hospitals, was also an ardent naturalist. His interest in sericulture, his assiduous labours in the matter of developing the cochineal dye and his work on 'the Hon'ble Company's Nopalry' which was created through his effort (it survived him and continued till Lord Clive abolished it)—all these have received fulsome notice at the hands of the annalists of old Madras. Anderson endeavoured to popularize the cultivation of foreign varieties of plants like the apples and grapes besides coffee and American cotton, and he had a share in building up the reputation of the Madras Silkworm of Bengal (*B. Crasi*).

The fine monument of this official in St. George's Church, Madras, was Sir Francis Changrey's work, forming a notable link with British tradition in art, as this sculptor was also the maker of the Munroe bronze standing on the Island Grounds.

Authorities on Snakes

There were one or two authorities on snakes among the members of the Madras Medical Service. Reference is made in H. D. Love's *Vestiges of Old Madras* to a book of snakes written by Dr. Patrick Russel of Visakhapatnam and it would appear that this book as well as Dr. Roxburgh's magnum opus on the Coromandel plants (for which Russel wrote a preface) were both distributed by the Board of Trade in the year 1798. Russel was interested in cures for snake-bites, but he also wrote a book on the fishes of Visakhapatnam. He was a botanist, besides.

Another medical man with the distinction of being an ophiologist as well, was Edward Nicholson, Assistant

Surgeon, Royal Artillery, who too wrote a book on Indian snakes (1870).

The ornithologist T. C. Jenson (1811-1872), author of *Birds of India* (1862) and *Mammals of India* (1867) was also a member of the Madras Medical Service. Yet another naturalist in that fraternity was Robert Wight who brought together a long botanical collection and wrote much on botanical subjects. He also collaborated with Neil Arnott, the famous inventor.

Botanical Studies

The pre-eminence of Madras as pioneer in Indian botanical study was published long ago in the *Imperial Gazetteer of India* and Colonel Love's book mentions the important quartette of eighteenth century botanists in the peninsula, viz., the Danish physician Dr. Koerig, Dr. Russell and Dr. Roxburgh already mentioned, and Heyne.

Johann. Gerhardt Koenig (1728-1785) was a pupil of of Carl Linnaeus of Upsala who laid the foundation of modern botanical nomenclature. Although specially deputed from Denmark under Royal orders, for research in things Indian, Koenig appears to have received little encouragement from the Danish community, and so on his applying in 1778 for appointment as the 'Honourable Company's Natural Historian' he was taken into Madras Service. The manuscripts and the herbarium that he collected in South India were bequeathed to the then President of the Royal Society in London, and his post was held, following on his death in 1785, by Dr. Russell of Visakhapatnam and after him by Dr. Roxburgh.

William Roxburgh who has been acclaimed as the father of Indian botany, made his large collection in Samalkot while serving there as a surgeon. He has the distinction of having discovered indigenous pepper in the Rampa Hills and the Government of the day attached great importance to this discovery. Roxburgh advocated the growing of the coconut palm in the Circars when Ceylonese exportation of coconuts to India had ceased during 1778-1780. He was also keen on growing sago, date, plantain, opuntia (prickly-pear) and jack in view of their food value; and peculiar interest, no doubt, is attaches in the circumstances of today to the derisive view he held on the inadequacy or unsatisfying nature, from the standpoint of agricultural production, of the Zamindari tenure of the time under which, as he said, "the sower scarce knows whether he will reap or not". His great work on the Coromandel plants made him famous and he came to be known far and wide for his interest in economic botany.

Other Naturalists

On Roxburgh's transfer to Bengal in 1799 as Keeper of the Botanical Gardens near Calcutta, Dr. Benjamin Heyne of Tranquebar was appointed to the post of Botanist in Madras. Heyne was later on sent to Bangalore to be in charge of the Lal Bagh Garden. Apart from his work as a botanist Dr. Heyne was greatly interested in mineralogy and metallurgy; also diamond-mining in Malvalli and iron-smelting near Eluru mattered much to him.

Donation from Malayan Government

As a token of sympathy with those who suffered injury or loss as a result of the recent hurricane and floods in South India, the Government of the Federation of Malaya have contributed, through the Representative of the Government of India in Malaya, a sum of Rs. 38,781-4-0 (equivalent of \$ 25,000 Malayan) towards the Madras State Cyclone Relief Fund.

There were a host of other botanists deserving mention and they were of diverse nationalities. There were, for instance, the Frenchmen P. Sonnerat (the grey jungle-fowl *gallus sonnerati* is named after him) and Leschenault de la Tour (1819) who gave his collection to the Madras Literary Society. Two other naturalists, Bernard Schmidt and Hohenacker were German missionaries. And among the United Brothers group of Danish naturalists were Klein and Dr. J. P. Rottler (1749-1836), the Tamil translator of the Christian Prayer-Book, besides Koenig and Heyne already referred to. "Have allowed the Society for promotion of Christian Knowledge to send out Klein and Breighaupt to carry on that good work"—thus do we read in an East India House Despatch of March 20, 1745, addressed to Nicholas Morse.

The earliest of the botanists of South India was of course, the famous Dutchman, Hendrik Van Rheede, Governor in the West Coast, who wrote the book *Hortus Malabaricus* (1703) which is a classic on the flora of the West Coast.

Geological Surveys

The first Englishman to reach the Nilgiris plateau was Dr. Francis Buchanan-Hamilton who went up from the Bhavani Valley in 1800. He was Surgeon to the Marquis of Wellesley and he gathered together a considerable herbarium in the course of his travels. His account of his journey in Malabar, Mysore and the Canara country is also an indispensable Vade Mecum to the study of peninsular history. Buchanan spent several years in Northern India too and he is said to have been the earliest botanist to investigate the culture of jute in Bengal. He was an eminent geologist besides and his large collection was made over to Lord Wellesley who had them placed in the East India Company's library in London.

Other names in the field of geology were H. W. Voysey who wrote an account of the native steel-smelters (1827-33) and Captain T. J. Newbold, F.R.S. (1807-1850), author of several papers touching on the beryl mines of Padiyur and on Salem's magnesite and chromite and on the nature of laterite and black cotton soils. In more recent times there were H. F. Blanford (1834-1895) and C. T. Keye (the latter was a civilian) both of whom wrote excellently on the cretaceous rocks of the Tiruchirappalli region. To these names we should add William King (1850-1894) as well as Robert Bruce Foote (1858-1891), the last of whom was fittingly remembered at the recent centenary of the Madras Government Museum wherein is housed a famous collection of his. To such personages as the finders or

remains from Adichanalloor to Arikkamedu does Madras owe its reputation of being the Mecca of students of pre-history.

Architects and Astronomers

Our homage is finally due, ere we conclude this study to the toilers in yet other fields of science as well. One such name is Colonel Richard Henry Bedhomme, author of *Ferns of Southern India* (1863) and the *Flora Sylvatica* (1869) (he also wrote on reptiles) who was the head of the Forest Department. There are then the engineers and architects of a bygone day, such as Major Fiott de Havilland and R. F. Chisholm and the Government Astronomers in the Observatory, particularly Norman R. Pogson (1821-1891) who held the post for nearly 30 years and discovered several variable stars besides 'Asia' and eight other minor planets. And who can forget the indefatigable Tanjavur judge and Sanskritist, A. C. Burnell, of Hobson-Jobson fame whose life (1840-1882) was saga of strenuous and selfless work in the field of palaeography, a name that is honoured by devout enquirers in the department of South Indian antiquities?

To all those and other pioneers and to their illustrious compeers in the present day, science in Madras is indebted and their labours will be cherished as long as learning is honoured among men.

All-India Khadi and Village Industries Board announced

The Government of India have decided to set up an All-India Khadi and Village Industries Board. Sri V. L. Mehta will be the Chairman of the Board which will have fifteen members. Its other members will be Sri A. W. Sahasrabudhe, Wardha; Sri Dhawaja Prasad Sahu, Muzzafarpur; Sri Dwarakanath Lele, Wardha; Sri G. Venkatachalapathy, Madras; Sri Jhaverbhai Patel, New Delhi; Sri Lakshminarain, Muzzafarpur; Sri Raojibhai N. Patel, Gujarat; Sri R. Srinivasan, Palghat; Sri Satish Chandra Das Gupta, Calcutta; Sri Sidharaj Dhada, Rajasthan; Sri Srikrishnadas Jaju, Wardha; Sri Vichitra Narain Sharma, Lucknow; Sri V. V. Jerajani, Bombay, and a Member-Secretary to be appointed by Government on the recommendation of the Board.

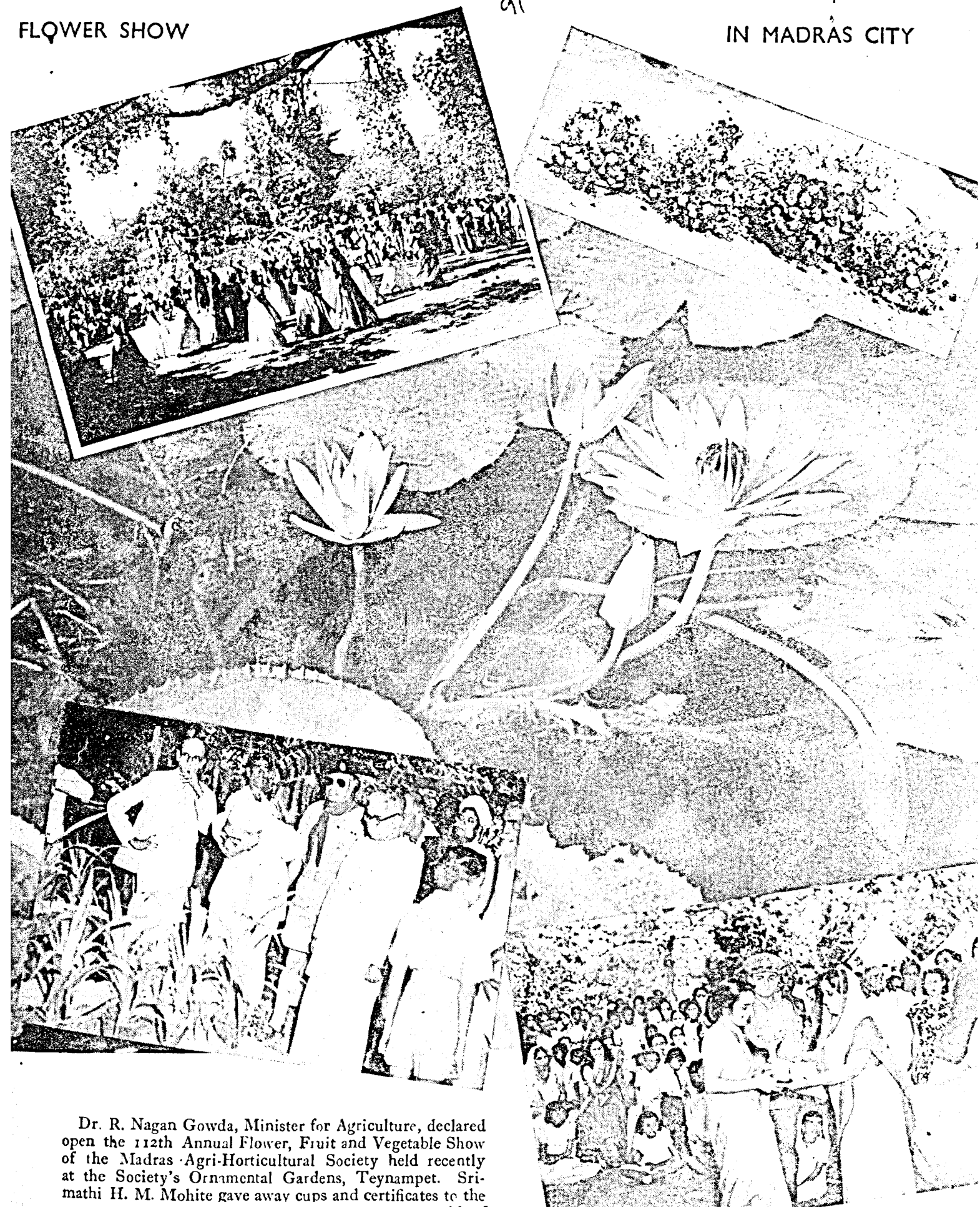
The Board will work in close co-operation with the State Governments and the All-India Spinners' Association. Its headquarters will be at Bombay.

The Board will be responsible for preparing and organizing programmes for the production and development of Khadi and village industries, including training of personnel, manufacture and supply of equipment, supply of raw materials, marketing and research and study of the economic problems of different village industries. It will also function as a clearing house of information and experience relating to these industries.

The Government of India propose to create a Khadi Fund by the levy of a cess on mill-made-cloth from which grants or loans will be made for financing, in whole or in part, activities necessary for development and improvement of the Khadi industry. Government also propose to make available separate funds for the development and improvement of village industries.

FLOWER SHOW

IN MADRAS CITY



Dr. R. Nagan Gowda, Minister for Agriculture, declared open the 112th Annual Flower, Fruit and Vegetable Show of the Madras Agri-Horticultural Society held recently at the Society's Ornamental Gardens, Teynampet. Sri-mathi H. M. Mohite gave away cups and certificates to the

CHILDREN'S ART EXHIBITION

On the occasion of the Annual Day and first anniversary of the National Art Gallery, a special exhibition of paintings by children was held at the Centenary Exhibition Hall of the Government Museum. About 1,500 pictures from 120 schools all over the State were received, and the Exhibition attracted 24,000 visitors, including many children from City and suburban schools.

Below (picture 6) is the imposing facade of the National Art Gallery.

1. "Saint" by Sri P. N. Kumar (Besant Theosophical School, Adyar).

2. "Music Lover" by Sri A. V. Dhanushkoti (Madras Christian College School).

3. "Temple" by Sri Ninan P. Ninan.

4. Dr. M. V. Krishna Rao and Sri K. M. Unnithan, I.C.S., view the exhibits.

5. Srimathi Rukmini Devi addresses the gathering.

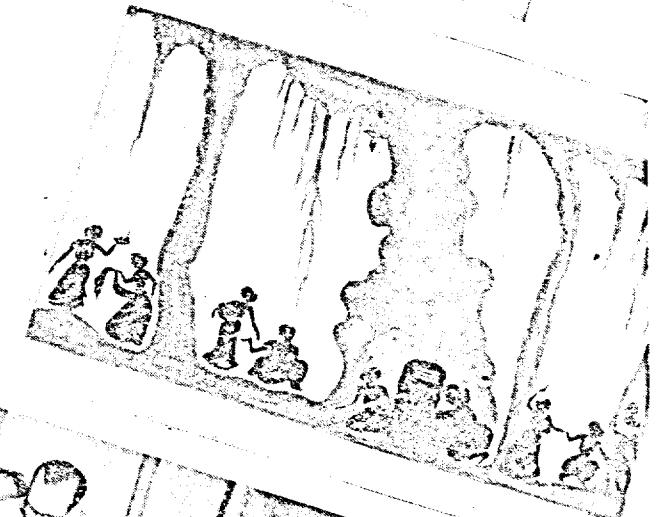
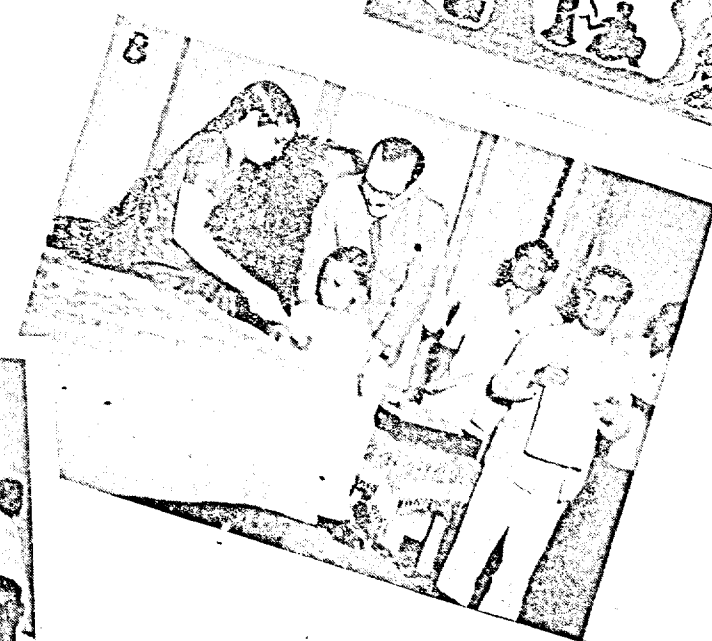
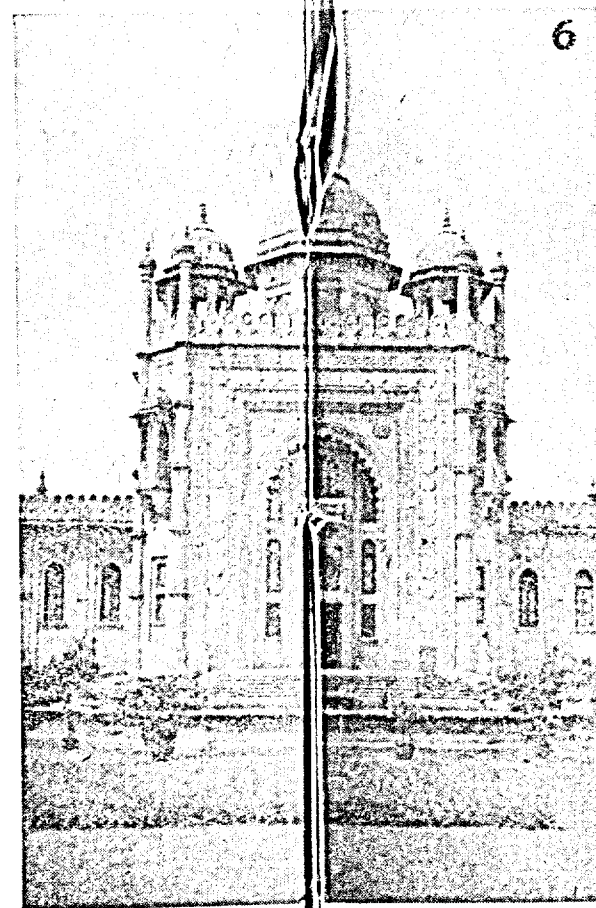
7. Some of the prizewinners.

8. Srimathi Krishna Rao gives away a prize to a budding artist.

9. "Tree Worship" by Sri V. Kolandaivelu (Kellet High School, Triplican).

10. "Dance" by Kumari P. Thingam (B.E.M. Girls High School, Kozhikode).

11. "Dancer" by Sri Seshadri (Besant Theosophical School, Adyar).



Progress and Future of Leather Research

Rationalization of the tanning industry of India which, in spite of its predominantly primitive character, exported as much as over Rs. 50 crores worth of leather and leather manufactures in 1951-52, is the chief aim of the Central Leather Research Institute, Madras, which was opened on January 15, 1953, by Sri T. T. Krishnamachari, Central Minister for Commerce and Industry.

Since the latter part of the eighteenth century, the science behind leather making began to be increasingly appreciated in Europe and since then the leather industries of Europe and America have made continuous progress. The mention of 'Chamra' (leather) and 'Chamrakar' (tanner) in Vedic literature indicates the antiquity of the art of leather-making in India, but scientific methods have not so far permeated into the industry as a whole. Organised leather industry has begun applying scientific methods but the ex-factory value of products of organised tanning industry in 1950 came to only Rs. 8.53 crores, which shows that the bulk of tanning carried out by village shoemakers must be considerable.

Proper tanning and finishing of leather almost doubles the value of raw hides and skins. Being a large exporter of hides, skins and semi-finished leather, it is imperative that India should improve the quality of leather if she is to operate in foreign markets which, incidentally, have had a lead of over a century and a half in scientific techniques of production. This problem has been engaging the attention of the Council of Scientific and Industrial Research for some years. The Council appointed a Leather Research Committee in 1944 and made grants to some of the existing centres of leather research. With the help of an annual grant of Rs. 60,000 from the C.S.I.R., the A.C. College of Technology, Madras University, has set up a degree course in leather technology. But research on a satisfactory scale could not be achieved without a Central Institute properly equipped.

The Central Leather Research Institute is the result of co-operation by many interests. The Government of Madras made a gift of nearly 84 acres of land in the Guindy area and also bore the cost of procuring and reclaiming it. The leather industry has made so far contributions amounting to nearly Rs. 1.21 lakhs and further support is expected. Rs. 35.5 lakhs has been sanctioned for building and equipment and the annual recurring cost is expected to be Rs. 3.5 lakhs.

Completed Research on Nine Projects

Though the Institute was formally opened only recently, the days that have gone by since the foundation stone was laid on April 24, 1948, have been days of intensive research activity. Work on 26 research projects was started early and of these nine have been successfully completed.

There is an old tradition in this country of using myrobalan nuts for giving an attractive yellowish cream colour to tanned leather. But the traditional process is wasteful as the tannin of the myrobalan is not thoroughly exhausted and much of it remains in the used nuts which are thrown away. Myrobalan tannin extract can eliminate this waste but the extract from the factory makes

the leather turn dark which makes it unattractive. The Institute has patented a chemical process for treating the extract which not only produces a lustrous colour on the leather but protects the extract from fermentation. A number of synthetic tanning materials has also been prepared in the Institute from extracts of Bhilwan nuts and cashewnut shells which are rich in phenols, and also from coal-tar distillation products like phenol, cresols and naphthalene.

Aluminium tannage has far lagged behind chrome tannage due to certain adverse effects on the tanned skins. Research at the Institute has resulted in the preparation of highly basic aluminium tannage to be carried out like chrome-aluminium sulphates and other combination tanning agents. Research on tanning processes abroad has been adapted to Indian conditions. Nine processes for the manufacture of box sides and seven processes for the manufacture of glazed kid have thus been elaborated by adaptive research. Methods have been worked out for the economic utilisation of divi-divi pods which are rich in tannin, for eliminating waste in South Indian tanning processes, for the manufacture of East Indian tanned kips, goat and sheep skin for export and also for rendering clear and odourless the tannery effluents which are not allowed to be discharged into rivers unless they are made inoffensive by treatment.

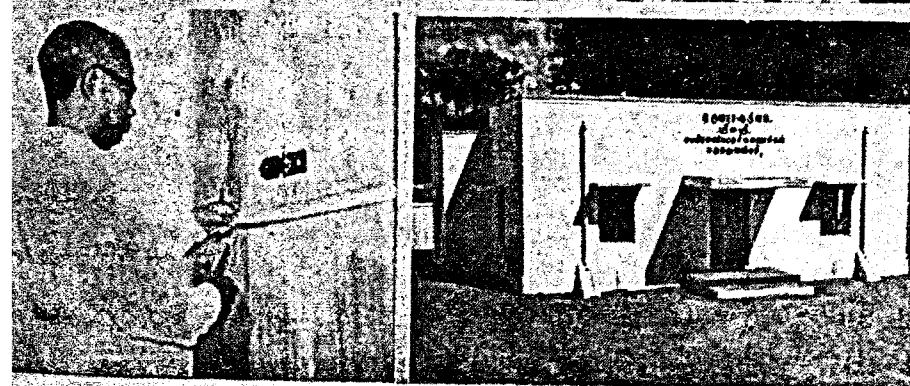
Programme of Work

Research training and dissemination of technical knowledge to the leather industry are the threefold function of the Institute. Research can be classified into three broad categories. The first is fundamental work comprising research on the histology of hides and skins, physical structure and properties of hide and skins, fibres, chemical constitution of hide and skin proteins. Next comes applied work including research on the application of chemistry, physics, bacteriology, microscopy and other branches of science in tanning and production of leather, control processes including study of the mechanism of vegetable tannins, mineral tanning agents, discovery of new tanning agents, tanning auxiliaries and tanning processes. Lastly, there is development research implying investigations on processes of tanning and manufacture of leather auxiliaries practised in western countries to adapt them to Indian raw materials and conditions, pilot plant and extra-mural demonstrations of processes to industrial concerns, trials of new tanning auxiliaries and testing their performance in actual industrial manufacture.

The model tannery of the Institute has been equipped with a complete set of tanning machinery so that researches on leather manufacture may be carried up to a semi-commercial scale and trainees can get the advantages of working with intimate knowledge of demand conditions, production problems and consumer acceptance.

Liaison with Industry

The Institute will form the nucleus for the dissemination of technical education to the Indian leather industry including the issue of technical bulletins, contribution



The Omandurar Hospital at Siruvanthadu (about nine miles away from Villupuram), named after the former Chief Minister of Madras Sri O.P. Ramaswami Reddiar, was recently opened by Sri C. Rajagopalachari (top right).

Sri C. Subramaniam, Minister for Finance, opened the Emergency Ward (top left), and Sri M. Bhaktavatsalam opened the Srilasri Subramanya Desikar Ward (left).

Speaking on the occasion Sri C. Rajagopalachari pleaded for the need of more doctors to practise in rural areas. The Chief Minister declared: "Somehow the reluctance of the doctor to go to the villages must be overcome. That is one of the greatest tasks facing us."

of articles to issues of technical bulletins, contribution of articles to scientific and leather trade journals and answering of technical enquiries, etc. This work has already been started and a technical bulletin is being issued monthly. Technical enquiries received from different parts of India are also being replied to.

Enquiries which have come in, even before the formal opening of the Institute, cover a wide range. Full data on the Chinese process of manufacturing box and willow sides have been furnished to a Tiruchi firm, advice on the use of sulphite cellulose and anthracene oil has been given to firms in Kapurthala and Madras respectively. An establishment dealing in industrial chemicals has been

supplied with full lists of chemicals used in leather industry. Advice regarding the commercial preparation of myrobalan extract and data on the foreign sources from which plants can be obtained were furnished to a Calcutta firm. A Kanpur firm supplying Turkey Red Oil to local tanneries, which found itself in difficulties because the oil rapidly deteriorated in quality, was given technical advice for remedying the defect. A Calcutta leather firm was put in touch with Madras houses engaged in kip trade. Gum Tragon, a leather finishing material, was tested for a Madras firm, and raw material was procured for the Leather Industries Research Institute, Grahamstown, South Africa, for the extraction of gallo catechin, a tanning material, for experimental purposes.

Rare Earths Factory Opened

Rare earth chlorides and carbonates, tri-sodium phosphate, caustic lye and thorium nitrate are the important industrial materials, production of most of which has already been started by the Indian Rare Earths Factory, Alwaye, Travancore-Cochin, which was opened by Prime Minister Sri Jawaharlal Nehru on December 29, 1952.

The rare earth chlorides and carbonates are used in metallurgical operations for the manufacture of flints, aluminium base alloys, etc. Tri-sodium phosphate is used for pharmaceutical purposes, for wetting out of yarn in Indian mills as a cheap detergent. Caustic lye is used in soap manufacture. India requires thorium nitrate for her gas mantle industry. Until now India has had to import her thorium nitrate from abroad, mainly from the U.S.A. The thorium nitrate from the factory will not only be able to meet the requirements of the Indian gas mantle industry, but will also leave a surplus for research in India and for sale abroad. Among other industries for which the products of this factory can be utilised directly or indirectly may be mentioned cigarette lighters, misch metal for steel casting, special glass for lenses and optical goods, and enamelling of steel.

The Story of Monazite

The mineral sands of the Travancore-Cochin beaches are among the valuable natural assets of India. Monazite is one of those sands which have been washed back upon our shores after going through a cycle of erosion and disintegration of rocks which formed a part of the now no longer cardamom and possibly also the Nilgiri Hills. As the monsoon rains wash rock fragments towards the sea, the particles break off and in the course of this process, are converted into grains of various types of sands which are washed out into the ocean. Due to the changing and peculiar force of sea currents along the coast in this part of the world, some of the sand is swept back on to the shores and deposited there, when the monsoon is at its height. It happens that in so depositing the sands, the ocean carries out the first steps in separating one type of sand from another.

Monazite occurs in grains and occasionally as crystals. It has a yellowish colour and is about five times heavier

than an equal volume of water. Monazite sand is washed into the sea by streams and rivers and deposited about a mile or two from the shore. This process has been going on for a considerable period. The incoming tide picks up the monazite sand and brings it towards the shore mixed with ordinary sand, ilmenite and other materials. In this process, due to the difference in nature of the monazite sands and other sands there is tendency for the monazite to separate from the other sands.

The natural process, however, is not as perfect as man requires it and this process is completed in factories, where with the aid of mechanical and electro-magnetic equipment, the various constituents desired by man are sorted out.

Towards National Utilisation

The occurrence of monazite in Travancore-Cochin State was discovered by a German chemist, C. W. Schomberg, in 1909. This discovery was followed almost immediately by an investigation of the area by the Geological Survey of India. Monazite was first exported to U.K. in the year 1910. When the agreement between the Government of Travancore and the British firm lapsed, further exports were banned by the Travancore Government.

The Indian Rare Earths Limited, Alwaye, came into being in September 1950 after the deliberations of a Committee set up by the Government of India in July 1949 'for administering a company to be formed for processing certain minerals.' The subscribed capital of the company was originally fixed at Rs. 50 lakhs but has recently been increased to Rs. 80 lakhs. This has been paid by the Government of India and the Government of Travancore-Cochin in the proportion of 55 : 45. The Chairman of the Board of Directors is Sri. J. D. Choksi, a representative of industry. The nominees of the Government of India are Dr. H. J. Bhabha, F.R.S., Chairman of the Atomic Energy Commission, Dr. S. S. Bhatnagar, Secretary, Ministry of Natural Resources and Scientific Research and Director of C.S.I.R., Sri K. R. K. Menon, Secretary, Ministry of Finance, and Dr. K. S. Krishnan, Director of the National Physical Laboratory. The Chief Secretary and the Finance Secretary of the Government of Travancore-Cochin are the other two members of the Board.

The Factory can process 1,500 tons of monazite sands a year. The sand will be supplied by the Government of Travancore-Cochin. The main products are rare earth chlorides and rare earth carbonates. The plant is capable of producing the entire earth as either chloride or as carbonate. This is required due to the fluctuating nature of the demand for these products. It can produce a maximum of 1,650 tons of chlorides or 1,150 tons of carbonates. Normally it will produce approximately 1,000 tons of chlorides and 450 tons of carbonates. The by-products are between 1,500 to 1,800 tons of crystalline tri-sodium

phosphate and 900,000 gallons of caustic soda lye in 10 to 12 per cent solution.

The residue, after all this extraction, when suitably treated, can yield approximately 205 to 228 tons of thorium nitrate, provided all the thorium is converted to nitrate. These figures are variable as the thorium oxide content of monazite is known to vary from 8 to 9.5 per cent. This residue will be treated by a factory being set up by the Atomic Energy Commission for the production of uranium and thorium compounds. This factory will also extract uranium.

Role of the National Research Institutions

Indian scientists are busy grappling with a number of problems the solution of which is vital to national production and economy. Discovering more economical ways of using imported or rare materials, elaborating substitutes for raw materials which the country does not produce, investigating measures to improve the quality of economic products, finding use for waste, tapping new sources of energy and wealth and maintaining a close liaison with industry, both large-scale and small—these are some of the activities in which India's network of National Laboratories and Research Institutions is incessantly engaged.

None of these institutions is older than the current decade of the present century. The accelerated effort which brought them into being is a result of the attainment of independence which shifted the emphasis from *ad hoc* functions to long-term planning. Accordingly 1950 saw the opening of a number of laboratories, the National Physical Laboratory, New Delhi, the National Chemical Laboratory, Poona, the Fuel Research Institute, Dhanbad, the Central Glass and Ceramic Research Institute, Calcutta, the National Metallurgical Laboratory, Jamshedpur, and the Food Technological Research Institute, Mysore. The Central Drug Research Institute, Lucknow, was opened in 1951, the Central Road Research Institute, New Delhi, in 1952, the Central Electro-Chemical Research Institute, Karaikudi, and the Central Leather Research Institute, Madras, were opened in January 1953. The Central Building Research Institute, Roorkee, was opened in February this year.

Husbanding Sinews of Life

Economic use of materials is the *sine qua non* of rationalised industry and the need for economy is especially imperative in the case of imported and rare materials. India, for example, does not possess any nickel ore deposits, and nickel is needed as a catalyst by the growing vanaspati industry. Investigations undertaken at the National Chemical Laboratory, Poona, have resulted in the development of a method of recovering nickel from the spent catalyst from vanaspati factories, which was found to contain 4 to 17 per cent nickel. The recovered nickel can be re-used in the form of precipitated carbonate or formate for the hydrogenation of oils.

Likewise, cryolite which is used as a flux in the manufacture of aluminium, is wholly imported, and the National Metallurgical Laboratory, Jamshedpur, has evolved a method for recovering it from the carbon dust produced by

the disintegration of electrodes in aluminium reduction furnaces.

There is need for economic use not only in the case of imported materials but also in the use of substances which we have in this country but do not have in sufficient quantity for meeting expanding requirements. Thus, India is under a compulsion to use her reserves of metallurgical coal with the greatest care. As a result of investigations by the Fuel Research Institute, the Bokaro 200,000 K.W. Thermal Power Station will now utilise the cheap, low grade, high ash coal of the Bermo Seam instead of metallurgical coal. The cheap coal can be used as pulverised fuel and at the same time, a proportion of the coal can be recovered for coking, thus adding to the reserves of metallurgical coal.

Search for Substitutes

No less vigorous is the search for substitutes for imported material. Thus, the Indian enamel industry which produces annually cheap utensils worth Rs. 1,50,00,000 for the common man, imports its total requirements of borax. The Central Glass and Ceramic Research Institute, Calcutta, has worked out enamel compositions free from borax, employing materials whose production has already been initiated in the country. The compositions are not more costly and in some cases are cheaper.

The National Chemical Laboratory, Poona, has, likewise, shown that Kamala seed oil is a good substitute for the highly expensive Tung oil, imported from China, for use in the paints and varnished industry.

For India's B.C.G. Campaign against tuberculosis, which kills five lakhs of people every year in this country and disables five times that number, the National Physical Laboratory has devised a suitable container with foamed latex as the insulating material for the local transport of the vaccine. The American containers utilise, as insulating material, foamed polystyrene, a substance not available in India, and needs facilities for deep freezing in order to maintain the temperature inside at about six degrees centigrade for 24 hours. Such facilities are not available always in or near the fields of operation in India.

Continuous Improvement

Competition demand continuous improvement in the quality of economic products and services. There is, for example, an old tradition in this country of using myrobalan nuts for giving an attractive, yellowish cream colour

to tanned leather. But the traditional process is wasteful as the tanning of the myrobalans is not thoroughly exhausted and much of it remains in the used nuts which are thrown away. Myrobalan tanning extract can eliminate this waste but the extract from the factories makes the leather go dark and unattractive. The Central Leather Research Institute has patented a chemical process for treating the extract which not only guarantees the lustrous colour but protects the extract from fermentation.

Regarding the improvement of economic services, there is the problem of the bullock-carts, for instance. They do a lot of harm to roads but they cannot be banished from the Indian scene because there is estimated to be eight million of them and their transport capacity is as much as about half of the entire rail network. The Central Road Research Institute has devised a wheel tester for scientifically testing bullock-cart wheel systems. If new wheel systems are approved by the tester before they take the road and old wheels are repaired scientifically, not only will the Indian road get considerable protection but there can be a substantial saving as well. An assumed saving of one rupee per bullock-cart per year can save the Indian people the sum of Rs. 80 lakhs per year, without taking into account the carts that are not registered.

Use for Waste

Another problem engaging the attention of national research workers is how to eliminate waste and extract maximum wealth from it. For example, it is estimated that there is a loss of about 10 per cent of the 40 million tons of foodgrains which India produces in a normal year, owing to excessive moisture content at the time of storage and the attack of microbes, fungi, insects and vermin. Research undertaken at the Food Technological Research Institute, Mysore, has shown that treatment with mercury vapour and fumigants ensure the preservation of foodgrains. Studies are now in progress on the chemical impregnation of jute bags for repelling insect attack.

The Sindri Fertiliser Factory was faced with the problem of disposing of huge quantities of ash from the boilers, and investigations undertaken at the Central Building Research Institute, Roorkee, have shown that the ash can be used as a puzzolana in making puzzolanic cements, which will reduce the quantity of cement required by about at least 25 per cent at practically no cost and without any detrimental effects.

New Energy Sources and Machines

New sources of energy are being located and new types of machines evolved. One such source is utilisation of wind velocities wherever they are continuous and do not fall below a certain minimum. Wind power is extensively used in some countries for lift irrigation. A wind power survey in India undertaken by the Meteorological Office, Poona, has shown that wind velocity is generally greater during day time when it is most convenient to irrigate crops. There is also more wind during the hot months preceding and at the beginning of the monsoon rains when it is most important to get the crops sown and growing. American scientists estimate that wind blowing at ten miles per hour and turning a wheel 12 feet in diameter, operating at 50 per cent efficiency, develops 0.2 horse power which can lift 500 imperial gallons of water per hour from a depth of 40 feet. The Board of Engineering Research of the

C.S.I.R. is setting up two experimental stations, one in Central India and the other in Saurashtra, to find out how this wind power can be put to practical use.

Among the new type of machines developed by research are the Flash Steam Generator and the Metal Detector. The object of the steam generator research was to develop a small, compact, light weight, fast steaming and high efficiency steam boiler which can be started from cold in a few minutes. The new generator has several advantages over conventional shell tube and water tube type boilers. The boiler tubes are straight and parallel, and therefore easy to clean, scale formation on tube surface is minimum—hence chances of failure of the tubes are small and heat transfer through the tube surface is better; rate of evaporation per square foot of heating surface per hour is high with the result that the tubes are fewer and the space occupied and weight of the boiler less; manufacturing cost would be less owing to the absence of boiler, shell or drum and fewer tubes; high pressure steam can be maintained and the boiler can be started from cold in a few minutes.

The Metal Detector is an electronic device designed and constructed in the National Physical Laboratory for the Customs Department to check the smuggling of gold and other precious metals. Two models of the apparatus, a portable and a table model, are in use at the ports.

Abolition of Zamindaris: Deposit of Additional Advance Compensation

On behalf of the Government, the Director of Settlements, Madras, has deposited certain amounts with the Estates Abolition Tribunal at Chittoor towards Advance Compensation in respect of Edigapalli Zamin Estate notified in Chittoor District. The amounts deposited and the date of deposit are published at page 1710 of Part II of the *Fort St. George Gazette*, dated December 17, 1952.

On behalf of the Government, the Director of Settlements, Madras, has deposited certain amounts with the Estates Abolition Tribunal in Chittoor towards Advance Compensation in respect of Damodara Maharajapuram Zamin Estates notified in Chittoor District. The amounts deposited and the date of deposit are published at page 1710 of Part II of the *Fort St. George Gazette*, dated December 17, 1952.

Deposit of Advance Compensation

On behalf of the Government, the Director of Settlements, Madras, has deposited with the Estate Abolition Tribunals, Vizianagaram and Chittoor, certain sums towards advance compensation in respect of certain zamin and under-tenure estates notified under Section 1 (4) of the Madras Estates (Abolition and Conversion into Ryotwari) Act, 1948. In respect of some other estates, he has withdrawn certain amounts as indicated against them from the amounts previously deposited. The names of the estates, the amount deposited or withdrawn and the date of deposit or withdrawals are published at pages 1710 and 1711 in Part II of the *Fort St. George Gazette*, dated 17th December 1952.

Multipurpose Co-operative Societies

Srimushnam

The Srimushnam Multipurpose Rural Credit Society was registered on 9th January 1912 and started on its work on 12th May 1912. Its postal address is Srimushnam P.O., Chidambaram Taluk, South Arcot District. Its area of operations are confined to Srimushnam and Vakkaramari villages. It is affiliated to the Vriddhachalam Co-operative Union and the South Arcot Co-operative Central Bank Limited.

There are 188 members on the rolls of the society with a paid-up share capital of Rs. 1,770. The maximum borrowing power of the society is Rs. 20,000 and the individual maximum borrowing power is Rs. 1,000. A sum of Rs. 15,951 is outstanding against members' dues while a sum of Rs. 12,301 is outstanding under Central Bank loans. There are no overdues under Central Bank loans. The society is also enjoying a cash credit of Rs. 1,800 for multipurpose activities.

The following are the investments made by the society:—
RS. A. P.

(1) Shares in the South Arcot Co-operative Central Stores, Cuddalore	100	0	0
(2) Shares in the South Arcot District Central Co-operative Bank, Cuddalore	850	0	0
(3) Reserve Fund invested in the South Arcot Co-operative Central Bank, Cuddalore	4,041	9	0

The society has taken up multipurpose activities. It purchased chemical manures to the extent of Rs. 1,592 and sold to the value of Rs. 1,436. The society is also running a reading circle and is getting Tamil dailies from its Common Good Fund.

The society has built a godown at a cost of Rs. 9,041, utilising a sum of Rs. 4,000 drawn from its reserve fund with the aid of Government subsidy of Rs. 4,000. The South Arcot Co-operative Central Stores is having its stock in his godown and is running a fair price shop in the premises of the godown. It is paying a rent of Rs. 16 per month.

Hacholli

The Hacholli Co-operative Society, Hacholli Post, Adoni Taluk, Bellary District, was registered on 8th April 1927 and started on its work on 27th June 1947. It was dormant for a good number of years and only in 1947 was it revived and converted into a multipurpose society.

The village of Hacholli is the headquarters of a Revenue Firka in Adoni Taluk of Bellary District. The village is at a distance of 27 miles from Adoni and 13 miles from Siruguppa which is the headquarters of the Bank supervisor. The village is only a furlong from the Tungabhadra river and has a typical rural appearance with valuable irrigable lands. It is a minor panchayat with a population of about 2,000. One of the distributaries of the Tungabhadra canal runs near the village and the number of irrigated acreage will be increased by 2,000.

The society has 162 members with a paid-up share capital of Rs. 2,333. The loans due to the Central Bank amount to Rs. 14,620. Out of 120 loans due from members to the tune of Rs. 16,150, only a sum of Rs. 100 is overdue. It has so far done non-credit business in foodgrains. The purchases and sales amounted to Rs. 4,853 and Rs. 4,891 respectively during the year 1951-52. Since the decontrol of foodgrains, it has suspended its non-credit activity due to surplus of foodgrains in the village. Even during the control period, the society was selling foodgrains only to the Police staff, school teachers and other officials. From the year 1950 it continues to get *Madras Information* which is widely read and appreciated by the villagers. The net assets of the members amount to Rs. 67,000. The maximum borrowing power of the society is Rs. 20,000. The maximum borrowing power of the members is Rs. 500. This is one of the societies benefited by the intensive supervision scheme. The percentage of population benefited by this society is 40 as against a target of 30 per cent fixed. The working of the society is good and it has a promising future.

Nandalapadu

The Nandalapadu Multipurpose Rural Co-operative Credit Society in the Tadpatri Taluk of the Anantapur District was registered on 3rd June 1922 and started on its work on 30th June 1922. There are on the rolls 158 members with a paid-up share capital of Rs. 1,813. The population in the villages covering the area of operations of the society is 3,200. With the 158 members the society is serving a population of 790. It works out to 24.5 per cent. The loans outstanding against members amount to Rs. 26,209. Though there are some overdues from members on account of famine in the area, the entire overdues are covered by extensions from the Central Bank. The society has invested Rs. 330-4-0 under reserve fund and Rs. 1,250 under share capital in the Anantapur District Co-operative Central Bank.

The society has purchased and distributed 40 pairs of cart-tyres to its members. The society is distributing "Dechans" medicines to the villagers free of cost. It is maintaining a library which contains 147 books which are being issued to the villagers. The society raised an amount of Rs. 400 for constructing a "Vyayamasala" with Rs. 200 from the District Development Committee and Rs. 200 from local subscriptions. A site for the purpose has been donated free to the society by a local philanthropist. The construction of the Vyayamasala will be soon taken up and Vyayama commenced. The society is also getting regularly *Anthra Patrika* and *Rashtri Samacharamu* which is being read by the villagers. All these activities are being carried on with local subscriptions. The village being two miles distant from Tadpatri is within the municipal limits of Tadpatri. The village was included in some of the wards in Tadpatri town with the result that representation on the Municipal Council was given from the town itself all these years. Through the efforts of the co-operative society the village was treated as a separate ward and a seat was given to the village in the Municipal Council.

Co-operative Housing Scheme in Malnad

The Ujre Rural Housing Co-operative Society Limited, Ujre, in the Puttur Taluk of South Kanara District, was started on 21st December 1951 with the object of assisting serving houseless persons in the village to construct dwelling houses. Ujre is an important village in the Malnad and is a great rice producing area in the district. It is situated at a distance of 40 miles from Mangalore on the Mangalore-Kadur line. Its importance is attributed mainly to its being located at the terminus to Sri Dharmasthal which is a famous pilgrimage centre for both Hindus and Jains all over India. The need for a high school in the Malnad Ports was keenly felt and thanks to the efforts made by the 'Karnataka Vidyalaya, Ujre' under the patronage of Sri Manjappa Hegde of Dharmasthal, a high school rose up in the place. The Government also opened a Basic Training School here.

The place developed suddenly and there was a dearth of dwelling houses. A fine block of Government waste land well suited for the purpose was available very near the high school and the town, and the public approached the Co-operative Department for a Housing Society. The rich and the poor alike co-operated and the society was registered.

The society has applied to the Collector for the assignment of 20 acres of Government land and all preliminary enquiries having been completed, the Collector conducted

final personal investigations on 25th December 1952 and the society is taking steps to get the layout plans, etc., prepared by an Engineer.

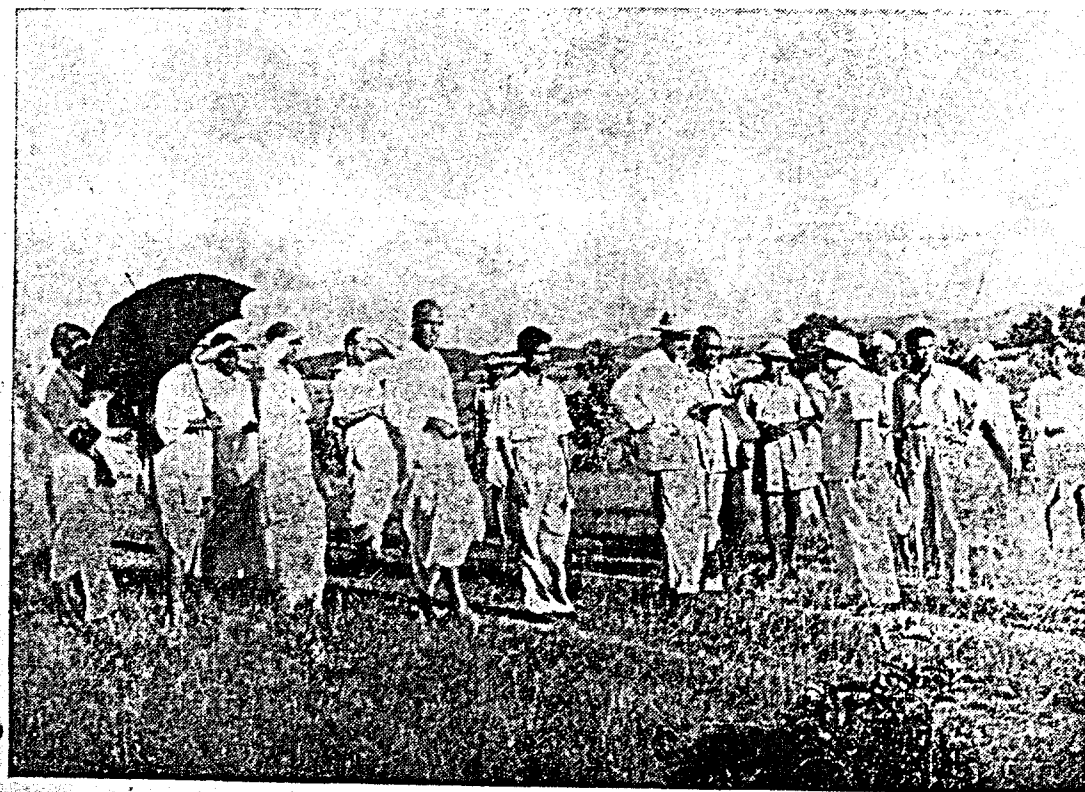
The scheme is to construct at least 30 houses in the village before 31st March 1954. Government have allotted a sum of Rs. 40,000 to be utilised for disbursement as loans during the current financial year and have also sanctioned the services of a Senior Inspector to work as the Secretary of the Society for a period of one year.

Deposit of Interim Payments

On behalf of the Government, the Director of Settlements, Madras, has deposited certain amounts with the Estates Abolition Tribunal at Vizianagaram towards interim payments for fasli 1361 in respect of certain estates notified in West Godavari District. The names of the estates concerned, the amounts deposited and the date of deposit, are published at pages 1708 and 1709 of Part II of the Fort St. George Gazette, dated 17th December 1952.

Famine Relief in Cuddapah

The Government have sanctioned the contour trenching scheme in Galivedu and Chinnamandam firkas of Rayachoti Taluk of Cuddapah District as a famine relief measure. The District Forest Officer, Cuddapah South, will be in charge of the scheme.



UJRE HOUSING SCHEME: The Collector of South Kanara inspects the site as the Deputy Registrar of Co-operative Societies (Kasaragod) explains the housing scheme of the Ujre Rural Housing Co-operative Society.

Rural Welfare Activities

A brief note on the salient features of the activities of Rural Welfare Department in the areas selected for Rural Welfare during September 1952 is given below:—

Tiruchirappalli District—Musiri firka.—Forty-two persons visited the reading room; 303 members were served by the libraries; 12 Grama Seva Sangams were formed; four insanitary pits were filled up; seven manure and compost pits were dug. The number of services rendered by bulls and buffaloes was 11.

Vengalamb firka.—An expenditure of Rs. 1,003 was incurred towards the sinking and repairing of wells, etc., of which an amount of Rs. 492 was contributed by the villagers themselves. Ten insanitary pits were filled up; 20 acres of lands was brought under cultivation; 20 manure pits were dug; 1,037 hanks of yarn were collected and five spinning competitions were conducted.

Salem District.—A sum of Rs. 919 under Village Communications and another of Rs. 1,242 under Rural Water-Supply were spent; 35 charkas were distributed; 3,810 hanks of yarn were produced by self-spinners; four charkas were renovated; seven congregational spinnings were held; 778 manure and rubbish heaps were removed; three soak-pits were dug; 36 cesspools were constructed; 42 cherries were cleaned; eight trench latrines were opened; 25 insanitary pits were filled up; 110 compost pits and 16 manure pits were dug and 49 manure pits were rectified. Rural games were organised in four villages.

Madurai District.—The Rural Welfare Officer visited 44 villages and made intensive propaganda on sanitation, agriculture, Grow More Food and Khadi. Public meetings were conducted in 80 centres with 39 games. Street levelling and drainage construction was also attended to and 834 cartloads of earth for filling up low lying places and 867 feet of drains were constructed; 317 compost pits and 56 ordinary pits were dug up and unhealthy pits numbering 89 were covered. One hundred and thirty-six trees were planted. One thousand sesbania seedlings, 230 glyricidia seedlings and 78 Vadanarayana cuttings were planted. In addition to the drains constructed, 63 cesspools were put up. Four charkas were distributed and the hanks of yarns produced were 3,796.

North Arcot District.—During the month, 241 persons used the reading rooms. The number of books circulated was 330 and the number of persons served by the libraries was 1,300. Twenty-five latrines of ordinary type were constructed; 64 insanitary pits were filled up; 165 manure and compost pits were dug. Number of services performed by bulls was two. One thousand two hundred and fifty trees were planted.

Malabar District.—In Tellicherry, Kuthuparamba and Mattannur firkas 57 compost pits were got dug and 99 tons of compost were produced; 300 acres of land was manured with green leaf; 29 charkas were introduced and the yarn produced by the spinners was exchanged for 62 yards of cloth. Eight persons were given training in carding.

In Payyanur area, 16 compost pits and two manure pits were dug; five Wardha type latrines were constructed; 75 lb. of chemical manures and 17 paras of seed paddy were distributed.

South Arcot District.—In Kadambuliur firka, a sum of Rs. 1,036 under Rural Water Supply and Rs. 130 under Communications was spent. Eighty-four compost pits and 28 trench latrines were put up in Kadambuliur and Tirunavalur firkas.

In Vadakanandal area, a sum of Rs. 520 was spent under Rural Water Supply; two radio sets were installed and two elementary schools were opened.

Krishna District.—Eight mass sanitation drives and 14 individual sanitation drives were conducted in the villages; nine soak pits were dug and 25 rubbish heaps were covered up; five spinning demonstrations were organised, 23 compost pits were dug and 50 tons of compost manure was removed from the compost pits and taken into the fields.

Guntur District.—In Ongole firka, 28 individual and five mass sanitation drives were conducted; three soak-pits were newly dug; five unhealthy pits were filled up. Contour bunding was done in 19 acres of land; 60 compost manure pits were formed; 80 manure heaps were properly covered up; 148 tons of compost manure was opened and carted to the fields. Eighty-five books were distributed; 175 hanks of yarn was produced by the self-spinners; 15 spinning demonstrations were conducted; 10 new charkas were introduced. Six cub packs were newly organised. Five training classes were conducted for the cubs. Seven oil engines and pumpsets were introduced in the area for lift irrigation to overcome fodder and food crops shortage on the banks of Musi and Gundlakamma rivers. Tools were distributed to the artisans in the villages under the Cottage Industries Development Scheme.

Chittoor District.—During the month, 47 branch libraries were opened; 1,500 books were circulated; 10 insanitary pits were filled up; 10 tons of compost was produced and 3,820 trees were planted.

East Godavari District.—Thirty-six compost pits were dug; 43 were set right; 24 sanitation drives were conducted; 63 tons of compost were removed to fields; 45 manure heaps were removed; 19 charkas were introduced; 113 old charkas were repaired; 2,161 hanks of yarn were spun; 400 visitors visited the Central Library and 393 books were distributed from the Central Library.

Tanjore District.—During the month, 125 persons used the reading rooms; 500 books were circulated; 1,330 members were served by the libraries; sixteen Wardha type and 20 other type latrines were constructed; 23 insanitary pits were filled up; 103 manure pits were dug; 23 tons of compost were produced; 223 trees were planted. Forty charkas were introduced, 67 repaired and 798 hanks of yarn were produced.

Kurnool District.—A sum of Rs. 1,054 was incurred towards Communications; 515 books were circulated; 515 members were served by the libraries; seven maternity cases were attended to; seven Wardha type and three other type latrines were constructed; 99 manure and compost pits were dug and 399 trees were planted.

Visakhapatnam District.—In Pendurthi firka, 37 mass and 49 individual sanitation drives were conducted; 1,285 trees were planted; 674 books were distributed; 52 adult classes were conducted; 41 spinning demonstrations were demonstrated and 67 compost pits were dug.

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In Kotauratla firka, a sum of Rs. 350 under Rural Water-Supply and Rs. 6,631 under Communications was spent. Twenty-one mass and 50 individual sanitation drives were conducted and 47 compost pits were dug.

In Araku Valley firka, 322 trees were planted; 42 compost pits were dug; 33 mass sanitation drives were conducted; 23 insanitary pits were covered and five community latrines were constructed.

The Nilgiris District.—Fifty-two compost pits were dug and 38 tons of compost was removed to fields.

South Kanara District.—During the month, 1,380 books were circulated; five Wardha type and five other types of latrines were constructed; 58 manure and compost pits were dug; 80 tons of compost was collected. The number of services performed by bulls was 24. Six hundred and seventy-seven trees were planted; 41 charkas were distributed.

Tirunelveli District.—A sum of Rs. 1,556 was spent under Rural Water-Supply of which the public contributed Rs. 488 by way of labour. One hundred and forty-three books were circulated, 326 members were served by the libraries. Forty-eight Grama Seva Sanghams were formed. Sixty-three manure and compost pits were dug. The number of services performed by bulls was 35 and 118 trees were planted.

The Extensive Khadi Scheme was introduced in all the groups. Eleven charkas were sold during the month. The number of charkas repaired during the month was 54. The number of hanks of yarn spun during the month was 1,342.

Srikakulam District.—Fifty-seven sanitary drives were conducted; 16 charkas were introduced; eight yards of self-spun yarn were produced; 7,090 trees were planted; 1,577 books were distributed; 148 cattle were attended to and 42 spinning demonstrations were conducted.

On 1st September 1952, the inauguration of Rural Welfare Scheme was celebrated in Ramakrishnapuram, a hamlet at a distance of five miles from Srikakulam. The inauguration of this model village was synchronised with the "Ryots Day".

During the "Ryots Day" 22 compost pits were dug and eight sanitary drives were conducted; 13 trench latrines and three community latrines were erected; five spinning demonstrations were conducted and 7,090 plants were planted.

Nellore District.—The Grama Sevaks conducted 45 individual and 18 mass sanitary drives; 11 soak-pits and 22 wells were cleaned; 36 dust heaps and 31 sewage canals were set right; 12 soak pits were constructed. Ninety-five books were supplied to the villagers from the Firka Central Library and 126 persons benefited. Sixty-two compost pits were dug and 167 old ones were set right; 142 tons of compost manure was collected. Agricultural loans for Rs. 20,000 were disbursed for purchase of seed; 42½ lb. of pesticides, 1,182 lb. of paddy seed and 1 lb. of Gogu were sold. Applications for sanction of loans for Rs. 10,000 are pending sanction of the District Agricultural Officer, Nellore.

Six new charkas were introduced; five old ones repaired. Sixty-eight spinning demonstrations were given and the



U.N. MISSION FOR RURAL WELFARE: The U.N. Experts Mission for Rural and Community Development Project work recently met officials of the Madras Government. The U.N. Experts are Dr. Hung-chun Chang (left), Professor Horace Belshaw (centre) and Dr. B. John Grant (right).

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significance of spinning and Khadi work were explained to the villagers; 1,608 hanks of yarn and 181 yards of cloth were produced. Five individuals were taught spinning. Twenty-five improved tools were distributed among eight artisans by the Village Industries Demonstrator and five artisans were given technical assistance.

Ramanathapuram District.—A sum of Rs. 1,306-9-0 and Rs. 1,203-4-0 was spent under Rural Water-supply and Communications respectively during September 1952. The contribution collected towards the expenditure was Rs. 325. Six thousand persons used the reading rooms; 450 books were circulated; 1,200 persons were benefited by the libraries. Twenty buildings were constructed for libraries and reading rooms.

Coinbatore District.—In Vellakoil Centre, 500 persons attended the reading rooms. Five Grama Seva Sangams were formed; 180 members were enrolled in the Grama Seva Sangams. Three Wardha type latrines were constructed. Twenty-four insanitary pits were filled up; 26 manure and compost pits were dug; 70 tons of compost was produced. Five hundred agriculturists were induced to use improved agricultural methods and seeds; 22 services were performed by the bulls.

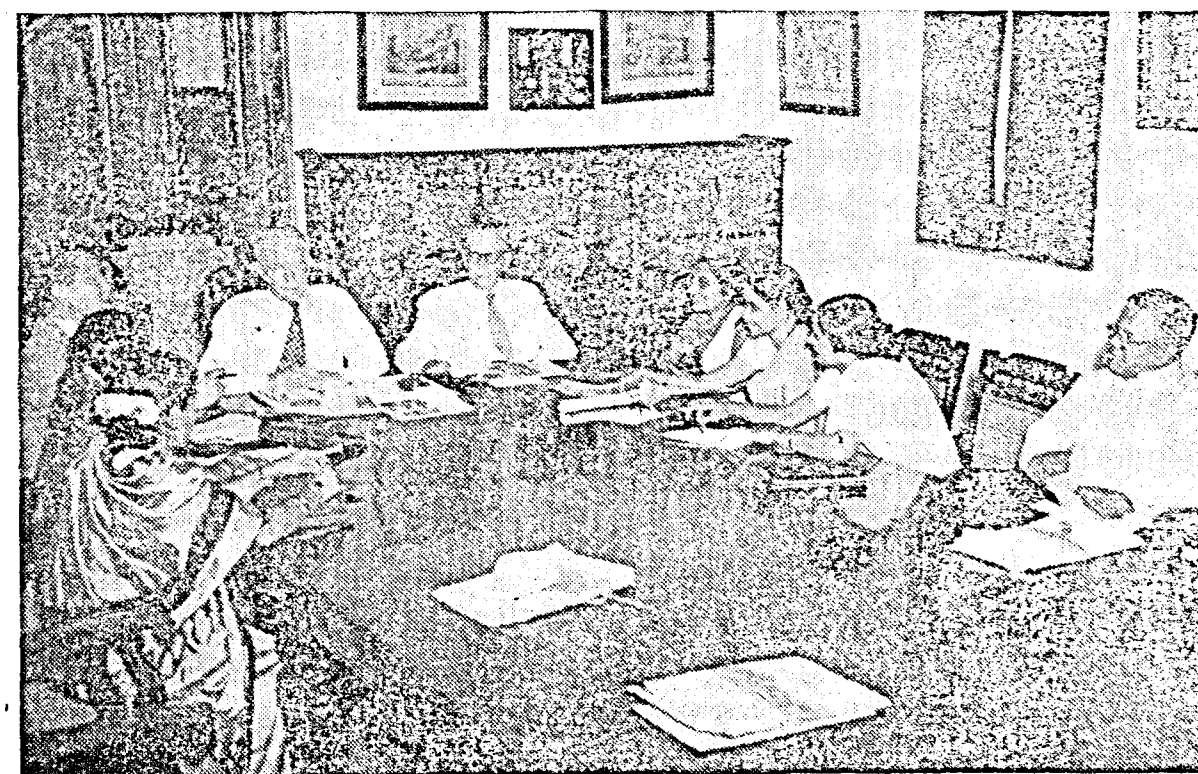
In Tiruppur centre, the Central Library and two branch libraries were opened. Four hundred books were circulated, 800 members were served by libraries; 17 Grama Seva Sangams were formed; 485 members were enrolled in the Grama Seva Sangams; 38 maternity cases were attended to. Sixty acres of waste lands were brought

under cultivation. Fifty-seven manure and compost pits were dug; 160 tons of compost was produced; 160 agriculturists were induced to use improved agricultural methods and seeds. Improved seeds and methods were employed over an area of 145 acres. Two hundred and thirty-one services were performed by the bulls.

Chingleput District.—Nine hundred and twenty-five persons used the reading rooms; 465 books were circulated and 253 members were benefited by the libraries; 484 members were enrolled in the Grama Seva Sangams. Twenty-three maternity cases were attended to; 11 Wardha type latrines were repaired; 92 insanitary pits were filled up; 30 compost pits were dug and 204 trees were planted.

Bellary District.—Two night schools were started. Thirty-one sanitary drives were conducted and six soak-pits were set right; 121 compost pits were dug; stud bulls and Murrahs performed 20 and 14 services respectively. Thirty-one charka demonstrations were conducted and 200 hanks of yarn were spun.

West Godavari District.—'Harijan Day' was celebrated at Ravikampadu on 30th September 1952. A large number of Harijans from the surrounding villages attended the function. Twelve mass sanitary drives and 25 individual sanitary drives were conducted; six soak-pits were formed and 20 wells were cleaned; 10 new charkas were introduced; six spinning demonstrations were conducted; 2,500 hanks of yarn was spun and 130 yards of cloth was got woven by self-spinners.



WITH WOMEN'S WELFARE WORKERS: The members of the U.N. Experts Mission for Rural and Community Development Project work met officials of the Women's Welfare Department.

Protozoan Diseases of Livestock

Protozoa are simple organisms with all the biological functions of complex organisms. The parasitic forms are found in various situations of the body of an animal. Intestinal tract and the blood stream are the common habitats. Both intra-cellular and extra-cellular varieties are seen. The well-known human malaria and amoebic dysentery for example are caused by protozoa. Similarly in animals there are a few such organisms. They live not only by absorbing the food present but also by breaking up complex tissues and substances necessary for the growth and life of the animals. Hence, disease is caused by deprivation of the food of the host by cellular destruction and the release of poisonous products leading on to anaemia and debility. Such weak and debilitated animals are liable to be attacked by other types of more dangerous diseases.

In the development of these organisms two phases are noted, one within the animal and the other without. The forms of the phase in the outside are either free living or found in other smaller animals usually insects like mosquitoes, ticks, etc. While the forms within the animal can be killed by curative drugs, only strict hygienic measures will be effective in killing those found outside.

Lingering Disease

Most of the parasitic protozoa of animals cause a lingering disease covering a good period of the life of the animal. At times acute forms of the disease resulting in large number of deaths also occur. The lingering forms are a greater strain on the slender resources of the farmer than the rapidly fatal forms.

In cattle and buffaloes there are four such parasitic protozoa. Of these, three are found in the blood streams and the fourth in the intestinal tract. Two out of the three blood forms are found within the red cells just like malarial parasites of man, while the third is free in the blood.

Surra

Surra is the disease caused by the form found free in the blood. The organism is called *Trypanosoma evansi*. Though this is a common disease of cattle and buffaloes, not much of it is usually noticed. Such animals, which are chronic sufferers, are debilitated and poor specimens. But often a rapidly fatal form of Surra is met with. Rapid fall in the blood sugar level consequent on the organism feeding on it brings about the disease. The commonest symptom is a nervous attack. Frequent falling and getting up, fits, going round and round and knocking against hard objects are noticed in such animals. Eyes will be bloodshot. Up to about 50 per cent of the affected can prove fatal. Less severe cases recover and are badly debilitated for a long time. They may even either temporarily or permanently lose their eyesight.

Animals of all ages are affected and all of them after recovery remain carriers of the causal organism, thus creating a dangerous focus of infection. In such areas, lowering of the vitality of the animals already present there and also introduction of new animals from free areas bring about explosive forms of the disease.

This disease is transmitted by certain types of biting flies from diseased to the healthy, while feeding on blood. These flies breed in dung, marshy places, very near ponds and slow flowing streams with a lot of thick vegetation.

There are a good number of drugs found effective in treating such cases. Combined with this treatment the flies also should be eradicated by strict hygienic measures and by spraying chemicals like D.D.T. over the breeding areas in the control of this disease.

Severe Anaemia

The other two blood forms called piroplasms are found within the red blood cells. Besides the destruction of such red cells, production of new cells for replacements is also tampered with, thus causing severe anaemia. Animals become pale and weak. Dropsical swelling may be seen. Jaundice may also be noticed. Consequent on the break of a large number of cells in acute attacks, a substance called haemoglobin, vital to the life of the animal, is passed along with the urine. Hence the urine may become dark red in colour.

Young animals suffer to a greater extent with a small percentage of deaths in very young calves. Most of the animals recover to remain for their lives as carriers. Such animals will always be weak and debilitated and be a source of constant worry to the farmer.

"Red Water" Disease

This disease called 'Red Water' is transmitted by ticks found on the body of the animals. These ticks breed on the body as well as in the sheds occupied by the animals.

This condition is also amenable to treatment. Herp again treatment combined with preventive measures alone will be able to check the severity and the spread of the disease. Dipping and spraying of animals with D.D.T. Gammexane, etc., and anti-tick measures for the sheds and infected fields will to a very great extent reduce the insect worry.

The intestinal protozoan called coccidium lives within the cells lining the intestinal tract. Very young animals are commonly affected by this. The disease is caused by destruction of a large number of cells resulting in bleeding wounds. Such animals suffer from acute dysentery, the motions being at times bloody in appearance. Rapid weakness leading on to death in unattended cases is the result of the disease in many of the young ones. All recovered animals remain weak for a long time, they being susceptible to their diseases. They also become carriers of disease for a pretty long time. Contamination of food and water alone is responsible for the spread of this disease.

Strict hygienic measures in conjunction with treatment with sulpha drugs will reduce the incidence of this disease.

In Sheep and Goats

Like cattle and buffaloes, sheep and goats also suffer from protozoan disease. There are a few blood forms similar to piroplasms, frequently met with but not known

to cause as serious a loss as the cattle forms. More commonly, the coccidium is met with, especially lambs and kids suffer from dysentery but get over it. They will be weak and debilitated for a considerable time and remain as carriers too.

Poultry too have their own specific protozoan infections, of which the infection with coccidium is an important and serious one. In young chicks coccidiosis is very serious, the loss by death at times being even cent per cent. The birds show severe dysentery, passing practically blood as droppings. A small percentage of the infected do recover but remain carriers for their lives. Spread of this disease is by ingestion of contaminated food and water. Treatment with sulpha drugs along with cleanliness effectively checks the severity and spread of coccidiosis.

Bird Malaria

Just as in man, birds also suffer from malaria, the organism causing it being almost similar to that of the human variety. Bird malaria though not very common causes loss in egg production, the birds becoming weak and predisposed to other diseases. It is transmitted by mosquitoes. Preventive measures alone will be able to check the spread of this disease.

Horses and elephants are not exceptions to protozoan infections; trypanosome infection in horses is invariable and rapidly fatal.

The Pollacheruvu Grama Sangham

This Grama Sangham is working in Chittoor Taluk in the district of Chittoor at a distance of ten miles from Chittoor. It was started on its work with 11 members on 19th January 1948 and registered on 22nd August 1949 under the Act XXI of 1860. There are now 42 members who are paying subscriptions towards the expenditure on ameliorative and social activities of the sangham. The benefits of the sangham are extended to all the people in the village whether they have paid subscriptions or not. There are some philanthropic gentlemen in the village who liberally contribute for expenses like conduct of festivals and recreational activities. They have so far contributed to the tune of Rs. 6,500. The benefits of the sangham are enjoyed by nearly 800 people of the village and its hamlets.

The sangham has a community hall and a radio house of its own at the entrance of the village constructed at a cost of about Rs. 10,000 by raising donation and a Government grant of Rs. 2,000. There is also a playground within the compound of the building. The hall is a substantial building which can accommodate about 70 people at a time.

The following are the activities of the sangham :—

Reading room and library.—The community hall is used as the reading room. A long table with chair and benches is provided for the readers. The library maintained by the sangham has a good collection of books to the extent of 900 in English, Telugu and Tamil. There are 793 Telugu (local language) books alone on different subjects such as history, poetry, literature, philosophy,

It will be seen from the above facts that parasitic protozoa as a class cause great economic loss to the farmer not so much by killing the animals but by rendering them weak and debilitated for a greater part of their lives. Such weak animals are not only unproductive but also remain as carriers of the infection, thus making rearing of fresh stock in that area hazardous. Though definite figures are not available, a moderate estimate of the annual loss should be several crores of rupees.

Points to Note

Three important points should be borne in mind by the farmer if he wishes to be a successful Animal Husbandry man: (1) Young animals are more susceptible to protozoan infections with a greater percentage of mortality. (2) Recovered animals remain carriers for a long time. So, if one should aim at having a healthy stock he should see that the young ones do not contain protozoan diseases. Besides he should see that the carrier is either disposed of suitably or not allowed to mix with the healthy young ones. (3) Lastly, as all know, it is a sound principal of economy, especially in Animal Husbandry, to pay greater attention towards preventive measures than curative.

Animals should be reared under hygienic conditions and all the possible transmitters of the disease destroyed. The Animal Husbandry Department is in a position to give you sound, practical and timely advice for the raising of the Animal Wealth of this country.

—(A.I.R., Madras)

mathematics and fiction. The following dailies and monthlies are received by the library and made available to the public :—

Andhra Prabha, American Reporter, Vahini, Bala, Padipantalu and Desa Sera.

Radio and park.—The sangham owns a Masterphone radio of dry battery set. It was purchased for Rs. 412 and it is being maintained properly by the members. Sri M. Narayana Reddy, the Village Munsif of the place, has supplied dry battery several times as a donation. There is a park in front. The radio is switched on daily for two hours and a good number of the villagers after hard day's work in the fields gather in the park and enjoy music and listen to the news and talks. During summer in the current year, the plants in the park began to wither but the members of the sangham did not allow them to die. They spent Rs. 69 on bringing water from a distant place to save the plants.

Gruel centres.—The committee members of the Grama Sangham have undertaken to run a gruel centre for the benefit of the poor people starving for want of one meal a day. Twenty-seven orphans, 336 children and 101 adults, disabled or aged are being fed daily by the gruel centre. This village is one of the severely famine-affected areas in the district.

Medicine.—The sangham has not neglected the medical aid necessary for the people. So far it has spent about Rs. 100 on medicine and supplied medicines to the villagers who suffered from fever, cold, cough, dysentery and pains.

Palms—Tubewells of Sugar Supply

N. E. Pealy of the Department of Agriculture, U.S.A., in his book "*The Sugar Producing Palms*" says: 'According to the Hindus, the Palmyra palm tree, dating as far back as 4,000 years, has been reckoned as a source of sugar in India.' In the same book, the author has cited extract from Louis Baker's report submitted before the U.S. Congress on December 12, 1871. Mr. Baker believed that "the introduction of a single variety of the family of sugar palms, and the same most fitting would be *Phoenix Sylvestris* (date palm) would cause a great and beneficial change in the agricultural arrangement of the Southern States—introduce the Palm now and twenty years hence thousands of them will be found growing in the south, yielding millions of pounds of sugar."

Palms, wherever grown, had been a source of sugar, fruits and alcohol. Records show that in Nippur (Babylonia) people were making honey from dried dates during 3000 B.C. This honey was called 'Dipsu' and was used by Rimusch, King of Akkad (2581-2573 B.C.) as a gift to the temple of Sun God. Ibu Batutu has made a reference of coconut palms in the Maldives Islands about 1343 A.D. and has mentioned that a kind of sugar from these palms was being exported to India, Vemen and China. In his memoirs Vasco Da Gama (1548) mentions the manufacture of Palm Gur in India. In Chile and Brazil palms are tapped even today for a substance called 'Palm Honey.' This is used as a syrup.

Palms, being a part of tropical vegetation, are found in abundance in parts of India like Bengal, Madras, Bombay and Rajasthan. From time immemorial these palms had been tapped for gur (raw sugar) or jaggery in the States of Bengal and Madras. Mr. Noel Paton in his *Notes on Sugar in India* (1911) gives an estimate of palm produced in India as 480,000 tons, i.e., about 17 per cent of the total output of gur-cane and palm together in the country.

A careful enquiry by the Government of India in 1889 showed, 168,262 acres of land were under palms connected with sugar supply. The average yield of gur per acre was calculated at 2½ tons.

During the period succeeding the equalisation of the duties of East and West Indian Sugar in 1837 the first industrialisation of sugar in India was associated with palm sugar. The first factory erected at this time was by Mr. Blake at Dhobah, near Burdwan. Another was built by the same company at Kotehandpur in Jessore. One more factory was built later. These factories were refineries making use of palm gur. The company had a capital of £ 180,000 and its production was 7,000 tons of sugar per year. It flourished till 1847, but with the adoption of free trade policy by Great Britain it collapsed.

It is evident from the tables on page 33 that with the exception of neera the other edibles are rich in mineral matter. They are of course not very rich sources of calcium or phosphorus. The increased concentration of calcium in treated neera and gur (jaggery) is due to the extraneous lime added as preservative. Further it appears that limed neera after decantation shows considerable loss of phosphorus. Probably the phosphorus of the neera combines with calcium in the lime and settles down as a precipitate.

Potentialities of Industry

The word 'Palm' stands for 'Victory and Success'. Sugar-producing palms are actually "Tubewells of Sugar" and 'Protector of the Poor.' Up till now palm sugar and gur industry has been in a very neglected state—both by the people and by the Government. It is only the scarcity of food and sugar that has drawn the public mind to this age-old industry.

All the world over, intensive search for other sources of sugar is going on for the last few years. Nations now feel that they cannot afford to grow canes or beets on rich and fertile soils. Food is their primary necessity. Researches on palm sugar from palms have now become part of the 'Grow More Food' campaign in almost all the tropical palm-growing countries of the world. Palms need neither rich soil nor adequate manuring or irrigation. They grow on sandy soils without any care. It is also very well known that the roots of palms have an excellent soil-binding property. These serve as anti-erosion measures so badly required in many places.

Can Replace Cane Gur

At present there are about nine crores of sugar-yielding palms in India out of which seven crores are tappable and can yield one and a half to two million tons of palm gur per year. And this much amount of sugar is from 2 to 3 lakhs acres of sandy soils, which, without palms, would yield nothing. Palm gur can easily replace cane gur which at present is locking up about 15 to 18 lakhs acres of good fertile soil. It has been further shown that palm gur is a highly nutritious diet as compared to cane gur. Attempts are now on way to utilise this natural wealth of the country to the best of purpose.

In order to help the growing food and sugar requirements of the people it is imperative that all possible attention be bestowed to the palms and palm gur industry in the country. Population in India is increasing by about 35 lakhs every year and the terrible famine conditions to come can very well be visualised if prompt and proper actions are not taken now. A campaign of 'Grow More Palms' has got to be started if adequate sugar supplies to the coming generation have to be assured.

Realising the importance of palms as a practicable and profitable source of sugar, the Government of India established a Palm Gur Section in 1947 under the able guidance of Sri Gajanan Naik Ji as Palm Gur Adviser.

This section has been attached to the Ministry of Food and Agriculture, New Delhi. As a practical step towards the development of the Industry, a Central Palm Gur Training School was started in 1948. This school has so far trained about 200 candidates from all over India on improved techniques of palm gur manufacture. It is gratifying to note that palm gur work has been taken up by almost all the States in the Union. The industry all over is being run on purely cottage industry scale.

Need for Scientific Study

The need for scientific study and researches on the subject was soon apparent and consequently a research laboratory was annexed to the Central Palm Gur Training

School in February 1952. According to the present day requirement, work on the following broad lines has been taken up:—

1. Scientific study of the present day methods of palm tapping, neera collection, neera clarification, boiling of juices, and keeping quality of gur.

2. A study of the growth of palms particularly in relation to height, vigour and yield of juice.

3. Preservation of neera.

4. Boiling technique:

(a) Improved furnaces for different kinds of fuels—A scientific study of the furnaces,

(b) Use of cow-dung ash plant,

(c) Oil burners,

(d) Electric furnaces and

(e) Solar energy.

Further course of research will depend on the results achieved. This is the first Institution of its kind in India and it is expected that in time to come it may well be worth its name in Asia.

Facts and Figures

During the first six months of 1952-53 Indian custom authorities seized 6,574 tolas of contraband gold.

During 1951-52 Indian railways added 2,254 broad guage and 2,359 metre guage goods wagons to their stock, thus bringing the total on October 1, 1952, to 161,160 broad guage and 63,405 metre guage goods wagons.

India produces about 55 million lb. of wool a year, of which about 31.6 million lb. valued at Rs. 4.3 crores is exported.

India's total exports to the United Kingdom and Europe amounted to Rs. 257.37 crores in 1951-52 as compared to Rs. 201.18 crores in 1950-51. Those to the Americas including the United States of America, increased from Rs. 150.96 crores in 1950-51 to Rs. 197.87 crores in 1951-52.

The first Indian railway was opened on April 16, 1893, from Bombay to Thana, a distance of 21½ miles. Today the route mileage of Indian railways is a little over 34,123 miles.

TABLE No. I.

Estimated production of palm sugar in terms of gur (Average 1933-34 to 1937-38) (in thousand tons).									
	Sago.	Date.	Palmyra.	Coconut.	Nipa.	Total.			
Bengal	..	..	..	..	..	85.0	16.0	..	101.0
Madras	..	..	..	..	..	0.6	0.3	46.0	49.6
Travancore	..	..	..	..	..	(a)	..	20.5	20.6
Cochin	..	..	..	..	..	1.4	..	0.4	2.1
Others	..	..	..	..	..	..	0.1	0.3	0.2
Total India	..	..	..	..	..	2.0	84.5	3.0	173.5
Burma	..	..	..	..	..	..	50.0	0.5	50.5

(a) Production of gur from coconut is estimated at 40 tons and from sago at 20 tons only.

TABLE No. II.

Chemical composition of some of the edibles from palmyra palm per 100 gm. of each foodstuff.

	Neera.	Neera treated with lime decanted.	Tad Gud.	Guth-like dadda.	Pulp ripe fruit.	Pre-served pulp.	Tarka Koa.	Flour (sun dried).
Moisture	..	85.89	85.76	8.32	80.99	77.22	22.70	12.06
Proteins	..	0.31	0.30	1.04	0.75	0.67	1.60	4.81
Fat	..	0.02	0.02	0.19	0.12	0.15	0.14	0.31
Minerals	..	0.31	0.38	3.15	0.85	0.68	3.37	1.31
Carbohydrates	..	13.47	13.54	87.30	17.29	21.28	72.19	80.91
Calcium	..	0.007	0.030	0.961	0.024	0.009	0.087	0.010
Phosphorus	..	0.008	0.001	0.951	0.116	0.033	0.070	1.155
Total sugar	..	12.2	12.2	82.6	..	..	..	..
Reducing sugar	..	0.3	0.3	1.7	..	..	..	..
Disaccharides	..	11.2	11.2	76.0	..	..	..	..
Total Calorie value	..	56.7	56.9	364.0	75.1	91.4	303.08	354.2

Electricity: Review for November 1952

Review of electricity work done in November 1952 is given below.

Machkund Hydro-Electric Scheme.—Land acquisition proceedings were continued. Metalling of the Soguru-Jalaput Road was continued up to a length of 7 miles and one-half furlong. The bridge at 6/0 was completed and work at road dam 5/0 and 7/2 was progressing. About 52 per cent of excavation, 17 per cent of concreting and 47 per cent of masonry building for the Division dam and 67 per cent of flume channel work were completed. Excavation for foundation, 24 per cent of masonry building and 17 per cent of bucket and apron concreting for tunnel pond dam were done. Concreting surge shaft, pipe tunnel and flume tunnel were completed and grouting of flume tunnel was progressing.

Grading of penstock slopes was in progress and 93 per cent of excavation in earth and 99 per cent in rock were done so far. Foundation for excavation for powerhouse, tail race excavation and levelling site for permanent workshop and transformer yard were continued. Excavation for foundation for Jalaput dam was continued and 2,509 units in earth and 560 units in rock were excavated. Drilling bore holes to find the location of firm rocks was progressing for spillway and down stream coffer dam. Total labour force during the month was 4,176.

Moyar Hydro-Electric Scheme.—All civil works from headworks to powerhouse were completed. Erection work on the third generating unit and the balance of works in switchgear erection were in advanced stages of progress. The No. 2 Power transformer (15,000 K.V.A. capacity) was commissioned.

Pykara III. Stage Extensions.—(a) **Pykara Dam.**—Construction of masonry for wing walls and dam main structure and concreting for R.C.C. core wall were continued. Work on earth bund at the right flank was in progress.

(b) **Penstock and Powerhouse Extensions.**—For Singara Powerhouse Extensions, erection of steel structures was in advanced stage of progress. Concreting substructure for terminal anchor No. 6 was completed. The erection of outdoor switchgear for Moyar bay at Singara Powerhouse was nearing completion.

Madurai Thermal Scheme.—Miscellaneous works such as painting turbine platform, steel work, covering for C.W. trenches with chequered plates, casting saddles for cooling pond, etc., were done. Transport of turbine materials for erection was being done. Boiler materials received so far were being verified and stacked. Forming of concrete piles for boiler foundation, erection of 10,000 K.W. turbo-set parts such as turbine, condensor, etc., and cooling pond, piping, etc., were progressing.

South Kanara Extensions.—Plotting of profiles for 33 K.V. lines and 50 per cent of the valuation for the same were completed. All the R.S. joists for 33 K.V. lines and earthwire and insulators for the 110 K.V. line were being received and stacked.

Tungabhadra Hydro-Electric Scheme.—(a) **Dam and Canal Powerhouse.**—In the forebay site permeability tests were continued. Investigations, i.e., the nature of soil in

Powerhouse site, forebay, low pressure pipeline, surplus channel, etc., were in progress. The availability of building materials for dam and canal powerhouse was being investigated.

(b) **Transmission Lines and Substations.**—Profiles for Guntakal-Gooty line were being connected. Detailed survey for Dhone-Nandyal 33 K.V. line was in good progress. Connected layout plans for Bellary and Guntakal substations were being examined.

Madras Plant Extensions.—Superstructure of main building was 88 per cent completed. Substructure of office and control block was 88 per cent finished. Work on railway sidings was 70 per cent over. Erection of transformers, coal handling plant, switchgear, etc., were progressing. Work on pumphouse and substation near cooling towers was 70 per cent completed. Works on C.W. pipes internal to power station was 80 per cent finished. Erection of timber stacks in cooling tower No. 2 was nearly completed and in cooling tower No. 3 was progressing. The second new 80,000 lb. per hour boiler of 'B' station, boiler No. 3 was commissioned. The excavation of the 15,000 K.W. turbo alternator is in progress, the station has been set in position and oil lines have been completed.

Vijayavada-Visakhapatnam Powerhouse Extensions.—**Vijayavada.**—Work on second raw water well continued to progress. Works in control room and repair house were progressing.

Visakhapatnam.—Flooring and plastering for side walls of south side extensions were progressing. Fabrication of steel work and driving of piles were in progress in the west side extensions. Earthwork excavation was completed and arrangements for pile driving was progressing for the VI Boiler.

Nellore Thermal Scheme.—Work on staff quarters at Gudur was continued. Substation structures at Nellore and Gudur were completed and operated at 11 K.V. The 3,000 K.V.A. transformers were installed in the permanent plinths and all works completed so that the station could be operated at 33 K.V.

Machkund Transmission Lines.—Tower erection was completed from Visakhapatnam to Vijayavada and was progressing between Visakhapatnam to Machkund. Stringing was completed for 119 miles reach out of a total of 199 miles from Visakhapatnam to Vijayavada, and further work will be taken up on receipt of conductors.

Operating Branch

Hydro Areas.—The north-east monsoon did not set in during this month and the water position in all the reservoirs continued to be unsatisfactory. The 25 per cent cut in consumption on all but essential consumers imposed in September 1952 was continued.

One 2,000 K.V.A. transformer was energised at Virudhunagar substation on 21st November 1952.

His Excellency the Burmese Ambassador to the Union Government visited Singara Powerhouse on 1st November 1952. Sri N. Ranga Reddi, Minister for Public Works, visited Mettur Powerhouse on 30th November 1952.

The number of units generated, peak load and the services connected up during the month in the Hydro systems were as follows:—

Name of system.	System peak load in K.W.	Generation in millions of units.	Services connected		
			Agricultural.	Industrial.	Domestic.
Pykara	37,450	17.25	40	2	276
		+6.93*			
Mettur	41,700	19.95	70	1	149
Papanasam ..	17,500	6.33	31	8	251
		+2.02†			

* 6.93 millions of units were generated at Moyar Powerhouse, the peak load of the station being 14,400 K.W.

† 2.02 millions of units were generated at Madurai Thermal Station, the peak load of the station being 3,600 K.W.

Thermal Areas and Ceded Districts.—The Madras System was in parallel with Hydro Systems during this month also, affording relief to the hydro stations during off-peak hours and availing relief during peak load periods.

The peak load, generation and the number of services connected up during the month in the several areas were as follows:—

Name of system.	System peak load in K.W.	Generation in millions of units.	Services connected		
			Agricultural.	Industrial.	Domestic.
1. Madras	30,200	12.13	18	24	163
2. Vijayavada—					
(a) Steam	9,000	4.014	57	6	196
(b) Deisel	510	.017	4	3	33
3. Visakhapatnam—					
(a) Steam	4,200	1.465	..	..	..
(b) Deisel	900	0.209	..	..	..
4. Kakinada	790	0.051	2	1	49
5. Rajahmundry ..	728	0.037	..	..	..
6. Srikakulam	120	0.019	..	..	..
7. Ongole	106	0.023	..	..	7
8. Narasannapeta ..	20.48	0.003	..	..	15
9. Nellore	1,075	0.368	1	2	32
10. Proddatur	110	0.033	5	..	5
11. Anantapur	212	0.058	..	..	20
12. Kurnool	360	0.101	..	2	20
13. Cuddapah	250	0.076	..	..	7
14. Tadpatri	67	0.0114	..	..	19
15. Nandyal	160	0.025	..	..	7

Power purchased from Mysore.

16. Hindupur	160	0.050	..	..	12
17. Ceded Districts ..	3,420	1.264	4	7	124

In the Madras Electricity System 69 No. D.C. services with a connected load of 138.74 K.Ws. were changed over to A.C. supply by voluntary basis during the month.

During the month 29 extensions were sanctioned by the Chief Operation Engineers and Chief Engineer for Electricity at an estimated cost of Rs. 13,35,600.



Financing the Five-Year Plan

(Continued from page 4)

In point of fact, the provision may be less unless the economic conditions take a turn for the better. In the circumstances, the Plan has to depend on resources other than financial. It is a matter of some pride for the Madras State that their idea of Village Production Councils was adopted by the Planning Commission as a mechanism to mobilize the natural resources of the people.

The Madras Government have again taken the lead in organizing these councils in all villages. The simple idea is that the villagers are made aware of their needs and the means they themselves possess of satisfying these needs. The process is a democratic one, the Councils themselves making an appraisal of the resources of each village and organizing one and all to utilize them. It is not the aim of the Plan to isolate the villages but to make them fully alive to their interests in the context of changed conditions. To the extent each village is able to contribute to its full capacity both of land and labour, not only will the village advance but it will increase the general wealth of the country. This gospel of rendering the best account of oneself is the basic principle of the Plan. We have to capitalize our own resources in village and town if the large deficiencies in our way of life are to be removed so that our future is worthy of our distant past.

(A.I.R., Madras)

Medicine Prices Revised

The maximum retail prices of the following drugs have been revised as follows:—

(1) *Ciba Pharma Limited, Bombay*: Formo-Cibazol—20 tabs. Rs. 2-14-0; Formo-Cibazol 200 tabs.—Rs. 24-10-0; (2) *Allen & Hanburys Ltd.*: Penicillin Nonad Rulle 72" x 4" (1 strip)—Rs. 6; *Burroughs Wellcome & Co.* Thyroid Gland; Tabloid Thyroid (Dry Thyroid B.P.) gr. 1/4, 100—Rs. 1-10-0; Tabloid Thyroid (Dry Thyroid B.P.) gr. 1/2, 100—Rs. 2-1-0; Tabloid Thyroid (Dry Thyroid B.P.) gr. 1, 100—Rs. 3-3-0; Tabloid Thyroid Gland (Standardised) gr. 1, 100—Rs. 1-13-0; Original Formula gr. 2, 100—Rs. 2-6-0.

Working of Vigilance Service

Working of the Government Vigilance Service Administration Report for the year 1951 on the working of the Vigilance Service is reviewed below :—

The Chief Inspector of Certified Schools and Vigilance Service (Sri M. P. Narayana Menon, B.A.) held charge of the Vigilance Service throughout the year under report with Srimathi V. T. Lakshmi, M.A., L.T., Inspector of Vigilance Service, as his Personal Assistant.

Classes of Institutions.—There are three classes of institutions in the Vigilance Department, viz., Rescue Homes, Vigilance Homes and Shelter Homes. There are two Rescue Homes, namely, the Stri Sadana Rescue Home in Madras and the Rescue Home under the Poor Homes Society at Kozhikode, one Vigilance Home in Madras and four Shelters in Madras, Madurai, Salem and Coimbatore.

Admissions and Discharges of Inmates in 1951.—Stri Sadana Rescue Home—90 inmates and six children were admitted and 77 inmates and four children were discharged. Its strength was 73 inmates and three children. Vigilance Home—108 women and five children were admitted and 76 women and five children were disposed of. Its strength was 219 women and three children. Besides, 106 remand cases of women were admitted in the institution and 103 of them were discharged, leaving three in the Home. Shelter Homes in Madras, Madurai, Salem and Coimbatore—342 inmates passed through these institutions during the year.

Period of Detention.—(1) *Stri Sadana.*—Out of 90 the inmates admitted during the year, 30 were rescued cases, 55 were preventive and protective voluntary cases and five kidnapped ones.

(2) *Vigilance Home.*—The periods of detention of inmates are as follows :—

Two years—62, 3 years—43, 4 years—2 and 5 years—1.

	Stri Sadana.	Vigilance Home.
(a) Religion of the inmates—		
Hindus	78	82
Christians	10	16
Muslims	2	10
(b) Ages of the inmates—		
Below 14 years	6	1
Between 14 and 18	38	33
Between 18 and 21	27	39
Between 21 and 25	12	29
Above 25	7	6
(c) Education of the inmates—		
Literates	60	22
Illiterates	30	86
(d) Health of the inmates—		
Healthy	73	25
Unhealthy	17	83

Stri Sadana Special School.—It is a higher elementary school common for both the Stri Sadana and Vigilance Home. The media of instruction are Tamil and Malayalam. There is adequate provision for the vocational training of the inmates in spinning, weaving, dressmaking, embroidery, music, laundrying and domestic service.

(a) Five girls of the Stri Sadana, one of them a Burma evacuee, are prosecuting their higher studies with Government scholarships in the outside schools.

(b) **Achievements.**—Three inmates passed the higher elementary teachers' training, and all of them are employed. Three more inmates are undergoing higher elementary Basic teachers' training. Ten inmates completed the midwifery course successfully, of whom five are employed and the rest await orders of appointment. Another batch of ten inmates are undergoing the midwifery training. One of the inmates is appointed temporarily as an attendant in the Oriental Manuscripts Library. Ten inmates have received certificates of proficiency in spinning.

Rehabilitation of the Inmates.—The following are the details of the manner in which the discharged inmates are resettled in life :—

	Stri Sadana (Discharged—79).	Vigilance Home (Discharged—76).
Marriage	1	4
Midwifery training	7	..
Teachers' training	1	..
Domestic servants	4	1
Restoration to relatives	52	60
Absorbed on the staff of the Institutions	9	1
Employed outside	3	..
Sent to Mental Hospital	1	2
Escaped	1	2
Transferred to Stri Sadana	..	4
Transferred to Jails	..	2

General particulars.—The physical activities as well as the extra-curricular activities of the inmates are zealously carried on. Their moral and religious instruction is duly attended to. Their discipline is satisfactory.

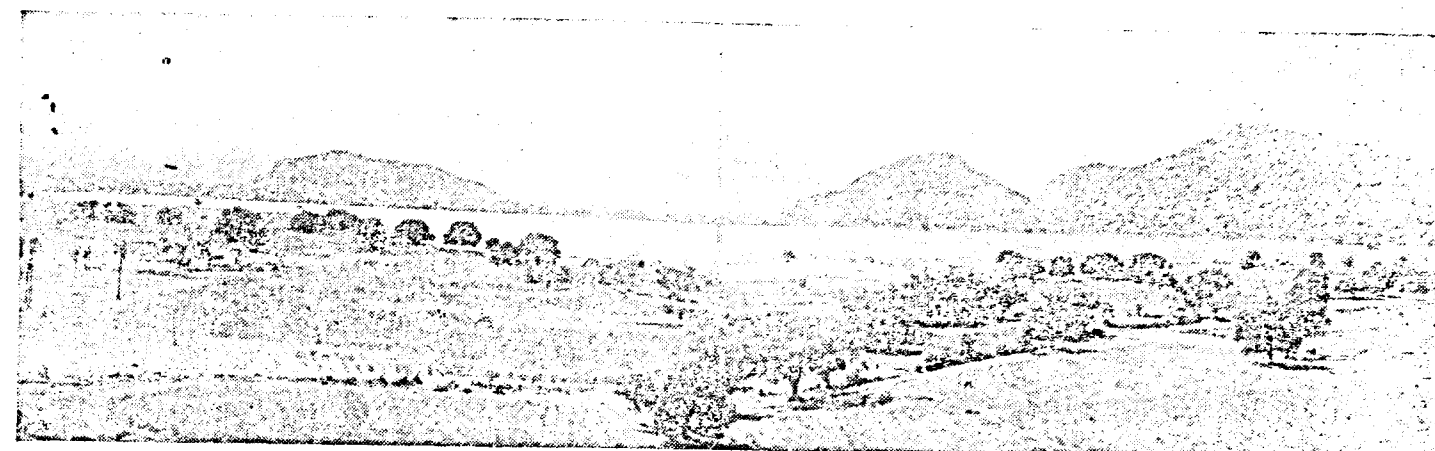
The average cost per head per annum in respect of the inmates of the institutions worked out to Rs. 540-10-0.

A sum of Rs. 552-1-0 was derived from the industrial (tailoring, laundry and weaving) sections of the institutions.

Visitors.—Among the distinguished visitors to the institutions were Srimathi Humayun Kabir, Dr. Walter C. Reckless, and Srimathi Leelavathi Munshi.

Conclusion.—The year 1951 has witnessed the completion of three years in the scheme of provincialization of the vigilance service. Under several handicaps, the chief among which is the acute and persisting problem of accommodation—and given limited finance and available facilities, both the Stri Sadana Rescue Home and the Vigilance Home in the City have done substantial work by medically curing, reforming, training and resettling a fairly good number of "morally vulnerable and socially handicapped girls and women." In the words of Dr. Walter C. Reckless, U.N. expert in Criminology: "The work in your institutions is certainly one of dedication, doing much with so little."

The Badathalav Project



BADATHALAV TANK: A view of the Badathalav Tank in Salem District; photo taken on November 16, 1952 with Water Level—13.10 and Full Tank Level 13.75.

The Badathalav Project is a G.M.F. scheme of Salem District sanctioned in 1949. The work was started in April 1949 and was completed in full by September 1952.

An anicut 250 feet long and 8 feet high has been constructed across Markandanadhi, a tributary of Ponnai, and a channel of 11 miles and 3 furlongs takes off upstream of the anicut to feed the Badathalav tank having a registered ayacut of 821 acres. The scheme will enable not only first crop to be raised over the whole extent of 821 acres but also second crop over 300 acres against the present actual cultivation of 494 acres of first crop. The surplus from the Badathalav tank goes to benefit the two lower down tanks, viz., Ghouse Mohammed and Thimmapuram tanks (shown in the key map). It is possible to bring a larger extent under these tanks after watching the effect of the scheme for a few years. Also supplies can be given to a few tanks through whose foreshore lands the supply channel runs.

Water was first let down the channel on 19th July 1952 when there were little freshes in the river, but it was not encouraging until the freshes on 25th September 1952 set in, when 3 feet depth of water (against 3' 6" FSL depth) was drawn into the channel. The Badathalav tank got full and began to surplus on 14th October 1952 to benefit the Ghouse Mohammed tank, which also got filled up and started surplussing on 1st November 1952. Thimmapuram tank, the lowermost one, is also getting good supplies.

The ayacutdars under these tanks are completely satisfied and have taken enthusiastically to cultivation. Even though supply was late this year, it shows that there is enough to spare for the other tanks higher up.

(Key map on page 38).

The total area in India irrigated from all sources is a little less than 50 million acres, or roughly 18 per cent of the total cultivated area.

As against 15,095 new wells sunk in 1947-48 by the States under the Grow More Food Campaign, 108,735 wells were sunk in 1950-51.

Do You Know?

The Cauveri delta canals date back to the second century and today it is the most harnessed river in India with more than 60 per cent of its annual flow being utilized for irrigation and power.

The Indian railways requires about ten million tons of coal every year. During 1951-52 the quantity of coal consumed was 10,807,461 tons.

Indian State forests provide fodder for 13 million cattle a year, 3 million buffaloes and 9 million other animals.

India's exports to Commonwealth countries totalled Rs. 391.29 crores in the year 1951-52 as compared with Rs. 306.11 crores in 1950-51.

The actual income-tax revenue collections for 1951-52 amounted to Rs. 185 crores as against the budget estimate of Rs. 175 crores.

Madras State leads Indian States in tobacco production; it produced 257.6 million lb. in 1951-52. Next came Bombay with 80.6 million lb. during the same year.

During 1951-52 the United Kingdom was the largest market for Indian goods. From Rs. 135.15 crores in 1950-51 the value of Indian exports increased to Rs. 187.74 crores in 1951-52.

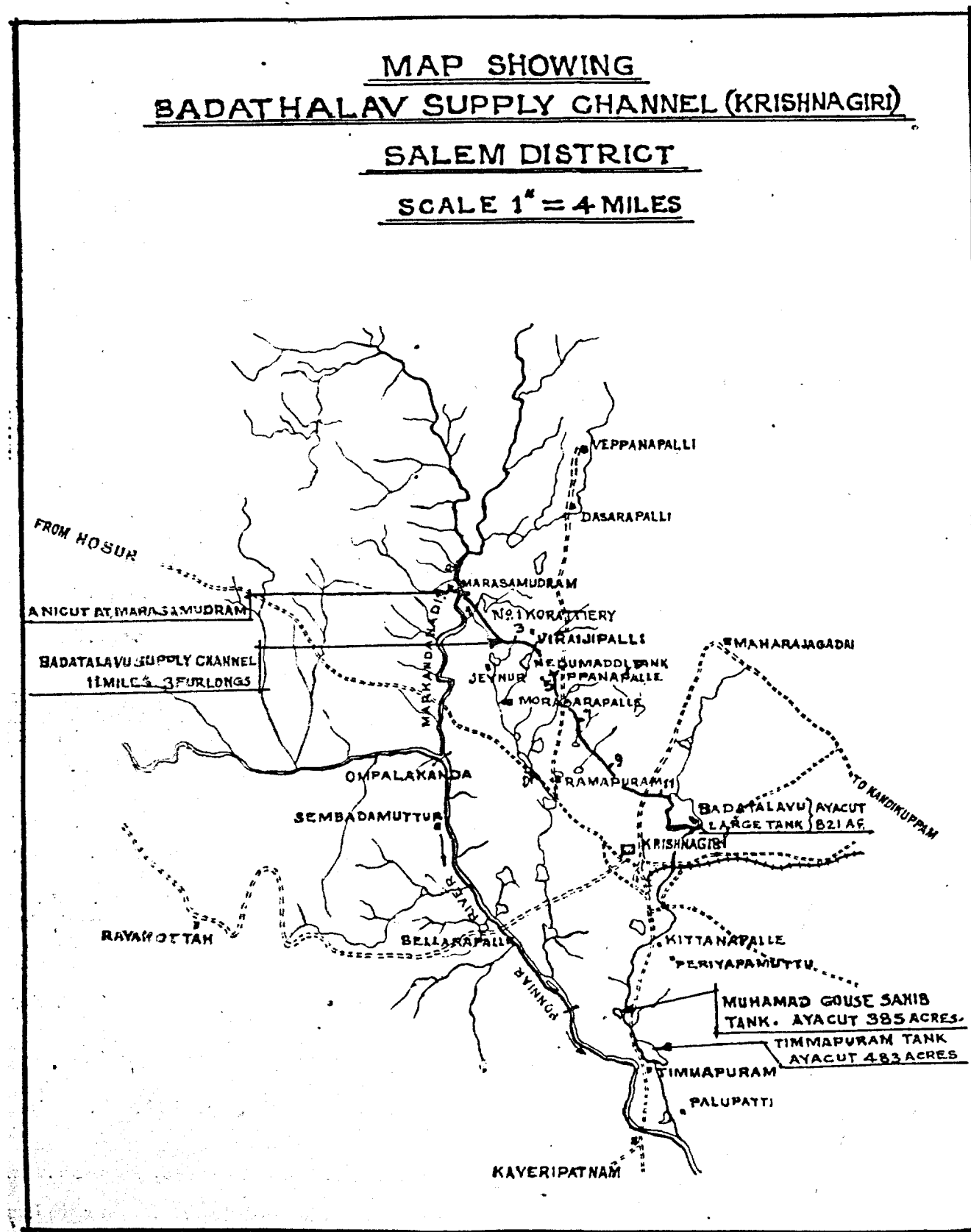
About a crore of persons and two crore heads of cattle are employed in the Indian bullock-cart industry. The number of bullock carts in India is estimated at 87 lakhs with a total capital investment of Rs. 261 crores.

Punjab is the only State in the Indian Union where the total area under each of the principal food crops is sown under improved varieties of seed.

During the period of the Five-Year Plan, short-term credit for agriculture is to be progressively increased to reach Rs. 100 crores in 1955-56.

Sonepur on the North-Eastern Railway has the longest platform in the world—length 2,415 feet.

The Central Tractor Organization has so far reclaimed 720,870 acres of land in Uttar Pradesh, Madhya Pradesh, Madhya Bharat, Bhopal and Punjab.



Shape of Dams to Come

Set up neatly in a newly-constructed temporary hall in the Bikaner House grounds in New Delhi is the nucleus of an Engineering Museum of irrigation and power projects models open to the public from January 6, 1953. Laid out on a floor area of some 6,000 square feet are 22 scale models and a huge relief map of India. In addition to the scale models of projects, the Museum has over 100 charts and 200 photographs depicting various engineering features and statistical data.

Soon after the Indian Capital had run a successful International Engineering Exhibition early in 1951, the idea of a permanent engineering museum, like the one now attempted, came originally from the Prime Minister, Sri Jawaharlal Nehru. Taking the cue from the Prime Minister the Central Board of Irrigation and Power requested the exhibitors at the International Exhibition to present models and exhibits of educational value.

As a result, models came from Madras and East Punjab States, the Central Water & Power Commission, the Cement Concrete Association of India and the National Committees of Yugoslavia, Italy and Switzerland. More offers of models have been received, but these have not been availed of owing to the limitations of space. Proposals, however, are under consideration for setting up the Museum on a permanent and more spacious scale.

The biggest amongst the models seen in the Museum is that of the Hirakud Dam, which is being constructed nine miles upstream of Sambalpur on the Mahanadi River. One of the largest earth dams in the world, the waters trapped by the Hirakud Dam will irrigate nearly two million acres. The ultimate power available at the main dam site will be 123,000 K.W. and if the construction of the subsidiary dam and power channel is eventually completed, the total power available will be about 200,000 K.W. The Project, besides aiding navigational facilities on the Mahanadi River, would offer complete security of the Mahanadi delta from tragedies of recurring flood devastation.

One of the imposing models to be seen in the Museum is that of the Pykara Hydro-Electric Scheme. The source of power in this project is the Pykara river on the Nilgiris plateau. Launched in 1929, this scheme is being carried out in three stages and is to be completed by 1953, when it

will give 71,000 K.W. of energy. The total cost of the scheme is Rs. 380 lakhs, and even as early as 1949 it had started supplying cheap electric power to 410 towns and villages in Madras State. The Moyar Hydro-Electric Scheme is an extension to the Pykara Project and utilises the tail water of Pykara powerhouse at a distance of 10 miles down the Pykara powerhouse. The Museum has a composite model of both these schemes. Located on the top of one of the lovely summer resorts in South India, the Pykara Scheme utilises a fall of 3,080 feet, believed to be the highest head so far exploited in Asia.

Amongst other models seen in the Museum are those of the Bhakra-Nangal Project, the Jogindernagar Hydro-Electric Project on Uhl river and the Bhopindra Cement Factory.

The world's second highest straight gravity concrete dam, the Bhakra Dam will rise 680 feet above the deepest foundation with a top width of 20 feet. Eight miles down stream is the site of the Nangal dam 800 feet in length. The Bhakra canals comprising the main canal and branches will run a total length of 538 miles with distributaries making another 2,100 miles, and in all irrigating about six million acres.

The model of the Uhl river Hydro-Electric Project depicts the powerhouse and step-up substation as developed in the first stage of the Project. The powerhouse situated at Jogindernagar at 4,141 ft.R.L. is an earthquake-proof building of steel and concrete. Its working capacity now is 36,000 K.W. The model shows a section of the pipeline, switch house, machine room, control room, tail race and step-up station.

Another interesting exhibit in the Museum is a working model of the Papanasam Hydro-Electric Scheme, located in Tirunelveli District almost at the apex of the Indian Peninsula. The powerhouse is situated at Papanasam Falls, six miles down the headworks in the southernmost district of Madras State. The source of water power for the project is the Tambrabarni river.

The Bhopindra Cement Factory model shows a two-unit cement-producing plant, each unit producing 100,000 tons of cement a year. Each production unit consists of one raw mill, one rotary kiln and one cement mill for grinding the clinker into cement.

Research Work at Poondi

By SRI J. VISWESWARA RAO, Research Executive Engineer, Irrigation Research Station, Poondi.

Particulars of important items of research done at the Government Irrigation Research Station, Poondi (Madras) are given below:

Stilling basin with Tee-blocks.—In the course of carrying out studies for the design of energy dissipation arrangements for the Lower Bhavani Spillway dam a new device has been evolved which consists of a stilling basin with Tee-shaped blocks inside it and a short apron beyond. By locating the blocks inside the basin instead of on the apron down-stream as in the conventional designs the length of the aprons is reduced. The device ensures the

creation of a hydraulic jump which reduces the velocity of flow even for very low tail-water levels and at the same time the stream has no diving characteristics so that the depth of scour is low.

This arrangement is found to be very efficient and economical and has been adopted in the Lower Dam. This principle has also been applied successfully in a number of subsequent designs including those for anicuts.

The design of sluices in dams.—The design of river and canal sluices in the Lower Bhavani dam was subjected to a thorough investigation by hydraulic models and a very

IRRIGATION

40

MADRAS INFORMATION

efficient design was evolved. The design as finalised consisted of an inlet built up of elliptical curves ensuring cavitation free operation. Studies also included determination of discharge co-efficient for the sluices. The energy dissipation arrangements consisted of a stilling basin with T-shaped blocks in it as in the case of the spillway dam.

Design of exit transitions in aqueducts.—The width of a stream is sometimes reduced at an aqueduct to effect savings in cost. But at the exit end, the stream is made to connect up with normal dimensions of channel through a transition. In the design of exit transitions in cross-drainage works, the high velocity stream from the flumed portion issues centrally in the transition region, giving rise to eddying and uneven velocity distribution, resulting in increased head-loss in the structure and objectionable scouring action on the bed and sides. The conventional practice consists of providing long exit transitions of 1 in 5 to 1 in 10 divergence to restore normal conditions of flow downstream of the flumed portion. As a result of basic studies conducted on the subject a device was evolved in which only a short transition of 1 in 4 divergence in plan, was adopted but two submerged deflecting vanes of triangular shape or an obstruction called a bed deflector sill were employed to restrict the flow in the centre and induce greater flow towards the sides. The financial benefits of these devices cannot be overstated for they will be of help in the design of several cross-drainage works in future projects.

Lined canal chutes in lieu of drops.—In certain reaches of the distributories of the Lower Bhavani Project the ground fall is very steep being in the order of 1/50 to 1/100 thereby necessitating the construction of a series of drops in short reaches. The photograph (wrapper) illustrates a steep reach where a number of drops were used though it does not relate to the Lower Bhavani Project. In such situations, designs have been evolved for lined canal chute in lieu of drops, in which the bed fall of the chute approximates to the existing ground slope, a velocity of about 20 feet/sec. being permitted in the chute portion. In the chute inlet transitions straight in plan were found to be adequate, but at the exit end energy dissipation arrangements had to be provided and in this connection a very efficient device consisting of a deflecting roof to be constructed in reinforced concrete in the prototype was developed for the purpose. The adoption of chutes in lieu of the drops in Lower Bhavani Project resulted in savings in cost to the extent of about 40 per cent in the reaches concerned.

Co-efficient of discharge of river weirs.—The studies conducted on the Krishna Anicut at Vijayawada revealed that the computation procedure till now in adoption did not furnish a correct estimate of the discharge for all conditions of flow, that errors to the extent of even 30 per cent may result for certain conditions of flow. The important findings were that a weir does not really get submerged although tail-water may rise above the crest, until certain depth of

overflow was attained. Furthermore, it was observed that even when a weir really got submerged owing to a sufficiently high tail-water, the discharge computed on the assumption of free overfall will not vitiate the result very much, contrary to the normal belief. In the light of these facts experiments were carried out for estimating the discharge precisely over the major anicuts in the State such as the Godavari, Nellore and Sangam, since the results of discharge computation are of particular value in the design of projects. Studies on other important anicuts are also in progress.

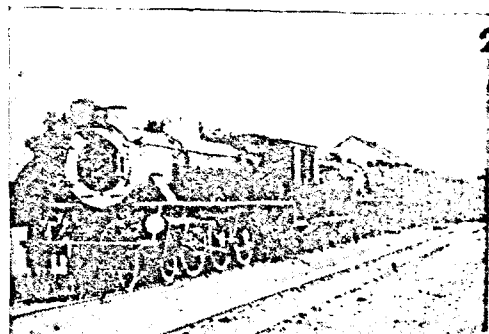
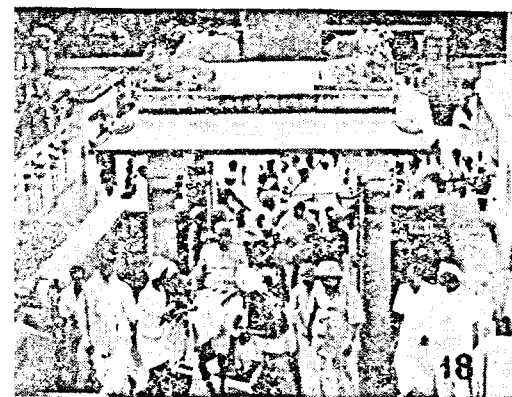
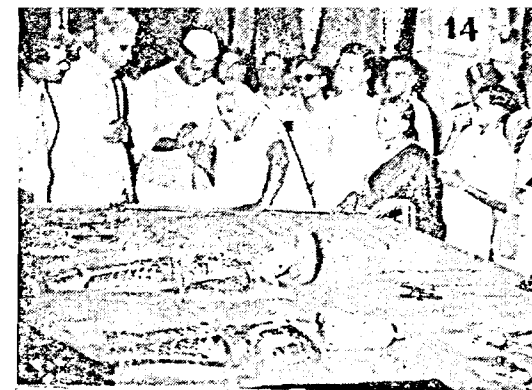
Sheet pile cut-off in Earth Dams.—With a view to reduce the seepage loss underneath an earth dam, and prevent occurrence of sand boiling or quicksand phenomenon, as it is called, at the toe which endangers the stability of rear slope, experiments of a basic nature were conducted on seepage models inside glass tanks employing dyes for tracing the path of stream lines. The efficacy of steel sheet piling driven partially into the previous substratum and the use of clay blankets on the upstream were examined and the optimum proportions for the same determined. The results will be of general application in the design of high embankments and earth dams.

Infiltration Galleries.—In the design of infiltration galleries for water-supply schemes there are a number of uncertain factors and it is not unusual that some of the galleries fail by choking after a time. For studying this problem use was made of the fact that the law of flow of water through sand is similar to the law of flow of electricity through conductors, and a standard technique, known as Electrical analogy technique, was adopted for the purpose. As a result of these experiments a number of useful results were deduced which served to evolve a rational procedure for the design of galleries in the future.

Materials Research.—The activities of the Poondi Research Station are not confined to hydraulic model experiments alone, but investigations on building materials are also conducted with a view to (1) evolve economical substitutes for conventional building materials such as bricks and cement, (2) find out suitable materials for low cost temporary housing for use in projects, (3) employ the materials available close to the construction site with necessary improvements, so as to effect savings in cost and also expedite speed of execution. As a result of studies conducted in the station, it was noticed that soil-cement blocks built of red sandy loam available at Poondi containing about 70 per cent sand and 30 per cent clay and an admixture of 8 per cent of cement by volume of soil were equivalent in strength to brick-masonry for housing purposes, and about 30 per cent cheaper. Soil-cement blocks were extensively used for the construction of buildings in the Lower Bhavani Project where they were particularly beneficial, besides effecting savings in cost, since suitable soil for manufacturing bricks was not locally available, and the procurable soil was good for manufacture of soil-cement blocks.

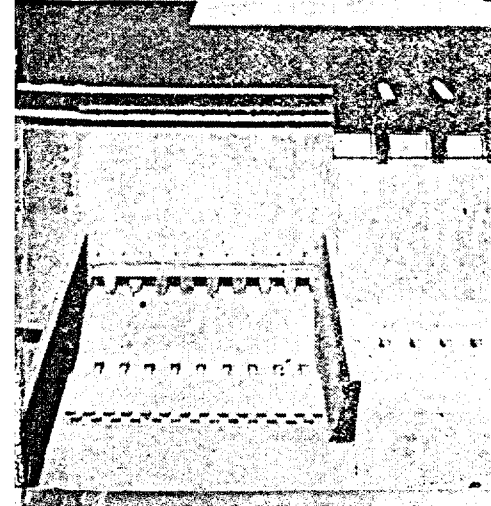
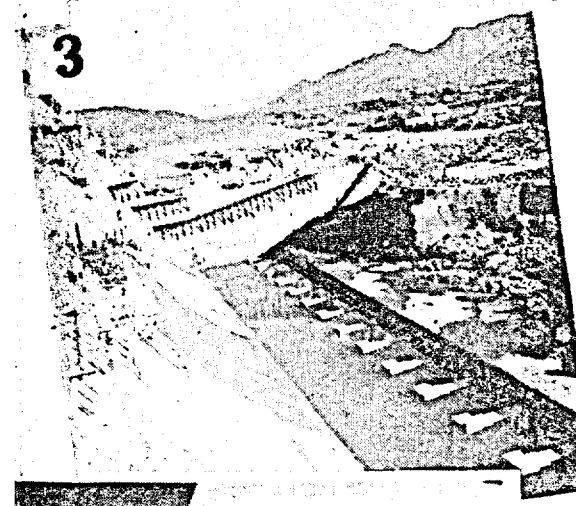
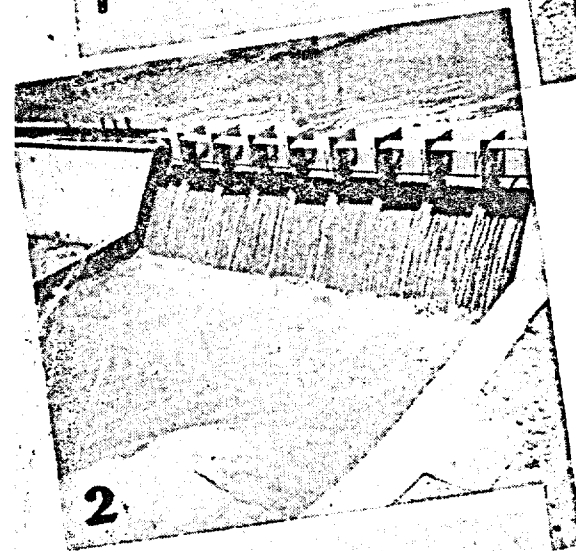
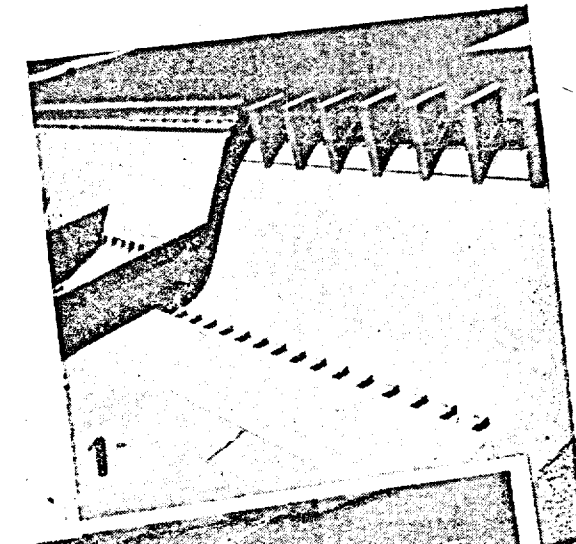
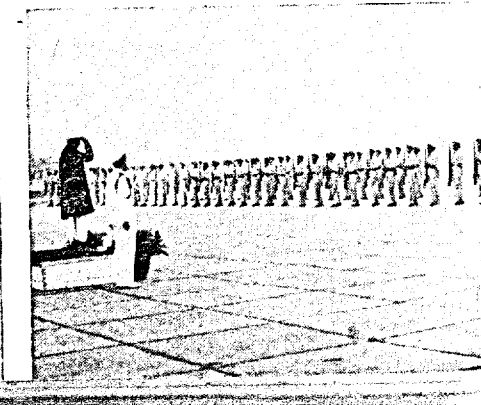
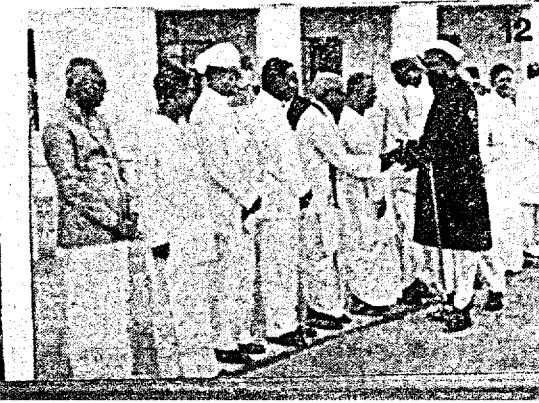
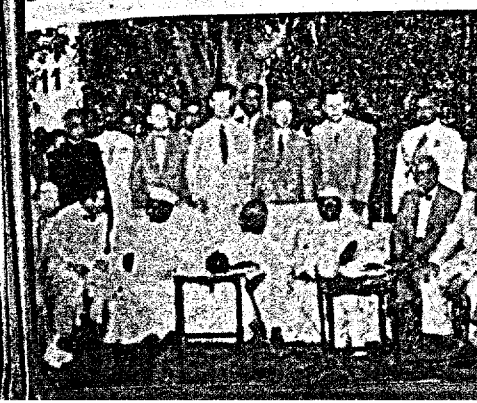
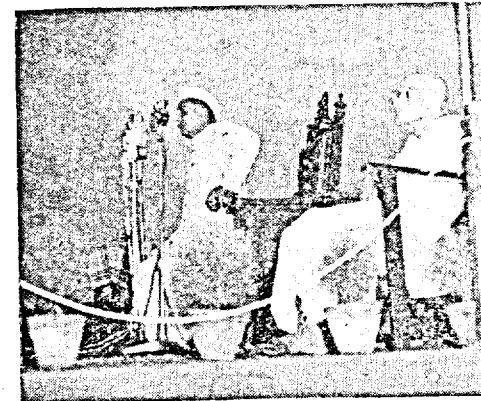
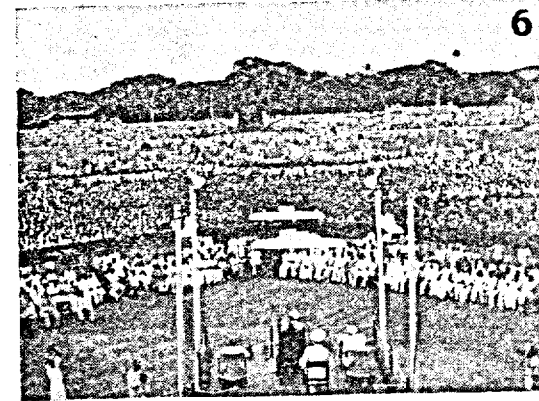
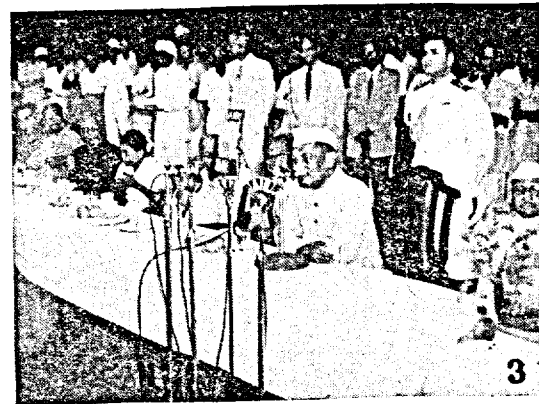
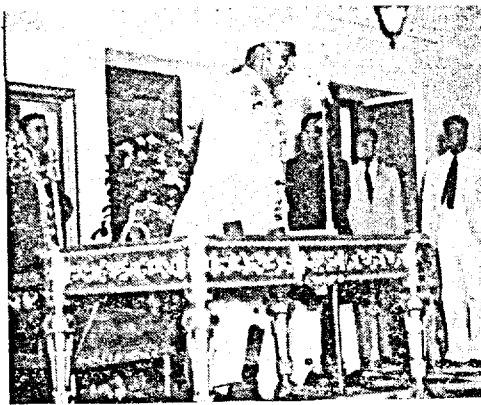
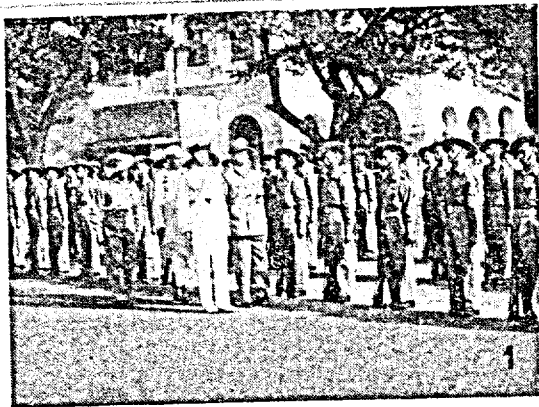
PRESIDENT'S TOUR

Coimbatore. 2. Getting a general view of the dam. 3. Getting a general view of the dam. 4. The President and the party descend from the dam. 5. Prasadam at Madurai. 6. The President and the party at the sea bath at Dhanushkoti. 8. Religious gathering on the occasion of laying the foundation stone of the Rameswaram temple. 9. The President and the party at the gathering on the occasion of laying the foundation stone of the Rameswaram temple. 10. The President and the party at the gathering on the occasion of laying the foundation stone of the Rameswaram temple. 11. The President and the party at the gathering on the occasion of laying the foundation stone of the Rameswaram temple. 12. The President and the party at the gathering on the occasion of laying the foundation stone of the Rameswaram temple. 13. The party at the gathering on the occasion of laying the foundation stone of the Rameswaram temple. 14. The President and the party at the gathering on the occasion of laying the foundation stone of the Rameswaram temple. 15. The President and the party at the gathering on the occasion of laying the foundation stone of the Rameswaram temple. 16. The President and the party at the gathering on the occasion of laying the foundation stone of the Rameswaram temple. 17. The President and the party at the gathering on the occasion of laying the foundation stone of the Rameswaram temple. 18. The President and the party at the gathering on the occasion of laying the foundation stone of the Rameswaram temple. 19. The President and the party at the gathering on the occasion of laying the foundation stone of the Rameswaram temple. 20. The President and the party at the gathering on the occasion of laying the foundation stone of the Rameswaram temple. 21. The President and the party at the gathering on the occasion of laying the foundation stone of the Rameswaram temple. 22. The President and the party at the gathering on the occasion of laying the foundation stone of the Rameswaram temple. 23. The President and the party at the gathering on the occasion of laying the foundation stone of the Rameswaram temple. 24. The President and the party at the gathering on the occasion of laying the foundation stone of the Rameswaram temple. 25. The President and the party at the gathering on the occasion of laying the foundation stone of the Rameswaram temple. 26. The President and the party at the gathering on the occasion of laying the foundation stone of the Rameswaram temple.

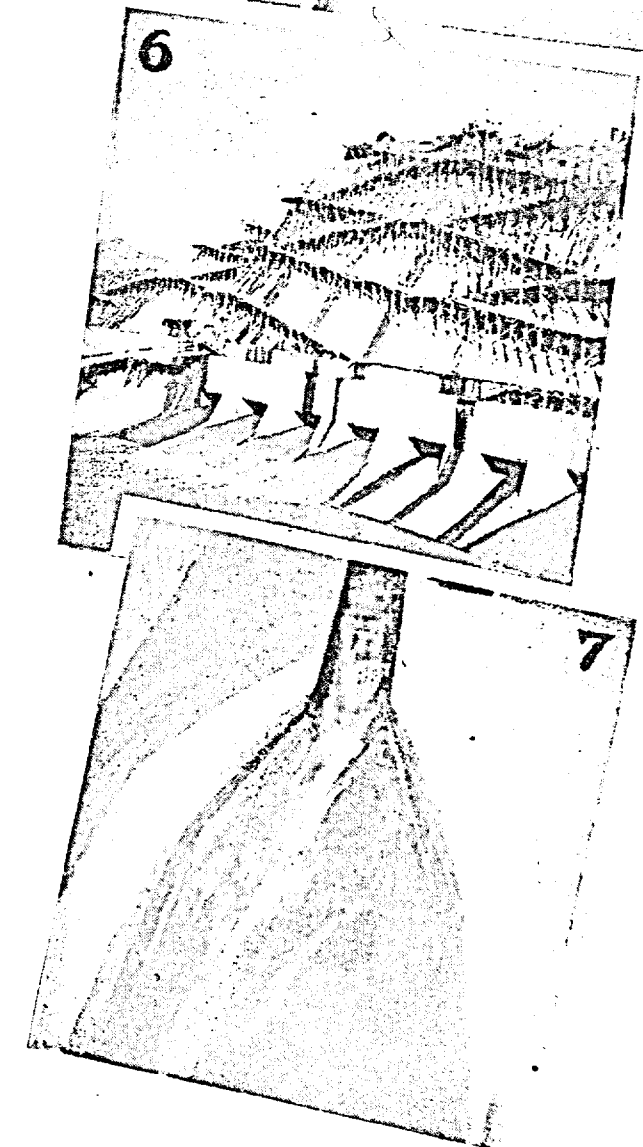


ENGAGEMENTS IN MADRAS CITY

1. Guard of Honour on arrival in Madras City. 2. Addressing the gathering at the Official Reception at Rajaji Hall. 3. Replying to the city fathers at the Civic Reception in My Lady's Gardens. 4. Planting a tree at the Theosophical Society Gardens, Adyar. 5. View of the crowd at the public meeting at the Corporation Stadium. 6. The President's dais at the Stadium. 7. The President addressing the public meeting while Sri C. Rajagopalachari, Chief Minister, listens intently. 8. Mobbed by the inmates of the Seva Samaj. 9. Garlanded by children. 10. At the Raj Bhavan Garden Party. 11. With the World Health Organization medical experts. 12. The President takes leave of the Madras Ministers. 13. Salute before emplaning.

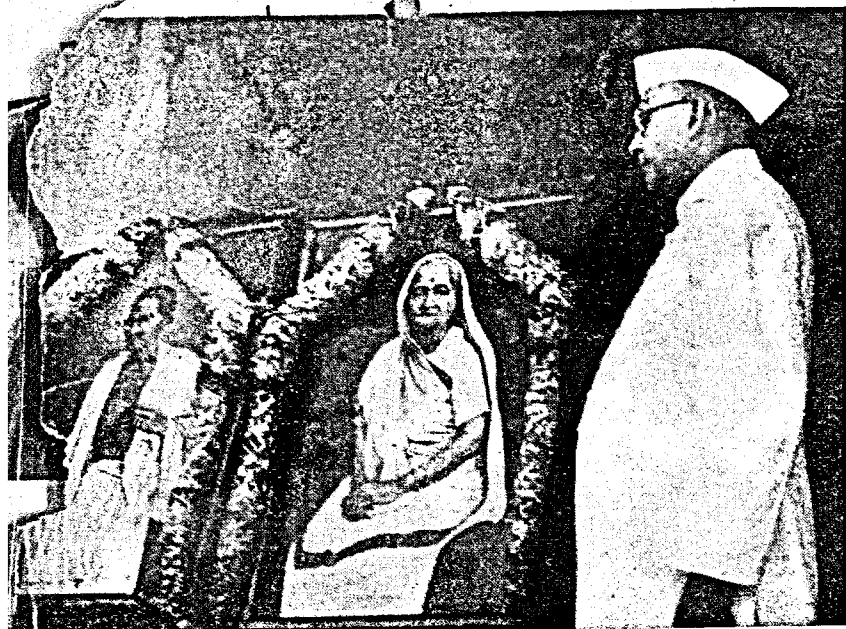


At the Government Irrigation Research Station at Poondi (Madras), studies for the design of energy dissipation arrangements for the Lower Bhavani Spillway Dam are carried on, and new devices evolved on efficient and economical lines.



MODEL OF LOWER BHAVANI SPILLWAY DAM

- (1) Model with stilling basin dry and (2) functioning under flood discharge.
- (3) Actual dam, showing stilling basin with blocks.
- (4) River sluices dry and (5) functioning under maximum discharge.
- (6) Actual structure, showing the fanning out of jets.
- (7) Exit transitions in aqueducts: uneven flow with no rectifying device (more pictures overleaf)



THE GOVERNOR AT NELLORE

1. Shri Sri Prakasa, Governor of Madras, unveiled portraits of Mahatma Gandhi and Kasturbha, at the Nellore Orphanage, when he presided over the Silver Jubilee celebrations of that institution.

2. The Governor visited the Tuberculosis Hospital at Dargamitta, where he was received by Dr. Gopala Nambiar (District Medical Officer), Sri C. Subbiah Chetty (Secretary of the Hospital Committee), and Dr. A. R. Krishnamurthy, Assistant Surgeon of the Hospital.

3. Inspecting the mica mined at the Shaw Mines in Rapur Taluk (Gudur) where the Governor performed the ceremony of switching on the ventilator fans in the mines.

4. Obliging a young autograph hunter.



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COVER PAGE: The experimental pit from which the first pieces of lignite were quarried at Neiveli (South Arcot district)

ENGAGEMENT

2

- (1) Exit transition in aqueduct, with deflector vanes beyond throat restoring quiescent flow.
- (2) Example of a series of drops in a steep reach.
- (3) Lined canal chute, looking downstream and (4) looking upstream.
- (5) Sangam anicut functioning as a free overfall weir though rear water level exceeds crest elevation.
- (6) Electrical analogy set-up.
- (7) Soil cement pavilion.

RESEARCH WORK AT POONDI

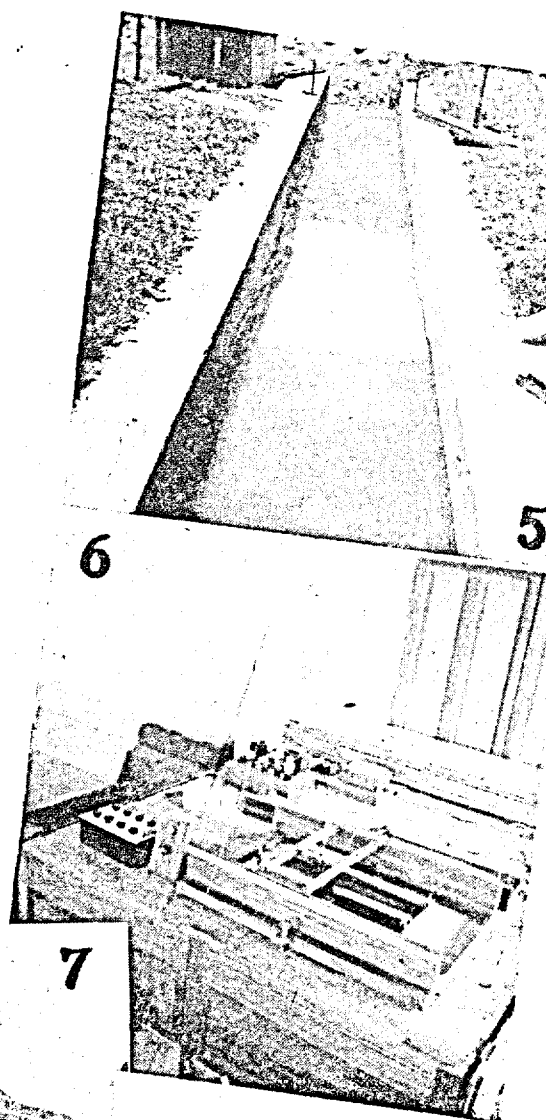
Important items of research are undertaken at the Government Irrigation Research Station, Pooni (Madras). The activities include hydraulic model experimentation and investigations on building materials.

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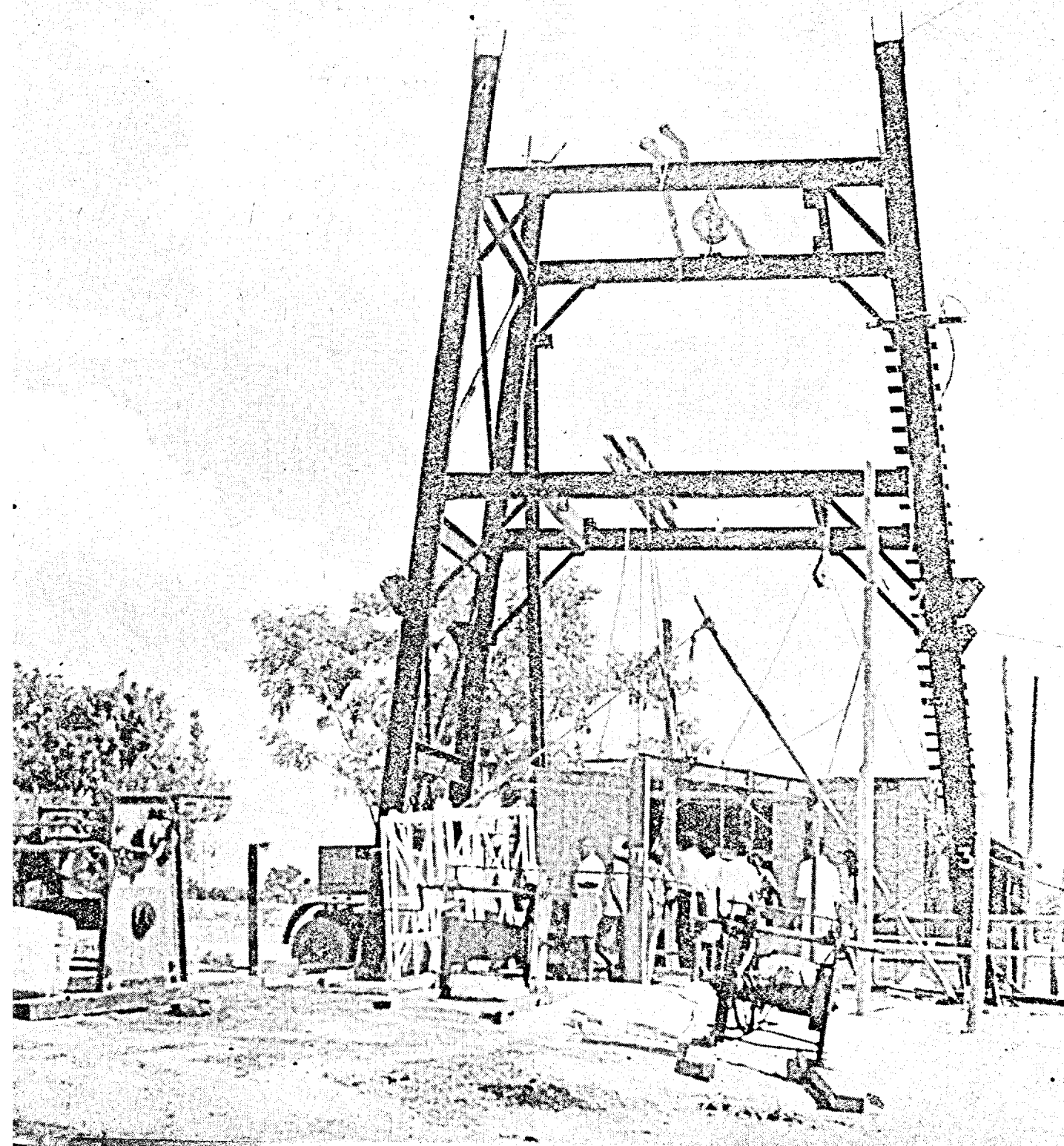
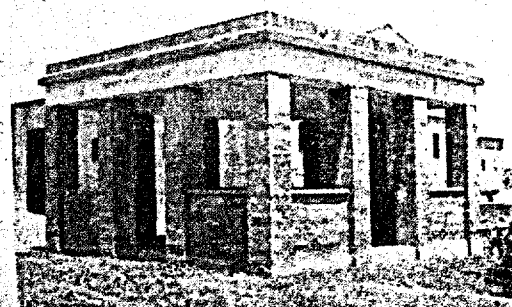


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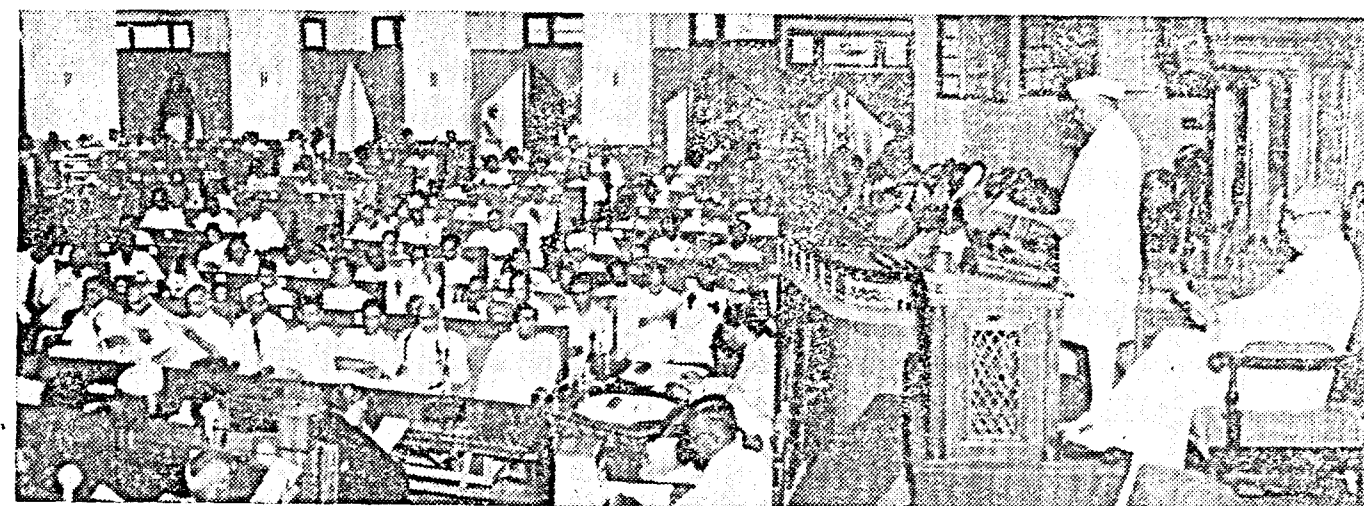
MADURAI

(SOUTH INDIA)

GRAMS:

"Harvey", Madurai.

PROGRAMMES



JOINT SESSION: Shri Sri Prakasa, Governor of Madras, addressing the Joint Session of the Madras Legislature.

Accent on Completing Schemes Already Taken Up

The Governor Addresses Joint Session of Madras Legislature

Honourable Members of the Legislature!

It is eight months since I addressed you last, and it gives me great pleasure to meet you once again. You have been summoned principally to consider the demands for grants for the ensuing year; and the Finance Minister will, in his speech, deal with various matters connected with the administration. I shall therefore confine myself only to a few important matters in my address.

Before I proceed further, may I say on behalf of the people and the Government of the State, how glad and grateful we are that the President and the Prime Minister were able to visit the State and tour through parts of it, since last we met. They brought cheer and hope wherever they went, and the people in the countryside were happy to meet them and hear their words of affection and goodwill.

The Wanchoo Report

As you all know, Sri Justice Wanchoo was deputed by the Government of India to examine certain important matters connected with the formation of the Andhra State. He has completed his enquiry, and his report is now under the active consideration of the Government of India. When that consideration is completed and we here are called upon to carry the decision through its further stages, I would like to assure Honourable Members that Government will take all necessary steps in this behalf without any loss of time.

[From the Address by Shri Sri Prakasa, Governor of Madras, to the Joint Session of the Madras Legislature, on March 7, 1953]

Firm action had to be taken by Government in respect of a challenge to authority and discipline in the Police force in the City, that was attempted by certain of its members, and I am glad to say that they can now be confidently depended upon as a loyal and efficient body of public servants.

Cyclone Relief Measures

As Honourable Members are aware, there has been widespread havoc on account of the cyclone in Tanjore and Tiruchirappalli Districts. All necessary help was rendered. Relief was given to the fishermen who lost their catamarans and nets. Compassionate grants were given to families whose breadwinners died. Not only were loans granted to agriculturists for the purchase of seeds, cattle and replanting of betel vines, but also to others standing in urgent need of relief, on the security of their houses. Remission of land revenue of nearly Rs. 8 lakhs has been sanctioned. Grants have also been made for the repair of the damaged buildings of aided schools and other institutions of a similar kind. Apart from remissions of land revenue, a sum of nearly Rs. 15 lakhs has so far been spent on cyclone relief in Tanjore District.

In Tiruchirappalli District, the damage was less. Relief measures in this district cost Government nearly Rs. 2 lakhs. Remissions of land revenue have also been sanctioned.

A State Cyclone Relief Fund was constituted, and a sum of Rs. 3,80,000 has been collected so far. A major portion of the amount has been spent in affording relief not covered by Government grants. It must be admitted that all these measures of relief were only in respect of

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the immediate necessities of the very poor people, and did not give any relief in respect of the damage done to plantations and other property which has been estimated to run into a few crores.

Seasonal conditions continued to be bad in many districts, and the collection of kists has been postponed in those areas. Relief measures will be continued in these to the extent needed.

Foodgrains

Consequent on the decision taken by Government to maintain Fair Price shops, although statutory rationing was given up, a scheme of levy has been introduced to procure rice from the surplus districts in the State. Informal rationing in Malabar, the Nilgiris and in the Hosdrug sub-taluk of South Kanara District, will continue. While the issue of rice is restricted in Fair Price shops, millets and wheat will be issued on an increased scale and at prices below that of rice. To check any anti-social activities, a system of licensing foodgrains dealers under the Central Government's Foodgrains Order, 1952, has been introduced.

Agriculture continues to engage the attention of Government and efforts are being made to give priority to the schemes under the Five-Year Plan. It is hoped that there may be no repetition of our misfortunes in respect of rain; and that agricultural production will be satisfactory.

Financing Projects

The financial position of Government unfortunately continues to be difficult. Even such steps as they intended to take to relieve this stringency to some extent, have, I am afraid, to wait on account of the decision to form a new State. This has compelled Government to slow down the progress of Irrigation and Power schemes throughout the State. It is however a matter for some satisfaction that with the additional loan of Rs. 1½ crores advanced by the Government of India towards the cost of the Tungabhadra and the Lower Bhavani Projects, the construction of these two schemes is going ahead according to schedule. These projects may therefore be expected to be completed within the next twelve months. Progress on the Malampuzha Project is also being maintained according to schedule. In the present conditions, Government's policy has had to be restricted to the completion of the schemes taken up, before embarking on new ones.

The Moyar Hydro-Electric Power Station with an installed capacity of 36,000 K.W., for the utilisation of the tail waters of the Pykara System, has been completed. But for the additional power made available from this station, the power cut in the State would have had to be much larger. Rs. 2.16 crores have been spent on the Machkund Hydro-Electric Project this year and progress of the work there is satisfactory; the power tunnel has been completed, and the first set of turbines will go into operation in 1954. In the field of power development, owing to the present limitations of financial resources, Government have had to be content with keeping up the progress of construction of the generating stations; while the schemes for the extension of electric power to villages and towns, have had to be slowed down everywhere. Government however hope that contributions from prospective consumers in the shape of loans, will enable such extension schemes to be taken up.

Comprehensive proposals for effecting improvements to Ports within the administrative control of this State, have been forwarded to the Government of India for consideration. It is proposed to bring in legislation during this session to constitute a Port Trust for Mangalore, one of our important Ports.

Community Projects

Community Project Centres were opened in our State in October 1952, and have made good progress. "Village Guides" are being trained at three Centres in the State. It is proposed to ask for the allotment of six more blocks for the State out of the 55 new development blocks that the Government of India intend starting during 1953-54. The Rural Welfare Scheme, which was sponsored in 1946, is in operation in 108 firkas in all, including the 24 firkas added this year.

Coming to the problems of the handloom weavers, we have recommended to the Government of India that the price of yarn supplied to weavers should be equalised as far as possible with the actual cost of the yarn used by composite mills in their own production of cloth. They have also urged that mills should be prevented from forcing unwanted counts on handloom weavers. Government are still pressing for and hope to secure complete reservation for handlooms of bordered dhoties, as the reservation of 40 per cent conceded has not brought about much relief. It is the considered opinion of Government that unless some such very bold step is taken to remove the competition from mill cloth, the problem of the handloom weavers in the State will remain unsolved, and will also be the cause of increasing distress among a large section of our population.

An *ad hoc* Committee is examining the working of the Basic schools in the State. Their report is awaited. The number of schools for adults is now about 2,500, showing an increase of nearly 400 institutions since July 1952. A scheme for the expansion of adult education is also under consideration.

Public Health and Medicine

In the field of Public Health and Medicine, it is expected that a sum of Rs. 43 lakhs would have been spent this year on medical buildings in the State. The Venereal Diseases Department of the Government General Hospital, Madras, the Anatomy Department of the Stanley Hospital, Madras, and the Obstetrics and Gynaecology Department of the Government Hospital for Women and Children, Madras, have been upgraded under an All-India scheme preparatory to the establishment of an All-India Medical Institute for Research and Post-graduate Training. Madras has agreed to participate in the National Malaria Control Programme formulated by the Union Government, and has also accepted the proposal to open an up-to-date Tuberculosis Demonstration and Training Centre at Madras with the assistance of the World Health Organisation.

Elections to the smaller Panchayats are now in full swing, and the elections to the bigger Panchayats will be taken up shortly. In view of the impending formation of the Andhra State, Government have been compelled to postpone the elections to the District Boards. Steps will be taken to appoint Special Officers to take charge of the administration of District Boards during this interim period.

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Portraits of National Leaders in Local Boards

The Government have passed the following orders regarding the purchase and installation of portraits of national leaders by local bodies in their premises, in supersession of all previous orders on the subject.

District boards, panchayats and municipal councils, including the Corporation of Madras, are permitted to incur from their funds expenditure on the purchase and installation in their premises of the portraits of Mahatma Gandhi and the President of the Indian Republic and of no others. Such expenditure may be incurred up to a limit of Rs. 50 per portrait without higher sanction. The local bodies should purchase only printed copies of the portraits, if they are intended for their schools and institutions, other than their main office buildings.

The services of eminent chairmen, presidents, and members of local bodies may be commemorated by the installation of their portraits in the premises of the respective local bodies, if the cost is met from private funds. Government will permit the installation of the portraits of other Indian national leaders in the premises of local bodies, if the entire expenditure is met from private funds. Local bodies should propose the installation of such portraits only after obtaining the consent of the leader concerned.

Hopes for the Future

Your deliberations have always been conducted in the best interest of the people, and I am sure that this session will follow this tradition.

In view of the impending partition of the State, may I take the liberty of expressing my fullest confidence that the same high traditions that have always been maintained by this Legislature of Madras, will be continued, respected and enriched in the new Legislatures, that may come into being in the near future. You have my best wishes for a useful and successful session.

Before we disperse, I am sure it would be the desire of all hon'ble members that on their behalf as well as on behalf of the Government and myself, I should express our sense of grief at the passing away of Marshal Stalin, a great and outstanding figure of our times. We send our heart felt condolences to the Government and people of the U.S.S.R. in their bereavement and express our earnest hope that they and we alike would continue to work for peace, goodwill and co-operation among all the nations of the world. As a mark of respect to the memory of the great departed may I ask hon'ble members to stand for a minute in silence.

The Committee which has examined the working of the scheme of Separation of Judiciary from the Executive has submitted its report, which will be placed on the table of the House in due course.

Tenancy Reform

I am glad to state that the Tanjore Tenants' and Pannaiyals' Protection Act, 1952, has worked satisfactorily. In respect of the Revenue Surcharge Bill, which it was intended to proceed with at this session, Government have decided to put it off in view of the decision for the early formation of the Andhra State, as it would be proper to leave questions of additional taxation to the different Governments that will come into being.

In respect of the Malabar Tenancy Act, 1929, Government have under consideration a draft Bill further to amend the above Act. Pending amendment of the Act, all rent settlement operations under it have been suspended.

Proposed Legislation

It is proposed to introduce legislation during this session with regard to the following matters, namely:

(1) *The Madras Estates Land (Reduction of Rent) Amendment Bill, 1952.* The object of this Bill is to amend the Madras Estates Land (Rent Reduction) Act, 1947, so that the Government will have the power to cancel, if necessary, certain previous orders and also to correct clerical and other errors in them.

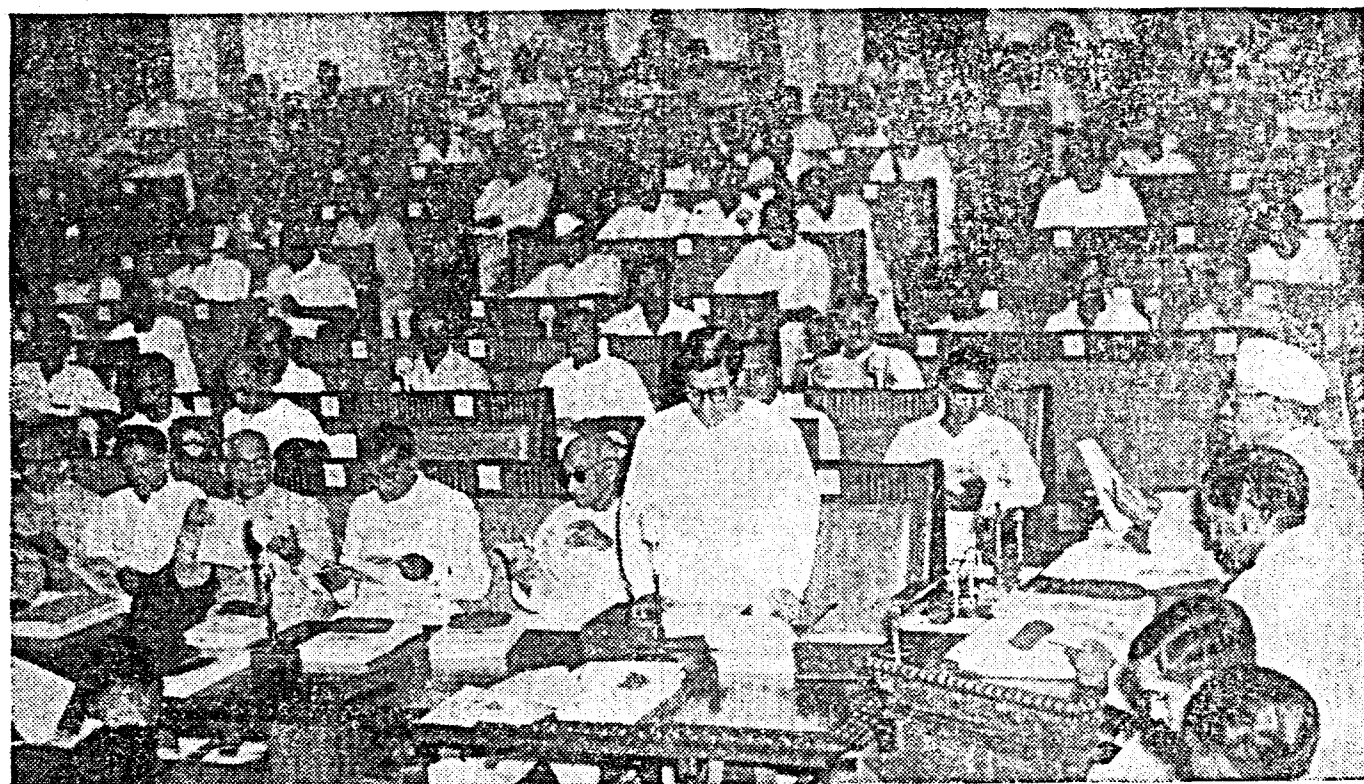
(2) *The Madras Estates (Abolition and Conversion into Ryotwari) Act, 1948.* A Bill to amend this Act will be undertaken to ensure that some compensation is paid to all under-tenure estate-holders.

(3) *The Madras General Sales Tax Act.* There is a proposal to speed up the disposal of cases by amending the Act so as to empower the Chairman of the Sales Tax Appellate Tribunal to constitute Benches of any two persons from among the members of the Tribunal. The Bill is likely to come up for consideration during the session.

(4) *The Land Acquisition (Amendment) Bill.* The amending Bill seeks to provide for reducing the rate of interest on the compensation amounts, from six per cent to four per cent, with reference to Sections 28 and 34 of the Land Acquisition Act.

(5) *The Madras Requisitioned Land (Continuance of Powers) Act, 1952.* A Bill will be introduced to extend the provisions of the Madras Requisitioned Land (Continuance of Powers) Act, 1952, for a further period, as it is found that the disposal of the properties held under the above Act cannot be completed before the end of this financial year.

(6) *The Constitution (Second Amendment) Bill, 1952.* The Bill to amend Article 81 (1) (b) of the Constitution relating to population limits for determining the strength of the House of the People, has already been passed by the Union House of the People, removing the upper limit as laid down in the above Article. As Article 368 of the Constitution requires ratification of this Bill by the Legislatures of a requisite number of Part A and B States, a resolution in this regard will be placed before you shortly.



IN THE ASSEMBLY: Sri C. Subramaniam, Minister for Finance, presenting the Budget for the year 1953-54 to the Legislative Assembly at the new Assembly Hall, Mount Road, Madras, on March 14, 1953.

Provision Mainly for Existing Schemes

Finance Minister Presents Budget for 1953-54

By SRI C. SUBRAMANIAM, Minister for Finance

We have assembled for the budget session in an unusual atmosphere. The impending partition has cast its shadow on us and our objective vision is somewhat blurred. In spite of many divergences, we had maintained in the past a unity of purpose in all our deliberations, but now the air is charged with doubts, suspicions and irritation. In these exceptional circumstances, I consider it prudent to present the budget for 1953-54, in a shape which will provoke the least controversy.

The estimates have been prepared as usual, for the full year. Provision has been made for carrying on the general administration and continuing without interruption the ameliorative schemes already in operation. A few new schemes have also been proposed, but only to the extent they have become unavoidable, in the light of the progress on schemes in operation. But demands will not be moved for the full year.

After the general discussion, a Vote on Account will be asked for, to meet the anticipated expenditure during the first six months of the financial year, by which time the

From the speech of Sri C. Subramaniam, Finance Minister, presenting the Budget for 1953-54 to the Legislative Assembly and Council of Madras on the 14th March 1953.]

new State of Andhra will have statutorily come into being. If the partition is delayed for any unavoidable and unexpected reason, Government must come to the House again with Demands for the full year, but let us hope that this contingency may not arise.

Seasonal Conditions

When Government presented the budget for the current year, towards the end of last June, we were in the grip of unprecedented famine. In our assessment of the magnitude of the disaster and the extent to which necessary relief measures would cut into our resources, we had erred on the wrong side. As against an estimated outlay of about Rs. 6 crores, we have already spent about Rs. 10 crores on famine relief; and expenditure continues to be incurred, though on a reduced scale.

Famine conditions therefore persisted in Rayalaseema. It gradually spread over the central districts of Coimbatore, Salem, North Arcot, South Arcot and Chingleput as the south-west monsoon held back.

Acute distress has now shifted to the southern districts of Tirunelveli, Ramanathapuram and Madurai, which did not benefit by the cyclonic spell, and relief measures

Madras Budget, 1953-54—Abstract

(Figures in lakhs of rupees.)

A. REVENUE AND EXPENDITURE ON REVENUE ACCOUNT.

	Accounts, 1952-53.	Budget Estimate, 1952-53.	Revised Estimate, 1952-53.	Budget Estimate, 1953-54.
	RS.	RS.	RS.	RS.
(1) Revenue	5,943.15	6,175.74	6,335.55	6,574.71
(2) Expenditure	6,443.84	6,534.44	6,875.28	6,574.51
(3) Surplus (+) or Deficit (—)	— 500.69	— 358.70	— 539.73	+ 0.20

B. TRANSACTIONS OUTSIDE THE REVENUE ACCOUNT.

(1) Total Receipts	2,879.43	2,705.26	2,756.58	1,175.80
(2) Total Disbursements	2,261.74	2,207.28	2,773.89	1,591.44
(3) Receipts minus Disbursements	+ 617.69	+ 497.98	— 17.31	— 415.64

C. BALANCES.

(1) Opening Balance	— 479.34	— 362.34	— 362.34	— 919.38
(2) Closing Balance	— 362.34	— 223.06	— 919.38	— 1,334.82

D. CAPITAL LIABILITIES AND ASSETS.

	On 31st March 1952.	On 31st March 1953 (Revised Estimate).	On 31st March 1954 (Budget Estimate).
	RS.	RS.	RS.
(1) Total Liabilities	9,378.43	9,692.15	10,836.38
(2) Total Assets	13,137.77	13,399.89	14,909.57
(3) Excess of Assets over Liabilities	3,759.34	3,707.74	4,073.19

have had to be organised there. There are still very many pockets of distress in these districts and relief measures are being continued there. Land Revenue remissions are being granted and instalments of Takkavi loans are also being postponed wherever necessary. All reasonable steps have to be taken to alleviate distress and it is too soon to estimate the cost of famine measures for the budget-year.

Cyclone

The devastation caused by the cyclone in Tanjore and large parts of Tiruchirappalli Districts, cannot be reckoned in terms of money. Relief measures were promptly organised to assist the poor to absorb the immediate shock and set them back on their feet. The cost to the State has already exceeded Rs. 25 lakhs. While we bemoan the loss sustained by the people in this calamity, we must be thankful for the rains which accompanied the gale.

Over a million acres of paddy in the Cauvery delta were saved from imminent danger, consequent on the storage in the Mettur reservoir having been fully drained. The central districts also turned the corner with these rains, but for which our food economy would have been in a deplorable state.

Power Shortage

Even though seasonal conditions are less unfavourable than in last year, the storage in our hydro-electric reservoirs is sadly depleted. The Mettur powerhouse has been virtually closed down and the Papanasam reservoir is also running dry. The bulk of the load of the Southern Grid is now on the Pykara system, which is naturally unable to meet the demand. Drastic power-cuts have been imposed and this is bound to have very adverse repercussions on our industrial production, unless replenishment comes down the skies early. I am afraid we must be prepared for some unemployment and distress in the industrial areas of Coimbatore, Tiruchirappalli and Madurai Districts, in the next few months.

The City is in a more fortunate position as the first set of generators of the Madras Plant Extension scheme is just going into commission, releasing 15,000 K.Ws. of additional power. In years of drought, our hydro-electric grid requires adequate thermal support to maintain the load during the non-irrigation months.

The resources of the Government are, however, severely limited. The Government decided in favour of extension of power to new areas and so we have now the Machkund scheme for the Circars and the Tungabhadra scheme for

Budget Figures for Telugu Districts

	1952-53 Revised Estimate.	1953-54.
(Figures in lakhs of rupees.)		
(1) Revenue for Telugu districts.	1,954	2,077
(2) Expenditure for Telugu districts.	2,461	2,280
(3) Surplus (+) or deficit (—).	—507	—203
Capital Expenditure—		
	1952-53 Revised Estimate.	1953-54.
Telugu areas ..	971 *	871 *
Residuary area ..	1,129	971
Total ..	2,100	1,842

* Including the Tungabhadra Project.

Rayalaseema, under implementation. Plans and estimates are, however, under preparation, to make up for the deficit in thermal strength in the Southern Grid.

Lignite Investigation

Certain investigations are now in an advanced stage of progress at Neiveli in South Arcot District, towards mining lignite or the brown coal, located in that area. Samples have been taken out and found on test to have adequate calorific value. A pilot scheme has just been started at an estimated cost of about Rs. 70 lakhs, with the aid of machinery generously lent to us by the Government of India, and provision has been made in the budget for this purpose. If the experiment succeeds, i.e., if the cost of extraction is less than about Rs. 30 per ton, which is the price we now pay for rail-borne coal, we shall have an abundant supply of motive power for industrial development.

Handloom Industry

Our large weaver population are in great distress owing to the impact of general famine conditions to what already was a problem of great difficulty, viz., competition of the cloth produced by mills in other parts of India and dumped on our markets, both urban and rural. Gruel centres have been opened in certain urban weaving areas, to meet the acute distress among the infirm and the children. About 200 centres are now functioning to provide relief. The scheme for providing employment to weavers through the agency of co-operative organizations, has met with some measure of success. Stocks worth over one crore of rupees had at one time piled up with co-operative societies, but the offtake improved

during Pongal and the accumulated stock has fallen off to about Rs. 60 lakhs worth.

Food Situation

Dealing with the food situation, the levy in surplus districts is making fair progress and we have a stock of about 2 lakhs of tons of rice. The quota of 2½ lakhs of tons promised by the Central Government is also moving in from surplus States. The offtake in fair price shops has fallen off after the harvest, with the result that large stocks have now to be held on Government account and this is causing serious ways and means difficulties. There need be no apprehension about our ability to maintain supplies in fair price shops all through the year.

Prices

Prices in general have steadied up at a lower level, after the sharp fall noticed early last year. This is indeed a welcome feature, but it has of course affected the returns from the General Sales Tax. As against a revenue of Rs. 15½ crores realised under this head in 1951-52, the revised estimate for the current year is only about Rs. 14 crores, which is again half a crore less than the budget estimate prepared earlier in the year. We should not mind loss of revenue under this head, if that is due merely to a lowering of the price-level. When prices fall, the costs of administration may also be expected to diminish correspondingly.

Community Projects

In presenting this interim budget, although I do not propose to review the progress made in respect of the various development schemes, I must refer briefly to the Community Projects, for which a token provision alone had been made in the budget-estimates of this year. The projects were inaugurated last October in six centres and intensive operations have just commenced.

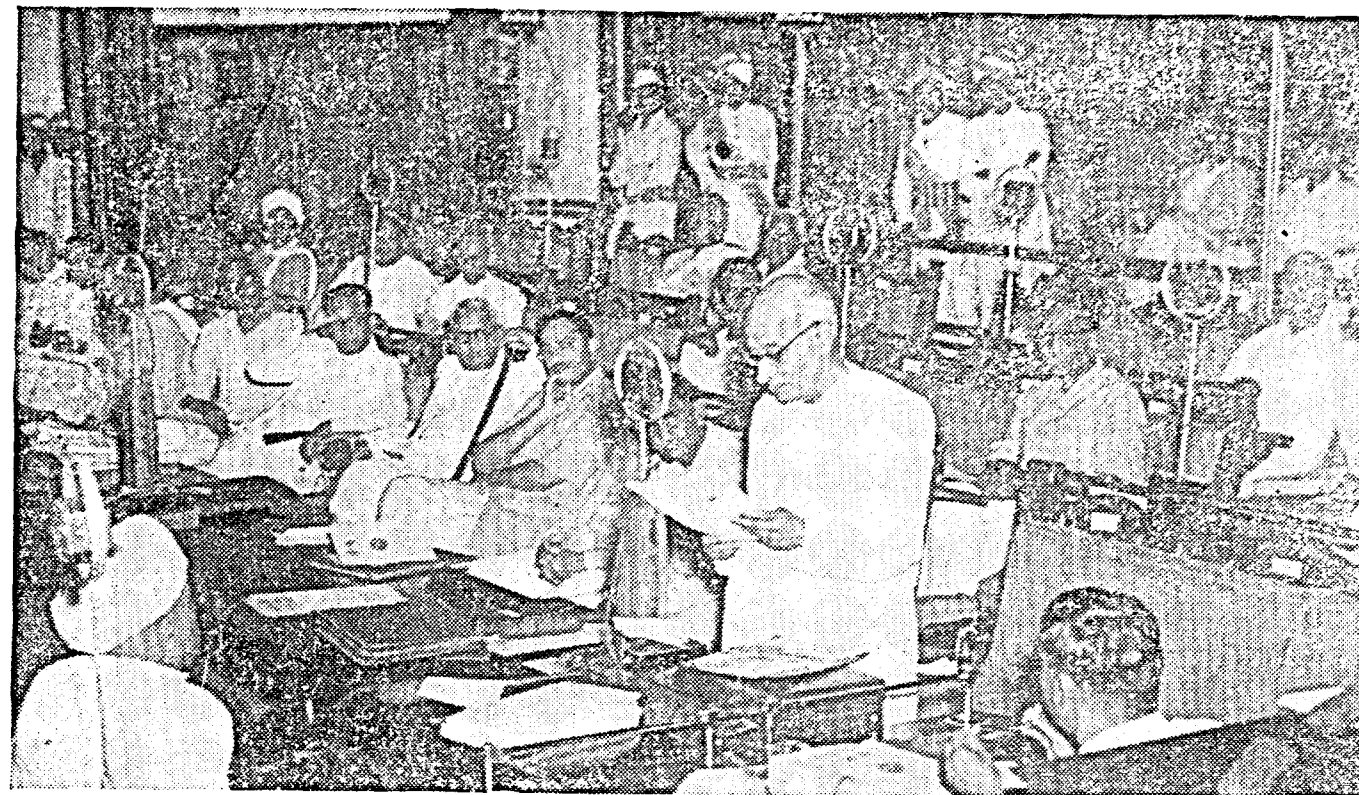
A provision of Rs. 71 lakhs has been made in the Revised Estimate of the year and of Rs. 111 lakhs in the budget for the coming year. The Government of India have agreed to assist this scheme with grants, and credit has been taken for Rs. 29 lakhs in the current year and Rs. 56 lakhs in the coming year under this head.

Finance Commission

The recommendations of the Finance Commission on the division of certain resources between the Centre and the States, have been published and accepted by the Centre. In placing our case before the Commission, we had pressed three points. We wanted that the share of income-tax payable to States should be increased from 50 per cent to 60 per cent. The Commission has recommended an increase from 50 per cent to 55 per cent, meeting our request half-way.

In the division of this share between the different States, we had pressed that the respective populations of the States should be the only consideration. The Commission evolved a compromise formula under which 80 per cent of the share of States, should be divided in the proportion of population and the remaining 20 per cent on the basis of collection.

We claimed a share from Excise duties levied by the Centre. The Commission has recommended to the States, 40 per cent of the Excise duties on tobacco, matches and



IN THE COUNCIL: Sri C. Rajagopalachari, Chief Minister, presenting the Budget for the year 1953-54 to the Legislative Council at the Council Chamber, Fort St. George, on March 14, 1953.

vegetable products, to be divided in the proportion of population.

The budget for the current year had taken credit for Rs. 884 lakhs under Income-tax, but our share will now go up to Rs. 926 lakhs. The budget did not take credit for a share of the Excise duties and we may get about Rs. 289 lakhs under this head in the current year and similar receipts may be expected in succeeding years. Our revenue position has thus improved by Rs. 331 lakhs over budget estimates, largely through the award of the Finance Commission.

Tobacco Compensation

We had been levying sales tax in the past on the consumption of tobacco, both raw and manufactured. At the request of the Centre, the Madras Government had suspended the levy of this tax some years ago, the Centre having thought it inexpedient that the State should levy a tax the same time the Centre was collecting heavy excise duties on that commodity. We were getting a compensation of Rs. 56 lakhs per annum for the loss of this revenue. The Finance Commission has now recommended and the Government of India have agreed, that this compensation may be stopped with effect from next year and the State may be given back the freedom to levy sales tax.

It is therefore proposed to resume the levy of sales tax on tobacco, with effect from the ensuing year. By a levy under the existing law, we may realise about Rs. 16 lakhs more from this source, than what we were getting as compensation from the Centre.

Accounts, 1951-52

When I presented the budget for the current year in June, I had expected that the accounts of the year 1951-52 would show a deficit of Rs. 3½ crores. The accounts have since been closed by the Accountant-General and the actual deficit for 1951-52 is Rs. 5 crores. This deficit has further cut into the Revenue Reserve Fund.

Revised Estimate, 1952-53

In presenting the budget for the current year, I had estimated the revenue at Rs. 6,176 lakhs and expenditure at Rs. 6,535 lakhs, showing a deficit of Rs. 359 lakhs. It was proposed to cover this deficit by measures of additional taxation to the extent of Rs. 270 lakhs, leaving an uncovered balance of Rs. 89 lakhs. It was not possible to push through all those measures of taxation. Even the modified surcharge on bus-fares came into force late in the year. The extra revenue that may materialise during the year from new taxes will not exceed Rs. 68 lakhs.

The revised estimate for the year shows a revenue of Rs. 6,336 lakhs and an expenditure of Rs. 6,876 lakhs, which means a deficit of Rs. 540 lakhs. This deficit appears, in spite of the improvement in revenue to the extent of Rs. 331 lakhs under the award of the Finance Commission and Rs. 68 lakhs as the proceeds of additional taxation. The yield from the major sources of revenue, such as Sales Tax, Land Revenue, Forests and Registration, has dropped appreciably on account of famine conditions and the lower level at which prices have stabilized.

(Continued on page 37)

Lignite Will Enlarge Industrial Horizon

By Dr. U. KRISHNA RAO, Minister for Industries and Labour

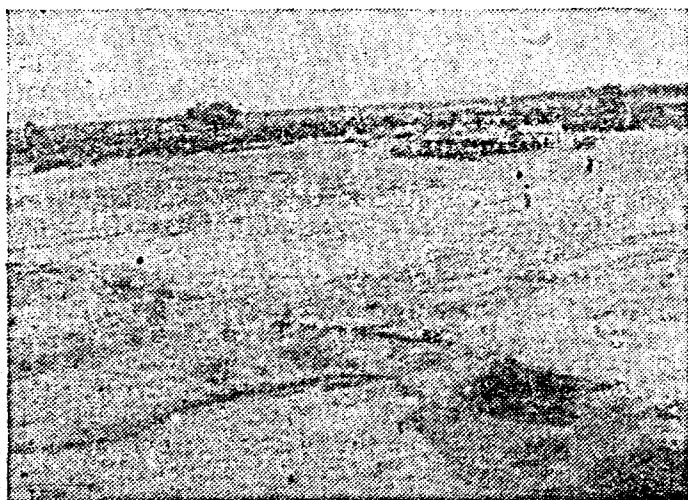
I am conscious of the importance of this occasion. As Minister for Industries and Labour, I am fully aware how much the Madras State is handicapped for want of proper fuel resources. The supplies of coal received by this State are not only unduly expensive but are insufficient, being, after the best efforts of the railway, less than a third of what is required. There is little prospect that the power resources can be appreciably increased either by improvement of transport services or by increase in the production of electricity. The discovery, therefore, of lignite is vital to the progress of industrialisation in this State.

I believe that industrialisation in Madras has a great future. The number of industrial workers in this State, including those working in cottage industries, is about two millions which is higher than the total of any other State. We produce 470,007 bales out of a total of 2,935,550 bales of yarn produced in the country. In the matter of cloth, the State's precedence is in the field of quality. In the sugar industry, the rated capacity of existing factories is 88,000 tons to which an addition of 60,000 tons has been sanctioned.

Industrial Development

In the automobile industry, the State has two of the five manufacturing plants in the country, and is a pioneer in the production of component parts like pistons, wheels and rims, diesel engines, etc.

In cement, the capacity of the State is a little less than a third of the total capacity of the country. In ship-building, the State has a monopoly. In respect of metals, the establishment of an electro-metallurgical plant has been made a condition for the lease of manganese at Sandur. Magnesite is already being produced at Salem. The production of aluminium in the same district is awaiting supply of cheap electricity. In respect of steel, the State possesses the best ore in the world at Sandur, but plans for its exploitation await the availability of lignite.



SITE : A general view of the site of the Lignite Project in Neiveli, South Arcot district.

In respect of small industries, the State produces about 3,000 cycles out of a total production of 13,453 in the country, and eight million match-boxes out of a total of 26 millions. In the film industry, the State stands first, as also in the manufacture of fountain pens, the Pilot of Japan and Parker of U.S.A. being expected to be shortly in production. The State is also distinguishing itself in the production of textile machinery.

Benefits State and Nation

This background is necessary to appreciate what lignite means to this State. I am very happy that the field for the utilisation of lignite is so wide. The President of the Coal Consumer's Association of India who had recently visited the State came to the conclusion: "In the water and fuel starved State of Madras, the use of lignite on scientific lines will give a great fillip to the industry and electrification of the country, not to speak of the large saving in coal freight to Railways and industry, the saving in wagon, loco power and traction capacity that is at present used to bring coal from one thousand miles North and the conservation of the best quality coal that goes to the South from Bihar and Bengal, because owing to the long haulage, it does not pay to send to the South lower grades of coal. Thus the development of South Arcot lignite is not a matter for the State of Madras alone, but it is a concern for the Union as a whole from the point of view, among others, of regionalisation of coal supply, nationalisation of transport and conservation of good quality coal."

It is no doubt because of this importance of lignite to this State and to the country, that the Government of India have made a generous loan of valuable equipment. They have also indicated that they would like to share in the future development of the industry.

Role of Private Enterprise

It is difficult to forecast the future development. Private parties are already interested in obtaining concessions for mining. Some of these parties are from abroad. The Government are not opposed to private enterprise but consider that until the experimental quarrying now to be conducted establishes a proper method for extraction and the correct value of lignite, it may not be fair to the State or to the private investors to enter into any large commitments. If and when the economics of lignite are established, in the large area of 100 square miles, it should be possible to allow private enterprise side by side.

I heartily endorse the services rendered by various parties to the project so far. I am conscious of the contribution made by Sri H. K. Ghose and Dr. Paul R. Eyrich. They have both worked on the spot and at Bokharo from where the equipment has been obtained. The success of the scheme when it is established will be considerably due to their efforts. The successive Secretaries to Government concerned in the project have also to be thanked for co-ordinating the work at different points.

I must make special mention of the efforts of the present Development Secretary, Sri J. M. Lobo Prabhu, who has

taken a personal interest in the matter and has done much to the quickening of the programme of work in connexion with the lignite project.

Foundations of Industrial Empire

I should also take this opportunity to thank the Minister for Production Sri K. C. Reddy, and the Minister for Commerce and Industry Sri T. T. Krishnamachari for their interest in this investigation and for their fullest support and co-operation.

I must also acknowledge the services of my predecessors who maintained a steady enthusiasm for the project. I must also acknowledge the interest of the Chief Minister without which this project could not have been sanctioned.

Opens New Chapter of Industrialization

There are moments in the life of individuals, as of countries, when history is tense with great possibilities. We, in the Madras State, are at one such moment. Since the State began to industrialise itself, the need has been felt for cheap and ready supplies of coal. In the absence of these supplies, industry has to depend largely on coal obtained from the North, a distance of more than 1,000 miles at a cost which is more than double and, in some parts four times, the cost at pit-head. This high cost has not only retarded the industrialisation of the State, but has added to the cost of production, reducing the market of existing industries. That so much industrialisation exists in spite of the competitive disadvantage of the State is a tribute to the resources, human and material, of the State and the people.

In the circumstances, the discovery of coal in the form of lignite, in the area on which we stand today, is a message of great hope to the industries of the State. It is also a message to agriculture which will have the benefit of the water released from mining, to forests which can be relieved of the demand for wood required for domestic purposes, for electricity the supply of which can be steadied and increased from thermal production, for railways which will be relieved of the burden of transporting coal for themselves and, for general consumption and for manufactures which can arise from the by-products of lignite. Today, therefore, when machines will scoop the first layer of earth in a quarry of 550 feet square, they will open a chapter of rich possibilities for the State. This moment may well be historic.

Mining Investigations

The story of lignite in South Arcot has been told many times before. This soft brown coal was first thrown up in 1937 in the course of boring an artesian well. The shortage of coal during the war induced Government in 1943 to entrust the Geological Survey of India with the prospecting operations. Until 1947, the Geological Survey of India put down 33 bore-holes and established an area of 23 square miles to be lignite-bearing. In 1947, the Government of

[From the Address of Welcome by Sri J. M. Lobo Prabhu, I.C.S., Secretary, Development Department, to Dr. U. Krishna Rao, Minister for Industries and Labour, on the occasion of the inauguration of the Quarrying Project at the Lignite Mines, Neiveli, South Arcot district, on March 5, 1953].

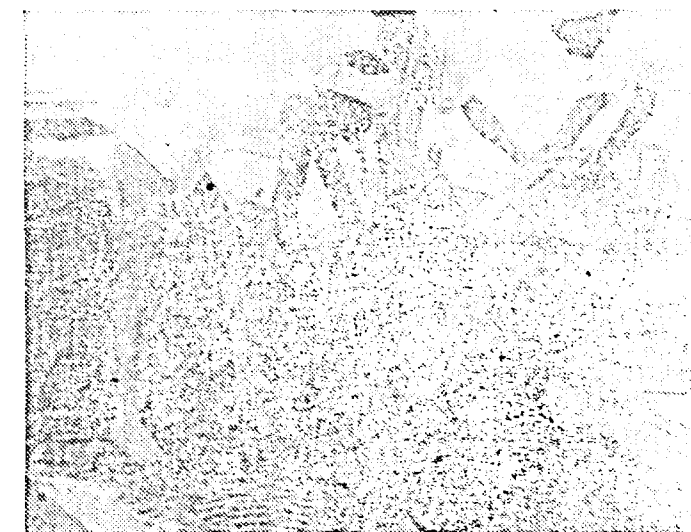
He is particularly anxious that the importance of this project is realised by all concerned.

It is somewhere in this area that Lord Clive started the operations which laid the foundations of the British Empire. It occurs to me that the Industrial Empire of Madras may also arise from South Arcot. With lignite, the industrial horizon of Madras will be enlarged very greatly. I have therefore great hopes which, God willing, may prosper. In this confidence I declare the quarry open.

[From the reply to the Address of Welcome, by Dr. U. Krishna Rao, Minister for Industries and Commerce, declaring the quarry open at the Lignite Mines, Neiveli, South Arcot District]

Madras were satisfied that they could pursue the investigation themselves. They obtained the services of Sri H. K. Ghose, Geologist and Mining Engineer. He has localised through 75 bore-holes a further lignite-bearing area of 77 square miles. At the same time he started to reach the lignite through three shafts, two of which had to be abandoned and the third was in the process of excavation when the U.S. Embassy deputed their Mining Expert, Mr. R. S. Sanford, in February 1951 to advise this Government. He confirmed the existence of the lignite, its great economic possibilities and the methods followed till then for extracting it. On his recommendation, the U.S. Government very kindly agreed to loan the services of Mr. Paul R. Eyrich of the U.S. Bureau of Mines to work out a plan for extraction.

In September 1951, shortly before the arrival of Mr. Paul Eyrich, the third shaft was successful in reaching lignite at a depth of 176 feet. With the evidence available, Mr. Eyrich lost no time in preparing with the help of Sri Ghose and a Committee of Experts the present Experimental Scheme for quarrying 550 feet square. The Coal Commissioner, Government of India, who inspected the site,



NEW WEALTH: Workmen shovel out the lignite ore from barrels which go deep into the bowels of the earth to bring up the new wealth.

approved the scheme which was then placed before a High Power Committee under the Chief Engineer (Irrigation) of the Government of Madras. The then Minister for Land Revenue and Labour, Sri H. Sitarama Reddi, and the then Minister for Industries, Sri C. Perumalswamy Reddi, the Secretary to Government, Development Department, Sri J. M. Lobo Prabhu, attended the meeting of the High Power Committee which recommended the immediate implementation of the scheme proposed. Further progress had to await the approval of the Government of India and their agreement to lend the machinery available with them at Bokharo. A greater part of the machinery has now reached Neiveli.

Simultaneously with the examination of the problems of mining, the Government have caused investigations to be made in the qualities of the lignite. In this connexion they have consulted among others Messrs. Lurgi & Co. of Frankfurt, Germany, Messrs. Elektro-Kemisk of Oslo, Norway, the U.S. Bureau of Mines, the Fuel Research Institute, Dhanbad. Numerous experts have also been consulted, some of whom have visited Neiveli. All this work has led us to this moment to begin the work to find out the actual mining conditions so that definite data become available for commercial mining in the area of 100 square miles.

Difficulties of Project

Even on this occasion the difficulties of the project are not to be overlooked. It happens that fire and water are enemies of each other and the rich deposit of lignite is guarded by strata of water. The problem is of avoiding and removing the water in order to reach the lignite easily and quickly. In the area now to be opened up water pressure is not considered to be high and therefore well within the capacity of the equipment available for dealing with it.

The programme of work is difficult to forecast very accurately. If the work proceeds as planned and the equipment gives no trouble, the overburden will be lifted by the machines working on the circular roadways which they make, within six months. No efforts will be spared to reduce this period.

Utilization of Lignite

Some mention may be made of the utilisation of lignite when it will be quarried. In the first place it will be available in substitution of coal with the best varieties of which it compares favourably. It is anticipated that in the direct run-of-mine state, lignite can be used in industrial boilers, glass industry, nitrate industry, cement industry and for brick-burning. In boilers it can be used for generation of power. In pulverised form, lignite can be used for fuel firing boilers, Mills firing boilers and in gas turbines. In briquetted form, it can be used in industrial boilers and for domestic purposes. As carbonized briquettes lignite can also be used in blast furnaces for smelting iron ore. An experiment was conducted by Lurgi in Germany to prepare metallurgical coke by mixture of lignite with low grade iron ore. The report was very favourable.

Among other uses of lignite it may be mentioned, that by suitable treatment the phenolic bodies can yield plastics. By carbonisation and hydrogenation, motor fuels and other light and heavy oils can be produced. By oxidation,

various acids can be obtained. The tar obtained yields countless by-products. The Montan wax is capable of many uses. The overburden of clay is most suitable for ceramics, fire-bricks, and provided a market can be found, is expected to cover the greater part of the cost of running the lignite project. The water, the clay and the lignite, therefore, which are subject of operations, are all assets.

Services Acknowledged

It now remains for me to mention the services of different parties who have contributed to the progress of the project to this stage. First and foremost, the Government of India deserve to be thanked for the loan of equipment, he calculated current value of the first instalment of which is Rs. 50 lakhs and of the second instalment may be as high. In this connexion particular thanks are due to Sri K. C. Reddi, Minister for Production, and Sri T. T. Krishnamachari, Minister for Commerce and Industry, for the very personal interest they have taken. The Coal Commissioner Sri A. B. Guha and the Chief Mining Engineer Mr. L. C. Corbett paved the way by their support for the help given by the Government of India. In the Madras Ministry, the interest shown by Sri H. Sitarama Reddi, late Minister for Land Revenue and Labour, and Sri C. Perumalswamy Reddi, late Minister for Industries, and yourself, Sir, may be acknowledged. My predecessors Sri K. G. Menon and the late Sri P. S. Viswantha Aiyar by virtue of their office were the natural fly-wheels of the project, finding time and enthusiasm for it, in the midst of their multifarious duties.

I had only to supply the steam for the various arrangements made ready by them. Of course, all the details of the investigation and of the plan for exploitation fell on Sri H. K. Ghose who has displayed an industry, intelligence and enthusiasm of a rare order. His faith in the possibilities of the project and his ingenuity to overcome all obstacles will form a substantial portion of the history of this project, when it will be successful. Our thanks are due also to the U.S. Embassy for the very keen interest they have shown in the project. Their expert, Mr. Paul R. Eyrich has served the project not only with his advice but with a rare devotion. Dr. A.V. Corry of the Embassy and Mr. R.S. Sanford of the U.S. Mining Bureau also deserve to be mentioned for the interest shown by them.

Among the foreign companies and institutions who have helped, Messrs. Lurgi & Co. of Germany, Elektro-Kemisk of Norway, Overseas (India) Limited, Calcutta, the U.S. Bureau of Mines, Messrs. Powell Duffryn, London, the Royal School of Mines, London, the Utah Construction & Co., San Francisco, and the International Engineering Company, San Francisco, may be mentioned.

I had occasion to describe our attempts to win lignite as "Operation Prometheus", unbinding the gigantic fire-power which had been sleeping in the earth for ages. It certainly gives some satisfaction that this Operation is now reaching a stage which will finally disclose the possibilities under investigation for more than ten years. There is every hope that the possibilities are real and the Madras State will at last receive the means of making their industrialisation complete and competitive. The staff and equipment assembled are the best possible. They have a large and difficult work before them which they begin today at your signal. I request you, Sir, to inaugurate the project and to wish it success.

The Magic that is Coal

By SRI J. M. LOBO PRABHU, I.C.S., Secretary, Development Department

This is a chat, just a travel talk. I would like to take you with me on my trip to Neiveli for opening the lignite mines. This may not appear very important but so much has been read and written already about lignite that some one who mistook it for an eatable, complained of indigestion! My colleagues have been facetiously remarking that I have produced more words than lignite and that a grateful people may put up a statue of lignite for me for as long as it will last. I have therefore to be very careful not to weary you.

I started for Neiveli on the evening of the 4th February 1953 at 5-30 p.m. Unfortunately I was indisposed; some one said punished already as Prometheus was, for stealing fire from Heaven. The road to Neiveli is past Chingleput which is about 35 miles. Tindivanam, 80 miles, Villupuram 100 miles and Vridhachalam, 120 miles from Madras. It is a good road except the last 20 miles. I did not feel the distance because at night time driving absorbs one's whole attention.

Entrancing Landscape

When I was not driving, I tried to enjoy the landscape which is particularly entrancing near Chingleput, where everything seems to be green, the fields which are coming up with the late rice crops and hills with waves of young trees. The water-filled tanks which are many and well distributed emphasise the rich beauty of this landscape. The moon was visible after eight o'clock and since it was waning seemed to cast a wistful suggestion on the scene in which the lights of my car were cutting swathes out of the night.

I reached the newly constructed Rest House of the Lignite Mines within four hours of starting from Madras. In spite of my indisposition I could not refrain from dwelling my eyes on the mine area which was lit up by a circular necklace of lights. I had seen it 18 months before just as an indistinguishable patch of darkness. I wondered what it might look a few years hence.

Day Begins with Puja

The day began with puja. In an operation of unknown difficulties, it is natural to seek help of the powers above. The workers, in particular, were most keen about the puja and turned out in large numbers. Their faith was touching. I looked at the rising sun and remembered what Wordsworth said on a historic occasion:

*"Bliss was it on that dawn to be alive,
But to be young was very heaven."*

I felt young in spite of my years.

Even as the puja finished at about 9-30 a.m. Dr. U. Krishna Rao, Minister for Industries and Labour, drove in from Salem. He was not expected so soon and I remarked to him that his early arrival was a good augury for the progress of the mining project. After him, one by one others began to arrive. Sri Narayana Rao, Superintending Engineer (Generation), and Sri Frederick, Superintending Engineer (Designs), both members of the Expert Committee, came one after the other. Narayana Rao is a great enthusiast for lignite. He has calculated that

if lignite was available, the saving in transport cost alone would be about Rs. 8,000 a day to the Madras Power Station and Rs. 3½ crores a year to all the users in the State. This calculation is less than more because the saving is estimated only at Rs. 20 per ton and not at Rs. 55 in respect of the large proportion of coal brought by sea.

Clay and Cottage Industries

The Minister discussed the disposal of the clays above lignite. It was considered that if the clays are washed at the work spot and made available in blocks to the neighbouring villages, a very thriving cottage industry of statues, toys and pottery could be established. In respect of the alumina clay also, it was considered that private enterprise should be obtained for manufacture of fire-bricks. One party is already interested and it was decided that it should be pressed to come to an early decision, as the clays will become available within three months.

The Minister Dr. U. Krishna Rao was then taken over to see the artesian wells. There are about 170 of these wells, 121 belonging to the Government which irrigate between 10 to 80 acres each according to the pressure of the spring, which varies from 200 to 2,500 gallons per minute. The wells are like fountains, the water gushing skywards continuously, so that, with the rich crops that they sustain throughout the year, the entire area looks like something new and strange imposed on the arid surface of South Arcot. From these wells the Minister proceeded to the mines. He was taken first to see the model of the quarry about 10 feet square which has been most realistically prepared, the varying colours of the soil and of lignite being exactly reproduced.

Water to Irrigate 2,000 acres

The quarrying will proceed by cutting roadways known as benches 25 feet wide of which there will be nine rows, before the lignite is reached. At different levels arrangements are shown to draw out the water. It is estimated that out of this quarry alone sufficient water to irrigate 2,000 acres will be available, which means that Government will have incidentally a minor irrigation work which might have otherwise cost them as much as the lignite project itself.

The Minister next visited the Chemical Department where numerous articles have been produced out of the lignite and clays. Lignite itself has been compressed into various strengths including coke. It has been carbonized in order to yield various by-products, like tar, Montan wax, etc. From the clays some very graceful statues and various articles of pottery had been made.

Spare Parts Made in Workshops

The Minister then passed through the Electricity Generating Station to the workshop. Sri Ghose, Mining Engineer in-charge, is very proud of the workshop where he is able to design and produce spare parts for the equipment used by him for drilling and other purposes. As this equipment is liable to break frequently, the ready and

easy availability of spare parts is indeed a great saving in cost and time. The mechanics under Sri Ghose's direction seem to be performing little miracles in producing hundreds of different parts.

Last the Minister began his inspection of the mining area. The first shaft 18 feet diameter which collapsed, has now been reconditioned and is being used to test the pressure of water under the lignite. It is necessary to be assured that this pressure can be reduced by pumping so that it does not threaten the lignite bed above it after the overburden of the earth has been removed. The experiments conducted near the shaft seem to prove that the pressure can be reduced, furnishing at the same time water for irrigation.

Descending Depth of 250 Feet

Shaft No. 3, wherefrom bulk samples of lignite have been removed and which has now reached a depth of 250 feet did test our nerves. We went down some distance in the cage and realised what it means to be underground before one's time! At the moment, although the bottom of the lignite has been reached in this shaft, some tunnelling is being done to provide one waggon load for the Sindri Factory which is experimenting on using lignite for producing activated carbon which we now import at great cost.

Not quite in the programme but according to his wish the Minister met the villagers whose land and houses had been acquired in connexion with the quarrying project. They had no grievance in particular except that the land they have been given in exchange was 5 cents and not 10 cents. The Minister remarked that they must be very well off to think of building a house on 10 cents. Probably the villagers expect prosperity from the opening of the mine. They have very sure instincts in such matters.

The Function Commences

The function in the afternoon commenced at 3 p.m. Long before that, streams of cars and of pedestrians were on the way to the quarrying site. On arrival, accompanied by me and the Collector, the Minister was met by Sri Ghose and conducted to the platform for hoisting the National Flag to the strains of the National Anthem. Considering the immense possibilities of the Project to the State and to the country, this item carried a thrill to all those present. Then Sri Ghose read the messages received. That from the Chief Minister read that coal was magic and that Dr. Krishna Rao's auspicious hands may make it available, was received with great enthusiasm.

Next it was my turn to read the inaugural address. In spite of my indisposition, I could not help feeling the sense of history in which the large audience seemed to join me. The very area, we were occupying, would in the next six months be 200 feet deep in the ground. Further in time, what giant works, large habitations, and the pulse of industrial life may take up the silent spaces around. Tennyson wrote:

*"Oh, Earth what changes has thou seen
There where the long street roars
Has been the silence of the Central Sea!"*

Prologue of a great Drama

Not only for the immediate area, but beyond, the discovery and use of lignite would imply a transformation. We all felt therefore participants in the prologue of a great drama. The Minister's reply also conveyed the same sense of historic importance, so much so that when

he turned to cut on the bulldozer the first sod of earth from the new quarry, there was a sense of high expectancy. The machine rolled carrying with it masses of earth. Then there was a cavalcade of seven more, Euclids, Tournapuls, all for doing different types of work in removing the earth. The fleet is only half complete, more machines being still due to come, but the scene turning the soil, uprooting trees and making little of the earth which lies over the lignite was inspirational.

After this, Sri O. P. Ramaswami Reddiar, ex-Chief Minister, who lives in the neighbourhood, expressed his enthusiasm for the project and his appreciation of the work done by Sri Ghose. He also emphasised the necessity of using the by-products not only to start large-scale industries but also cottage industries. He was followed by Sri Swami Suddhananda Bharati who, after observing 30 years silence in the Ashram of Aravind Ghosh which also in the neighbourhood, has now turned to help in establishing a Gurukulam.

Sense of Fulfilment

The inaugural function was well attended. Sri Padmanabha Iyer, Chief Engineer (Irrigation), Sri S. A. Iyengar, Inspector-General of Prisons, Sri Tandon, Consul-General at Pondicherry, Sri Dey, Geological Survey, Mr. Martindale, Consul for U.S.A., the British Consul from Pondicherry and various representatives of industry and trade were present. There was a fair number of ladies including Srimathi Menon, the Collector's wife, Srimathi Tandon, Mrs. Eyrieh who with her husband Dr. Paul Eyrieh of U.S.A. have been bearing exile for the last 15 months in this area to make the lignite project a success.

There was a general feeling that something important had taken place.

Everyone appeared convinced that the success of the project would not only benefit the South Arcot District but the whole of South India including Mysore and Travancore-Cochin which will have cheaper fuel for their industrialisation. For Sri Ghose who has been toiling for six years and Dr. Eyrieh who has been toiling for the last 15 months, the occasion was one of sense of fulfilment. The team of workers associated with them also seemed to share the same feeling.

We left telling Ghose and Eyrieh that we would return in six months to descend 180 feet in the very area where we were sitting to remove the first shovel of lignite. That is the time table to which we are working and if it is maintained the celebrations will have inaugurated a new phase in the industrial life of South India—*Jai Hind!*

(A.I.R., Madras).

DO YOU KNOW?

Indian aircraft carried in 1951 more than 500,000 passengers and flew 26 million miles.

India earned during 1951-52 Rs. 49-88 lakhs from the export of animals including horses, cattle, sheep and goats.

More than 20 per cent of the total expenditure on the Five-Year Plan will be on social services for which Rs. 424-81 crores have been earmarked.

The total number of railway stations in India on March 31, 1952, was 6,263.

Of the six farmers who received the certificate of 'Krishi Pandit' this year, two belong to Bombay, two to the Ludhiana District of Punjab and one each to Uttar Pradesh and Coorg.

Better Roads for Madras

By SRI N. RANGA REDDI, Minister for Public Works

The roads in the State fall under seven categories, viz., (1) National Highways, (2) State Highways, (3) Major District Roads, (4) Other District Roads, (5) Village Roads, (6) P.W.D. Roads, and (7) Municipal Roads.

National Highways connect ports, capitals of States, etc., and form the main framework on which the entire road communications system of the country is based. They are maintained by the Government at the expense of the Government of India.

State Highways are other main trunk arterial roads connecting the various district headquarters and important centres and are the main arteries of traffic to and from district roads. They form the framework on which the road system of the State is based.

Major District Roads also serve the interests of more than one district but are not as important as the State Highways mentioned above. The State Highways and Major District Roads are maintained by the State Government.

Other District Roads are roads of only district importance, and Village Roads are roads which connect villages to the communications system of the State. They are maintained by the District Boards.

P.W.D. Roads are on the canal banks, tank bunds, river banks, etc., and they are being maintained by the Public Works Department, but the cost is debited to the Highways Department.

Municipal Roads lie within the limits of the Municipality. These roads are being maintained by them.

The mileage of roads under each class are as follows:—

1 National Highways	..	..	..	1,978
2 Provincial Highways	..	..	..	3,134
3 Major District Roads	..	..	..	15,903
4 Other District Roads	..	..	..	7,654
5 Village Roads	..	..	..	10,302
6 P.W.D. Roads	..	..	..	711
7 Municipal Roads	..	..	..	3,816
Total	..	..	..	43,498

National Highways

Provision of Rs. 123 lakhs for expenditure on original works on these National Highways has been made. The works under progress include 23 bridge works, 26 cement-concrete works and 16 other works.

Links of National Highways within towns having a population of over 20,000 are at present being maintained entirely from State funds, because the Government of India have not accepted the liability, in view of the present financial stringency.

Improvements to these links are also being carried out from State Funds subject, however, to the condition that whatever the State Government spends over and above what the Government of India contribute towards these improvements, should be shared equally between the State

Government and the Municipalities concerned. The Central Government have been addressed to discharge their responsibility in respect of these links fully.

For the maintenance of these National Highways, the Government of India make a lump-sum allotment every year. The amount asked for by this Government for such maintenance during this year is Rs. 73.5 lakhs.

State Highways and Major District Roads

The policy of the Government is that they should be directly responsible for all roads of State importance. They have therefore taken over about 3,114 miles of State Highways and 10,395 miles of Major District Roads. The remaining 5,621 miles of Major District Roads still under the control of the District Boards, will ultimately be taken over by the Government, as and when finances permit. During the year 1951-52, about 55 miles of such roads were taken over, but during this year, owing to financial stringency, it has not been possible to take over any length of such roads. This, however, does not mean that the policy of taking over such roads has been given up. The question will be examined again in connection with the State Budget for the next financial year.

To avoid bottlenecks in otherwise through communications, and to ensure uniform standards of maintenance throughout such roads, the Government have taken over stretches of roads within Municipal areas which form links between roads under Government control outside such areas. As improvement works on such stretches benefit largely the residents of the Municipalities concerned, 25 per cent of the cost of all such improvements will be met by the Municipalities concerned.

Provision in Five-Year Plan

In the overall five-year development plan for the State for 1951-52 to 1955-56, the Planning Commission has allotted only a sum of Rs. 5 crores for Roads Development including roads under the control of the District Boards. We would have liked to spend during the period at least Rs. 10 crores. But the Planning Commission's proposal had to be accepted by the Government because other important Irrigation and Electricity Schemes which had already been taken up, had to be pushed through to completion, within the funds available to this State. You can understand why it has not been possible for the Government to devote as much attention to original works as they would have liked.

This year, for instance, it has been possible to take up only nine new road development works costing in all Rs. 6 lakhs. The new works to be taken include the reconstruction of the Belthangadi Bridges in South Kanara District at a cost of Rs. 2.75 lakhs, cement-concreting a stretch of road within Pollachi Municipality limits at a cost of Rs. 1.15 lakhs, improvement to portions of the Thandigudi Ghat Road in Madurai District at a cost of Rs. 1 lakh and six other smaller improvement works.

Works already under execution on Government Roads include 90 bridge works costing Rs. 226 lakhs, 38 cement-

Baby Taxis in City

The Government have sanctioned the proposal to introduce 25 Baby Taxis in the City.

The Government have also ordered that any make of motor car of 8 to 17 H.P. (both inclusive) having saloon type of body and providing space for luggage will be considered for registration as Baby Taxi and that the maximum fare that may be charged for such a taxi should be annas six per mile, subject to a minimum of annas eight and waiting charges at annas two for every 10 minutes of waiting.

This action has been taken, as Baby Taxis are expected to be more popular among the travelling public, being more comfortable than auto-rickshaws and cheaper than bigger taxis.

concreting works costing Rs. 130 lakhs and 66 other improvement works costing Rs. 198 lakhs. The total expenditure incurred on these Post-war Road Development works on Government Roads to the end of 1951-52 was Rs. 3.9 crores, and the provision proposed for them in 1952-53 is Rs. 113.77 lakhs.

Equitable Distribution among Districts

Under the Post-war Development Programme for roads other than National Highways, the Government approved a five-year plan for their development at an estimated cost of Rs. 12.06 crores at pre-war rates plus 80 per cent. It provides for improvements to existing roads both under Government and District Boards and also for the formation of about 10,000 miles of new roads. The allotment under the plan is distributed equitably among the districts with reference to population, area, revenue and special features such as backwardness in communications and the size of the allotment under the National Highways programme.

An expenditure of Rs. 5 crores was incurred to the end of 1950-51 and only a quarter of the five-year plan could be implemented by that date.

New works proposed are generally taken up under this plan. The expenditure in 1951-52 on works on Government Roads was Rs. 87 lakhs and on District Board Roads about Rs. 70 lakhs. In view of the financial stringency, proposals for new works for 1952-53 have been limited to very urgent items estimated to cost Rs. 21.34 lakhs, for which a provision of Rs. 2.9 lakhs will be required in 1952-53. This is awaiting consideration by the Government. Central grants were obtained in respect of the expenditure on the Post-war Road Development works incurred to the end of 1949-50. Such grants have been discontinued from 1950-51 and the entire expenditure is now being met from State Funds. A provision of Rs. 112.86 lakhs has been made in the Budget Estimate for 1952-53 for expenditure on the works in progress under the programme.

Central Road Fund

An extra duty of customs and of excise of not less than two annas per gallon is being levied on motor spirit and the

proceeds thereof, after deducting the amounts due to aviation are utilised mainly for the purpose of road development. From the amount so collected, a portion equal to 20 per cent is retained by the Central Government as a Central Reserve, and out of the balance certain amounts are allotted to each State in the ratio in which the consumption of taxed motor spirit in each area bears to the total consumption of that commodity during the calendar year ending during the financial year concerned. The amount at the credit of each State Government is to be spent on the construction of new roads and bridges of any sort, or the reconstruction or substantial improvement of existing roads and bridges and the maintenance of roads and bridges in special cases, etc.

It has been laid down that if the State Governments delay, without reasonable cause, utilisation of any portion of the Fund for expenditure within the State, the Central Government may resume the whole or part of the accumulation. The Chief Engineer has been asked to push on with the execution of the works. It was only in October 1951 that the approval of the Government of India was obtained to a programme of about Rs. 120 lakhs for works on both Government and District Board Roads. A sum of Rs. 95.5 lakhs is proposed to be spent from the Central Road Fund on Government Roads in 1952-53.

Maintenance and Original Work

Out of the total sum of Rs. 505 lakhs required for Government Roads works in 1952-53, about Rs. 306 lakhs are required for maintenance and the balance of Rs. 199 lakhs for original works including improvements. The sum of Rs. 199 lakhs also includes provision for works to be executed under the Central Road Fund allocation to this State.

For maintenance, we propose to spend Rs. 88 lakhs in the Circars, Rs. 49 lakhs in Rayalaseema, Rs. 130 lakhs in Tamil Nad and Rs. 39 lakhs on the West Coast. For original works the expenditure proposed is Rs. 63 lakhs in the Circars, Rs. 25 lakhs in Rayalaseema, Rs. 67 lakhs in Tamil Nad and Rs. 44 lakhs on the West Coast. On account of the financial stringency, there has been a slight reduction in the allotment made for the maintenance of Government Roads in 1952-53.

The Annual Session of the Roads Science Congress was held some time back in Madras City and a compliment was paid to the Highways Department by the President of the Conference. The Madras State has been following practically the Nagpur Plan for the development of roads in this State.

(A.I.R., Madras)

Permits for Stage Carriages

The Government have empowered, as a temporary measure, the Regional Transport Officers to vary conditions of permits to stage carriages now dealt with by the Transport Authority.

Public Call Office at Gobichettipalayam

A telephone public call office connected to Erode exchange was opened at Gobichettipalayam on February 16, 1953.

Neera and Palm Jaggery

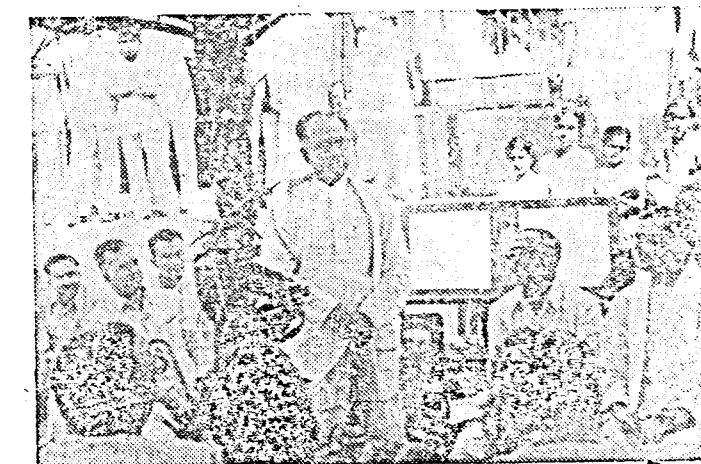
In connection with the permission recently given by Government to tap palmyra and date trees for sweet juice for use as beverage in select taluks in the districts of Visakhapatnam, East Godavari, West Godavari and Krishna, Sri V. C. Palaniswami Gounder, Minister for Prohibition, toured these districts in the last week of February 1953. He was accompanied by the Deputy Commissioner of Prohibition (Amelioration) and Joint Registrar of Co-operative Societies, Madras. He visited Parvada, an important jaggery producing centre in Visakhapatnam District. In Kakinada circle he visited Valasapakalu, Aryavattam and Koripella villages. In Rajahmundry circle he visited Kadiam and Vemagiri villages.

The Minister opened a neera parlour at Visakhapatnam and also at Kakinada in the presence of a large and distinguished gathering consisting of local gentlemen and officers and a large body of ex-toddy tappers. At these places the Minister said that although the people in Andhra Desa were not accustomed to take neera in the pre-Prohibition days, Government gave the concession to tap date and palmyra trees for sweet juice for use as beverage, in view of the persistent demand made in this behalf by the ex-toddy tappers and as local leaders gave a guarantee that the concession would not in any way be abused. The Minister observed that as an experimental measure permission was given for tapping palm trees for sweet juice for use as beverage in the taluks of Visakhapatnam, Kakinada, Narasapur, Nuzvid and Vijayavada, and that the question of extending the concession would be considered after the Government were satisfied that the neera in the places where permission was already given was not misused and was working well.

In the course of his speech at the various centres he visited, the Minister pointed out the benefits of Prohibition and emphasised that there was no question of going back on the Prohibition policy. He appealed to the large body of ex-tappers and others to make the best use of the palm wealth in Andhra Desa by taking up jaggery production, by popularising the use of neera, by making white sugar from palm juice and by preparing palatable products with palm jaggery. He said that there was great scope for the development of the palm gur industry and with the assistance given by the Government by way of subsidy and staff, it should be possible to make the best use of the palm wealth given by God. At the various places he visited, the Minister made a fervent appeal to the people to work Prohibition successfully.



VISIT TO CO-OP.: During his tour of Visakhapatnam district, Sri V. C. Palaniswami Gounder, Minister for Prohibition, visited the Valasapakalu Jaggery Manufacturing Co-operative Society, near Kakinada.



VALUE OF NEERA: The Minister for Prohibition opened a neera parlour at Visakhapatnam and then addressed the gathering on the value of neera as a health-giving beverage.

PALM JAGGERY: Sri V. C. Palaniswami Gounder, Minister for Prohibition, inspects the jaggery products made by the Co-operative Society at Parvada, Visakhapatnam district.



Tax on Sales of Tobacco

The Government have directed the cancellation, with effect from April 1, 1953, of the suspension of the operation of the Madras Tobacco (Taxation of Sales and Licensing) Act, 1939, as amended by the Madras Tobacco (Taxation of Sales and Licensing) (Amendment) Act, 1940.

Development of Palm Gur Industry

With the introduction of Prohibition in the Madras State, the palm gur industry received a fillip, and attention was focussed on the development of the industry as a means to provide alternative employment for the ex-toddy tappers thrown out of employment. Tapping of palm trees for sweet toddy for the manufacture of gur was permitted in all the districts of the State except the districts of Bellary and Cuddapah. The tapping of palmyra trees is permitted in all the districts except Anantapur, Bellary, Cuddapah, Kurnool and Srikakulam. Tapping of coconut trees for jaggery manufacture is permitted in the Malabar District and parts of South Kanara and Coimbatore Districts. Tapping of date trees for the purpose of jaggery manufacture is permitted in the districts of Nellore, North Arcot, Chittoor and Guntur and in select centres of Anantapur, Kurnool, Krishna and Srikakulam Districts. Sago palms are permitted to be tapped for sweet juice for jaggery manufacture in select centres of the Malabar District.

Under the Madras Sweet Toddy Rules licences for the tapping of sweet juice for manufacture of jaggery can only be issued to the members of co-operative societies. Palm jaggery manufacturing co-operative societies have therefore been organized and the ex-toddy tappers were admitted as members of these societies. As on 30th June 1952 there were 2,115 jaggery manufacturing co-operative societies in the State with a membership of 1.63 lakhs. During the year ended 30th June 1952 the members of the jaggery manufacturing co-operative societies produced 22.52 lakhs maunds of palm jaggery worth Rs. 78.13 lakhs. The societies are also undertaking the marketing of the jaggery of their members with a view to secure better price.

Scheme to Improve Quality

With a view to improve the quality of palm jaggery and to develop the industry on a scientific basis, a State-wide scheme was launched in December 1949. The scheme consisted of two parts, the first being the training of Palm Gur Instructors at the Central Palm Gur Training School, Cuddalore, and the second being the imparting of training to the ex-toddy tapper members of the jaggery manufacturing co-operative societies by the Palm Gur Instructors at the homes of the members in their villages in the improved methods of jaggery manufacture and the use of improved gur-making equipment. The training imparted to the members comprises construction of improved safety furnaces with a view to reduce the consumption of fuel, application of lime to the pots attached to the trees for collection of sweet juice without getting fermented, washing and cleaning of the pots, various processes of deliming the sweet juice before boiling, and boiling the sweet juice using improved gur-making equipment.

In order to create an incentive among the tappers to use improved gur-making equipment and to bring home to them the advantages in the use of such equipment, 1,000 sets of improved gur-making equipment were distributed free of cost to them. Government have also granted a sum of Rs. 10,000 to be distributed to the members of jaggery manufacturing co-operative societies towards 50 per cent

of the cost of improved gur-making equipment to be purchased by them. Arrangements are being made for their manufacture and supply to the members. During the year ended 30th June 1952 the Palm Gur Instructors conducted training at 610 centres and trained 4,611 members in the improved processes of jaggery manufacture. The trainees produced 3,659 imperial maunds of refined jaggery.

Besides giving training to the individual tappers, the Palm Gur Instructors conduct demonstrations for the benefit of other members also. During the year 849 demonstrations were conducted. They were witnessed by 11,183 members of jaggery manufacturing co-operative societies and thousands of others interested in the industry.

Consumed as Beverage

Besides being converted into gur the sweet juice of palm trees is consumed as beverage. Only the people of Ramathapuram and Tirunelveli Districts were accustomed to taking this beverage before the introduction of Prohibition in the State. Permission was therefore granted to the members of jaggery manufacturing co-operative societies in these two districts to sell the juice to the public for consumption as beverage. During year ended 30th June 1952, 8,825 permits were issued to the members of 265 jaggery manufacturing co-operative societies in the two districts. About 17.09 lakhs Madras measures of neera were sold to the public for Rs. 2.7 lakhs for consumption as beverage.

With a view to popularise the drink in other parts of the State also, two neera parlours were opened by the Department in the Madras City as an experimental measure. Neera drawn from the date trees in the Government House Estate, Mount Road, were sold at the parlours. During the year ended 30th June 1952, 23,816 Madras measures of neera was sold at the parlours. Though the neera was very popular in the beginning the sales dwindled due to changed seasonal conditions later. Proposals for starting a neera parlour under the auspices of a local jaggery manufacturing co-operative society at Mangalore are under consideration.

Production of White Sugar

Experiments are being constructed to produce white sugar from the sweet juice of palm trees with the aid of centrifugal machines. The Palm Gur Instructors are being trained in the technique of production of white sugar so as to enable them to impart the necessary training and guidance to members of the jaggery societies. Experiments were also made for the conversion of palm jaggery into palatable products like toffees, sweetmeats, etc. The manufacture of these products will be taken up by the jaggery manufacturing co-operative societies throughout the State.

Madras State leads the rest of India in the development of palm gur industry through co-operatives. A coloured poster showing the statistics and progress made in the development of the industry in the State was exhibited at the Sarvodaya Exhibition held at Nasik as an annexe to the Indian National Congress, and a prize was awarded to the Madras State.

Research to be Undertaken

In view of the fact that the palm gur industry is being carried on in this State on a large scale, the Government of India decided to set up a Central Palm Gur Research Laboratory in this State. With a view to demonstrate the system of climbing palm trees by the aerial ropeway method two Palm Gur Instructors were specially trained in the art at the Central Palm Gur Training School, Cuddalore, and posted to the districts. They have so far conducted demonstrations in the districts of South Arcot, Tirunelveli and West Godavari. The system has been very much appreciated by the tappers.

It is estimated that there are five crores of palm trees in the Indian Union, which, if tapped for sweet juice for manufacture of jaggery, would yield 11 lakhs tons of palm jaggery releasing nine lakhs of acres of fertile land at present under sugarcane cultivation and make them available for raising 2½ lakhs tons of wheat or 3 lakhs tons of rice. Thus the palm trees provide a potential alternative source for the sugar and gur requirements of the nation besides releasing lakhs of acres of land for raising food-crops. The palms unlike sugarcane, can be grown on waste lands, canal bunds, etc., and require no attention. Eat more palm-gur and help the Nation to Grow More Food. *Jai Hind!*

Sulphur from Pyrites

A technique for the extraction of sulphur from the low grade pyrites from Chitaldrug has been elaborated by a research project undertaken at the National Metallurgical Laboratory, Jealgora, with the financial assistance of the Geological Survey of India.

India's consumption of sulphur is about 65,000 tons annually, all of which is met from imports. The United States, the biggest producer of sulphur, has restricted its export and the International Material Conference has allotted only 44,000 tons per year of American sulphur to India. India has no deposit of native sulphur, and the acute shortage of the substance in the country has necessitated a search for indigenous raw materials containing sulphur.

The sample from Chitaldrug assayed 34.69 per cent sulphur. But, for the manufacture of sulphuric acid, a concentrate of at least 47-48 per cent sulphur is desirable. From a series of experiments conducted, it was found that straight flotation after grinding in an alkaline circuit, using sodium carbonate, copper sulphate, potassium amyl xanthate, pine oil and sodium sulphide, gave an overall recovery of 94.2 per cent with a concentrate grade of 46.28 per cent sulphur.

National Instruments Factory

Sri K. C. Reddy, Minister for Production, laid the foundation-stone of the new building for the National Instruments Factory at Jadavpur in Calcutta on February 22, 1953. Dr. H. C. Mookerjee, Governor of West Bengal, presided over the ceremony, which is an important step in the development of a modern instrument industry in India.

The National Instruments Factory had its origin in the Mathematical Instruments Office, founded in 1880 for the maintenance and repair of precision instruments required by the Survey of India. It is one of the oldest, if not the oldest, factories in India engaged in the manufacture and repair of scientific and mathematical instruments. The factory specialises in repair work of not only survey instruments, but almost every type of precision instruments. Its services are utilised for this purpose by the Union and State Governments and by semi-Government bodies in India and also by neighbouring countries like Afghanistan, Burma and Pakistan.

The two world wars led to a considerable expansion in the factory with the result that now it is a full-fledged instruments factory for the production of survey, drawing, mathematical, optical and other instruments. During World War II, the factory produced much needed binoculars, telescopes and compasses in large numbers. It was also equipped for repair, overhaul and production of aircraft instruments.

Production Steadily Rising

The production at the factory has been steadily rising. In the first nine months of 1952-53 the factory manufactured instruments valued at Rs. 13.58 lakhs, which is more than the total annual production achieved in any of the

three years from 1948-49 to 1950-51. During the current financial year, its total production is expected to be valued at more than Rs. 20 lakhs. One of the important achievements of the factory during the current year was the manufacture of five-inch internal focussing transit theodolite. The manufacture of a precision instrument of this type called for all the ability and resourcefulness of the various sections of the factory, and is a landmark in the development of instrument manufacture in India.

The new building for the factory which is being constructed on a plot of land measuring more than eight acres, is a part of the re-organization of the factory for which a provision of Rs. 182 lakhs has been made in the Five-Year Plan by the Planning Commission. Immediately, a scheme costing about Rs. 80 lakhs has been approved for the re-organization and development of the factory. This comprises acquisition of the land, construction of the new building for the factory, purchase of certain new machines and manufacture of certain new items including optical glass.

Concessions to Ryots

The Government have directed that the concessions granted to ryots in the selected areas, in the sale of agricultural materials and supply of departmental services, be extended also to the sale of oil-cakes and chemical fertilisers.

People's Participation in Programme

On October 2, 1952, the community programme was started in 81 development blocks in 55 project areas all over the country. In line with the general conception of the programme the fields of activity included agriculture, irrigation, animal husbandry, education, health, sanitation, roads, communications, social education, village arts and crafts and recreational facilities.

Reports received from the State Governments on community project work during the first three months after the inauguration of the programme in October 1952, indicate general progress all round, although the tempo of work is not the same everywhere. In some States, the work done is considered as extremely satisfactory while there are a few others where the progress cannot be considered so. In the foregoing paragraphs a short review of the progress made is given.

During this period, scores of miles of village roads have been constructed, dozens of co-operative societies and panchayats formed, agricultural extension service has taken root in the project areas, a number of schools and health centres opened, extensive veterinary services concentrating mainly on the protection of cattle against disease have been undertaken, thousands of compost pits have been dug, and a number of agricultural demonstration centres started. And all this work has been done with the maximum amount of popular co-operation.

A New Approach

Among the outstanding developments in the States during the period in connexion with the community programme, can be mentioned the evolution of what are called Village Vikash Mandals in Madhya Pradesh which embody, to a great extent, the conception of Village Production Councils envisaged in the Five-Year Plan. In Uttar Pradesh where the progress of community work is very satisfactory, this year's Republic Day was celebrated in a unique fashion in the project areas through a movement called *shramadan* (gift of manual labour). Another feature which is outstanding is the contribution of villagers in community project areas almost all over the country of over 300 schools on the occasion of the Prime Minister's birthday. Rajasthan has a programme of 50 such schools which the villagers have endearingly termed "Jawahar Bal Mandir".

Peoples' participation which is a crucial factor in the successful implementation of the community programme has been kept in view in launching the work in all project areas. The reports received till December 31, 1952, indicate that peoples' participation has been beyond all expectations. A notable feature of such co-operation is that it has come from all areas—advanced or backward—in varying degrees. This participation has manifested itself mostly in the building of roads, construction of canals, tanks, other minor irrigation works, in building of *panchayat ghar*, schools, small health centres, etc. Co-operative movement has received some encouragement although, it appears, the movement has yet to grow into full maturity.

Training of Personnel

An important aspect of the work which took considerable part of the time during this period and which is yet not

fully accomplished is the training of agricultural personnel for the execution of the programme. During the period under review, 23 training centres of Village Level Workers were started. Three hundred and sixty-two persons were trained and posted in the project areas and 1,196 persons were under training. In addition, steps were taken for the organisation of five centres for the training of Social Education Organisers and Chief Social Education Organisers for the Community Projects.

These training centres which will take trainees from different zones will begin to function from 1st April 1953, and will be located at Gandhigram for the South India zone, Hyderabad for Central India, Nilokheri for Northern India and Sriniketan for Eastern India. The training centre for Chief Social Education Organisers will be at the Agricultural Institute at Allahabad.

Liaison with the States

Close liaison is being maintained with the State Governments by the Community Projects Administration for execution of the programme which is a joint enterprise. The State Governments are being assisted by the Administration in organisational matters, finance, provision of trained personnel and technical assistance. The Central Administrator of Community Projects, Sri S. K. Dey, and the senior staff of the Administration including its Advisers who are the concerned officers in the various Ministries of the Government of India, are keeping direct contact with the project authorities in the State Governments, so that the work proceeds along right lines and the experience gained in one State is used with advantage in another. The contact is maintained not only through correspondence and directives from the Centre but through visits to the Project Areas.

The total budget estimate for the next three years for the 81 development blocks in which work is on hand amounts to Rs. 11.80 crores of which the rupee expenditure will be of the order of Rs. 10.52 crores and dollar expenditure equivalent to about Rs. 1.28 crores. Up to December 31, 1952, a rough calculation indicates that a total amount of Rs. 44.50 lakhs was likely to have been spent on Community Projects. Precise information is awaited from the State Governments. The estimated dollar expenditure during the period would have been about 4,45,000 for obtaining jeeps, trucks, station-wagons, tractors, road-rollers, pumping sets, etc.

Main Lines of Work

In most of the States, work has been carried on on the following main lines :—

(i) *Agricultural*.—Distribution of quality seeds. Construction of compost pits in villages, distribution of fertilisers and crop-planning to a limited extent.

(ii) *Animal Husbandry*.—Castration of scrub bulls, inoculation against rinderpest, distribution of pedigree bulls and poultry birds and establishment of veterinary centres.

(iii) *Irrigation*.—Minor irrigation works based on peoples' own efforts. Government-sponsored schemes are still in the process of planning and will soon begin to be implemented.



Mr. Aneurin Bevan, Left-wing British Labour leader and former Minister for Health in the Attlee Cabinet, recently visited Madras City.

Pictures show : (1) Arrival at Meenambakkam Airport. (2) At Ashok Vihar. (3) Addressing the Indian Medical Association at the Stanley Medical College. (4) With Sri C. Rajagopalachari, Chief Minister. (5) Open-air meeting of workers at Napier Park.

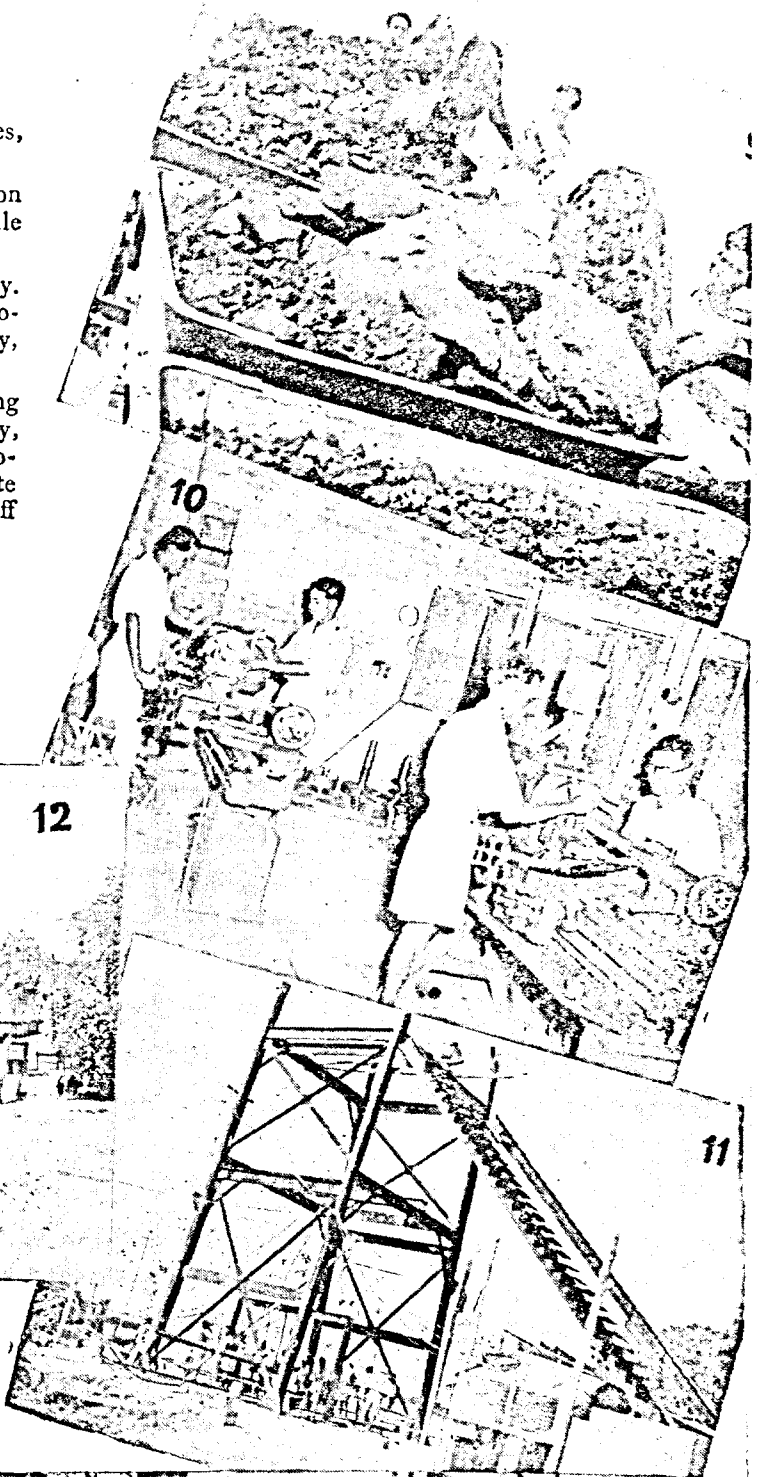
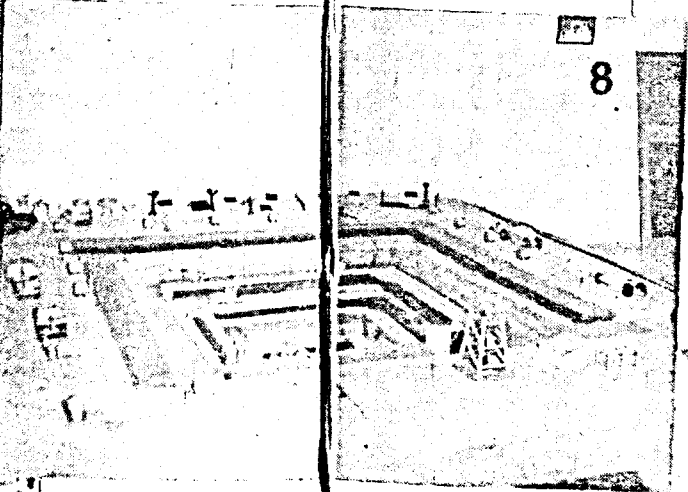
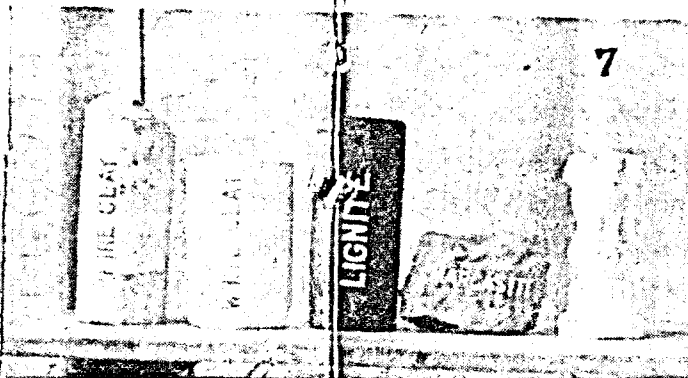
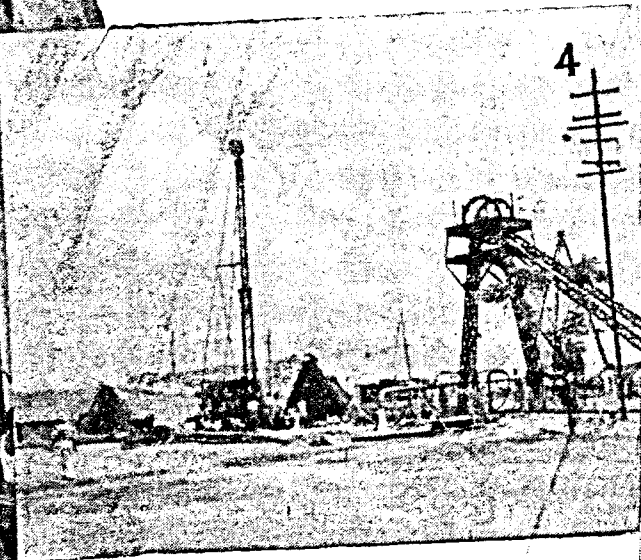
QUARRYING PROJECT AT THE NEVELI LIGNITE MINES INAUGURATED

On March 5, 1953, Dr. U. Krishna Rao, Minister for Industries and Labour, inaugurated the Quarrying Project at the Lignite Mines, Neveli (South Arcot District).

Madras State has in South Arcot round Neveli, lignite deposits over an area of 100 square miles, in an estimated quantity of 2,000 million tons. The pilot project is a scheme for open cut mining operation in an area 500 feet by 500 feet, to exploit the surrounding one square mile in which 35 to 40 million tons of lignite are available. It is estimated to cost about Rs. 70 lakhs, of which Rs. 26 lakhs will be for equipment.

Lignite will relieve the coal shortage. It will become the foundation for other industries, and it can be used for generation of electricity. Petrol can be extracted by direct hydrogenation. Montan wax is an important by-product, for use in manufacture of candles, polishes, gramophone plates, electric insulating materials, plastics and waterproofing materials. The quarrying process will yield valuable deposits of fire-clay, used for making pottery and porcelain.

Pictures show:—1. The Minister for Industries inaugurates the Project by turning the first sod with a mechanical hoe. 2. Inspecting the machinery at the pit-head. 3. Barrel-loads of lignite are drawn up. 4. General view of pit-head. 5. Sri J. M. Lobo Prabhu, I.C.S., Secretary, Development Department, reads out the Welcome Address. 6. D. U. Krishna Rao addresses the gathering at the inauguration. 7. Sample products of the Lignite mines—fire-clay, white clay, lignite and margasite. Note the Lion Capital made of white clay. 8. Model of the Lignite Quarrying Project. 9. Loading lignite onto trolleys. 10. Workshop attached to the mines. 11. Close-up of the experimental pit. 12. Staff quarters at Neveli. 13. The Minister for Industries inspects specimens in the laboratory. 14. The party emerging from the pit.



KENYA LEADER VISITS MADRAS CITY

Mr. Oginga Odinga of Kisumu, Kenya, recently visited Madras City in the course of a seven-week cultural tour of India. The African leader, who belongs to the Luo tribe, is an active member of the Kenya African Union.

Educationist, co-operator and journalist, Mr. Oginga Odinga was a teacher for 15 years; he organised a chain of co-operative societies in the South Nyanza Province of Kenya, started a press and founded a journal called *Ramogi*, named after the mythological ancestor of the Luo people.

Pictures show :

(1) Mr. Oginga Odinga being met at the Meenambakkam Airport by Dr. M. D. Paul, Deputy Director of Public Instruction, Government of Madras.



(2) Meeting the Minister for Education. (left to right) Dr. M. V. Krishna Rao, Dr. Soundaram Ramachandran of the Community Projects Scheme (Madurai), Dr. M. D. Paul and Mr. Oginga Odinga.

(3) Addressing a meeting at the Servants of India Society, Royapetta, Madras City.

(4) At Raj Bhavan: (left to right) Sri K. M. Unnithan, I.C.S. (Secretary, Education Department), Dr. A. L. Mudaliar (Vice-Chancellor, Madras University),



Shri Sri Prakasa, Governor of Madras, Mr. Oginga Odinga and Sri S. Govindarajulu Naidu (Director of Public Instruction).

(iv) *Health*.—Digging of wells, mostly with villagers' own efforts, repairs to existing wells with technical assistance from the Government and by supply of bricks and cement.

Vaccination against smallpox and other epidemics. Distribution of medicines, midwifery services and ante-natal care.

Village drains are being constructed by village people. Government is providing technical assistance and materials not available locally.

(v) *Education*.—New schools are being opened, villagers contributing substantially towards buildings. Strengthening of existing schools.

(vi) *Social education*.—Adult literacy and recreational activities are being organised through the existing project staff pending the appointment of trained Social Education Organisers. A decision has been taken, in consultation with the Central Ministry of Education, to associate village teachers in project areas with this work. The teachers will receive an honorarium.

(vii) *Roads*.—Village roads are being constructed on a substantial scale primarily through the efforts of villagers themselves, Government providing only technical assistance and finance for constructing bridges and culverts. Trunk and feeder roads are being planned to be implemented under Government auspices, with assistance from the local people.

(viii) *Village Arts and Crafts*.—Steps are being taken to strengthen the existing village crafts by training the artisans in up-to-date techniques and implements. Research centres on rural industries are proposed to be set up in collaboration with the Ford Foundation and the Ministries of the Government of India.

Outstanding work done in Madras State includes organisation of key village schemes which are receiving enthusiastic co-operation from the villagers, construction of a number of small roads, establishment of a number of adult schools and community recreational centres, health centres and dispensaries with peoples' contributions. Co-operation is being particularly encouraged. The State Government has decided that producers-cum-consumers' co-operative societies may contribute money from their "Common Good Fund" for executing schemes under the Community Projects.

New Indian Mineral Shown in London

A specimen of a new mineral discovered in South India is on display at the Geological Museum, South Kensington, London.

This mineral is very rich in the radio-active elements thorium and uranium. Its discovery has been announced to the Mineralogical Society by Mr. S. H. U. Bowie and Mr. J. E. T. Horne, of the Geological Survey and Museum, Department of Scientific and Industrial Research.

Recognition of a new mineral species is a very rare event. This mineral contains 31 per cent thorium oxide, and four per cent uranium oxide. It has been named cheralite, from Chera, the ancient name of the State of Travancore, where it was found.

Cyclone Relief Fund

A first instalment of a sum of Rs. 35,000 so generously contributed by the ordinary labouring classes of Malaya through the Editor, *Tamil Nesan*, Kuala Lumpur, has since been received and credited to the Madras State Cyclone Relief Fund.

Kodavalur Tank-Bed Lands

The Kodavalur tank in Kovvur taluk, Nellore district, was ordered to be abandoned by the Government in November 1950. The tank-bed is situated in the limits of Kodavalur, Naidupalem and Gundalampalem revenue villages. Even before the tank was abandoned there was sivoijama occupation on the tank-bed lands. In July 1950, i.e., a few months before the tank was abandoned, the Board of Revenue under a policy then being followed, accorded permission for the provisional assignment of these tank-bed lands to political sufferers, so that they might occupy and cultivate the lands.

Accordingly, the Collector assigned the lands to political sufferers in September 1950. Orders were also issued under Section 144, Criminal Procedure Code, prohibiting the cultivation of the lands by the villagers. By the time the lands could be handed over to the political sufferers on November 4, 1950, the sivoijamaders who were Harijans and landless labourers and who had occupied the lands in previous years as well as some new occupants entered upon the tank-bed lands and raised paddy crops (fasli 1360).

The crops raised by the sivoijamaders were harvested and removed by them. The political sufferers could not raise any crop on the land in fasli 1360. In fasli 1361 also, orders were issued under Section 144, Criminal Procedure Code, prohibiting the sivoijamaders from interfering with the cultivation of the lands assigned to political sufferers. But in that year also the sivoijamaders cultivated the lands.

Assignment of lands to political sufferers having been given up by the present Government, when the dispute regarding the occupation of these lands was brought to their notice, the Government examined the matter fully. Pattas had not been issued to the political sufferers. There was, therefore, no completed transfer of title in favour of the political sufferers. Many of the political sufferers in question are not even residents of the place.

The Government therefore considered that both in law and in equity the sivoijamadar landless persons now in occupation are entitled to assignment of the lands in question. They have accordingly directed that the provisional assignment of the Kodavalur tank-bed lands to political sufferers be cancelled and the lands be assigned in favour of the landless sivoijamaders, subject to the usual conditions and to such special conditions as the Collector may consider necessary in the circumstances of the case and the nature of the lands.

Cropping in Krishna Canal Ayacut

By SRI MULUKUTLA SATYANARAYANA, B.A., B.SC. (Ag.), Deputy Director of Agriculture, II Division, Eluru

With the excavation and opening of the Krishna East Bank Canal in 1937 and leading it to the ayacut of Puligedda pumping station, lands formerly under dry cultivation in the canal zone got converted into wet system of cultivation. The gravitational flow through the channel led to the dispensation of the pumping installation at Puligedda to economize water-supply costs to the pumping project ayacut. In the conversion of the dry land into wet of the ayacut under the East Bank Canal, changes in the cropping as well as changes in the condition of the soils have been brought about.

In this canal ayacut, a crop of paddy is raised between June and December, followed by sunhemp, or pulses as greengram, blackgram, pillipessara, etc. In certain blocks of land, in this canal zone, as in the villages of Sri-kakulam, Tenugurapalem, etc., large blocks of land extending to thousands of acres get hardened in the top foot of the soil, with white alkali deposit caused by efflorescence. The pulse crop following the paddy is diminutive in size and presents an atrophied appearance. A number of borewells in the area sunk for drinking water purposes have the level of water in them raising or falling with the level of water in the River Krishna in close proximity.

In flood time, the water level in the bores is high up while in other periods the level recedes to lower and lower depths. In these bores, the sand substratum with the watershed is generally reached at a depth of seventy feet from the ground level. Water from this level is pushed up to 12 feet from the ground level, indicative of the sub-artesian nature of the watershed.

Alkalinity of the Soil

The alkalinity of the soil is rendered by the rise of the subsoil water. A sure way of getting rid of the alkalinity and securing good pulse crops after paddy is by constructing reservoirs of wells around these bores, and pumping water therefrom to raise a second crop of paddy on the land, between January and June. The water from the lift irrigation led on to the fields in which the II crop paddy is raised, pushes from the subsoil salts and corrects the alkalinity.

In course of time, the soils are rendered sweet, to enable raising pulse crops in the second season in the normal way. Investments in regard to boring, pipes, reservoir or well construction, engine and pumpset may range from Rs. 3,000 to 6,000 per bore; but this investment can be recovered with the returns from two crops of paddy a year. The net profits from such may easily accrue to Rs. 400 per year, with paddy selling at Rs. 18 a bag of two imperial maunds.

Early Start with Paddy and Pulses

In the adoption of this system an early start of the first crop with heavy yielding medium duration types like Potti Basangi (MTU. 3) is feasible. With the early harvest of such, the pulse crop following has also an early lead for full development and high yield up to six bags (two imperial maunds each) per acre. The best lands of the area in this canal zone yield as much as 18 bags of paddy

with five to six bags (two imperial maunds) of the grams. Those that can afford the investment progress on these lines; but holders incapable of such investment may adopt one or more of the following agronomical methods, to reform their lands for better production. Soils that do not sustain any kind of pulse following paddy, or that support them only to diminutive stature may be reclaimed with "*Danul Tadupu*".

After the harvest of the paddy, the fields are flooded with the canal water and the water made to stand on them as long as possible, to push down the subsoil salts for an adequate period. In this process paddy straw that can be spared and any organic matter or refuse that can be trampled down will help reclamation in quicker measure. A second method of tackling the fields consists in raising green manure crops as sesbania and daincha sown in the standing crop of paddy just before harvest, either by themselves or in mixture with the pulse crops. With the harvest of the pulses, the green matter from sesbania or daincha can be cut and composted for application to the first season paddy crop.

Paring of the Land

Still another method of correcting such soils lies in the paring of land "*Gallu Teeyuta*". Strips of lands in the fields may be dug at alternative intervals to depths of six inches, transporting away the dug material. With the summer weathering, the pared subsoil gets enriched in plant nutrients; and the saline soil transported from the pared regions reduces the content of salts in the fields; this ameliorative measure helps the paddy crops to progress well. This method is specially useful in high level lands where lowering of the levels for better irrigation flow is essential.

Finally, if the lie of the land allows the free flow of drainage water, trenches straight and across may be dug in the fields after the harvest of paddy, and free flow of water allowed through them into main drains, as long as water-supply is admissible from canals.

Growing Potatoes in the Plains

Potato produces four times as much food per acre as any cereal, and therefore needs adequate and sustained nourishment. Requiring cool climate, it is grown in winter in the plains. It can be grown on almost all, except saline or alkaline, soils, but sandy loams rich in humus are the best. As potato is a shallow-rooted crop, good preliminary tillage is essential, while rendering the soil friable requires deep, thorough and frequent ploughings.

These and other useful hints on potato cultivation for those interested in vegetable growing are contained in the sixth information pamphlet just issued by the Indian Council of Agricultural Research, Union Ministry of Food and Agriculture.

The brochure deals, among other things, with the choice of varieties, selection of seed, planting, manuring and irrigation, interculture, spraying and lifting. Entitled *Growing Potatoes in the Plains*, it is well illustrated and attractively got up.

Synthetic Grains for Self-sufficiency

By DR. V. SUBRAMANIAM, D.SC., F.R.I.C., F.N.I., Director, Central Food Technological Research Institute, Mysore

The international situation is deteriorating so rapidly that it will be unwise if we do not tap other sources to meet the shortage in the supply of cereals and build up a second line of defence. Even since the entry of Japan in the last war, it was tapioca that saved the State to keep the wolf from the door. It is grown abundantly in the State. It is cheap and has become the poor man's food. It is cooked in various forms and eaten by all classes of people.

But certain factors stood in the way of its taking the place of rice. Tapioca is deficient in protein, and experts like Dr. Akroyd and Dr. Krishnan as a result of enquiries conducted in this State, warned against its extensive use as a staple food, unless supplemented by proteins of high biological value such as those of milk, fish, meat and eggs. To ensure an adequate supply of these articles of food and bring them within easy reach of the poor classes present a problem no less difficult than the production of rice. Moreover, on account of the bulk and weight of tapioca, its distribution in places where it is not grown and therefore not easily available, was found prohibitively costly.

Greater Appeal to Rice-eaters

In the synthetic grain, made out of 90 per cent of tapioca powder and 10 per cent groundnut meal, we find a solution for the difficulties we encountered in recommending tapioca as a substitute for rice. Its authors claim that, from a nutritional point of view, it is not only better than rice, but better than rice and tapioca together. Psychologically, it makes a greater appeal to rice-eaters than raw tapioca. By processing raw tapioca the weight is reduced to one-third and the bulk to roughly one-fourth. This solves the problem of storage and transport. The processing is simple and can be done either on a factory or cottage industry basis. It does not require elaborate costly foreign machinery and whatever machinery that is required can be fabricated locally. By careful planning, both of cultivation of tapioca and the manufacture of grain, it can be produced and distributed at a cost not exceeding three and a half annas per pound which is cheaper than the present controlled price of rice by about half an anna.

All the processes of manufacture, both by machines and manual labour, were demonstrated in Trivandrum during the recent All-India Exhibition. The demonstrations were conducted under the direct supervision of the Director and his staff of the Central Food Technological Research Institute, Mysore. Along with this, a canteen was also run where various dishes were prepared out of the grains and sold to the public. The appreciation gained from the public augurs well for the future of this enterprise.

The model plant fabricated for the above purpose is now installed and worked permanently in Trivandrum for the purpose of training apprentices and further study and development under the Research Department.

For producing grains three times its weight of raw tapioca is required. So, to produce one lakh of tons of

grains, 3 lakhs of tons of tapioca and 10,000 tons of groundnut meal, and for 4 lakhs of tons of grains, 12 lakhs of tons of tapioca and 40,000 tons of groundnut cake are required. It is not difficult to produce the required quantity of tapioca in the State. But there is some difficulty with regard to the groundnut.

Tapioca and Groundnut

Tapioca.—It is not advisable to draw upon the present production of tapioca for the manufacture of synthetic grains because it is consumed in some form or other and the prices will shoot up to the detriment of the poor people if large-scale purchases are made all on a sudden. This can be done by two methods, one by intensive cultivation in the existing area and the other by bringing new areas under cultivation.

The average yield per acre is estimated to be two to three tons. This can be easily doubled or trebled by intensive manuring and using high yielding varieties. The main cultivation season is April to November. One lakh of acres has to be immediately selected and the necessary sets of good variety supplied. A mixture consisting of 1 cwt. of superphosphate, 1 cwt. groundnut cake and 1½ cwt. of muriate of potash (3½ cwt.) per acre is prescribed by the Director of Agriculture. This should be made available and supplied at a subsidized rates for a year. The production of tapioca generally depends upon the price a cultivator is able to get in the market. Its export and conversion into starch and other commercial products are banned in the larger interests of food. If there is a slump in any particular year, the price goes down which adversely affects the production next year. The cultivator will not either cultivate or will not apply proper manure. In their case, the production will go down.

One of the best ways, if not the best way, to increase production is to offer an economic price for the next crop and announce it before the cultivation season begins. In that case, Government will be obliged to purchase at that price, if the market price goes below that price. But Government are not likely to be put to any loss. Because, they can arrange to process it into grains and convert the excess into starch, which is always sure to fetch a very good price.

Groundnut.—Groundnut is now generally cultivated during the rainy season. If an irrigated crop can be successfully taken between January and April, it can be tried in places where there are facilities for irrigation. Since groundnut requires only much smaller quantity of water than paddy it will not be difficult to find extensive areas for its cultivation. An experiment is being tried in this season.

Another difficulty is to get the right type of cake, i.e., clean cakes, free from grit. Special care will have to be taken from the time of harvest until the extraction of oil to ensure quality. This is, no doubt, not an insurmountable difficulty.

Manufacture of the Grains

Tapioca is cultivated not only in big plantations and in particular regions but is grown all over the State except in marshy and water-logged places. And because of its heavy weight and large bulk, it will not be economical to centralize this industry. Small factories will, therefore, have to be established in different centres. This again is an enterprise, which lends itself to the organization of a network of small cottage industries all over the country giving occupation to thousands, nay, lakhs of people. The removal of skins of the tapioca, cutting them into small pieces and drying them can be best done by manual labour that requires no skill. These chips can then be converted into flour again on a cottage industry basis in a few small flour mills put up in convenient places. Most of our towns and many of our villages have electricity. The Government have a plan to extend it to other villages. In all such places, small units of plants with a shaker or two, a drier and a master costing, say two to three thousand rupees can be put up.

The moment a demand is created for the product, there will be any number of private persons to come forward to start this industry.

Popularization of Synthetic Grains

This is perhaps the most important work that should be taken up immediately. To change the food habits of the people is very different. The method should be persuasion and not compulsion. It would be easy to persuade people to take to tapioca powder and soji. The cereal ration to coffee and tea houses can be stopped and tapioca soji and flour given in its place. As regards synthetic grains, the work may be more difficult. Our people being educated, they may take to it without compulsion, when they know of its food value and its comparatively low prices. And above all, there is the compelling necessity created by the present situation.

The opening of tapioca houses like the one run in the Trivandrum Exhibition with provision to give full tapioca meals at subsidized rates, in all leading towns will go a great way to popularize this produce. Another method

is to use the grains for the free noonday feeding of school children wherever it exists and try it in institutions like hospitals and jails.

Groundnut Milk Curds

A milk-like product from groundnuts has been developed at the Central Food Technological Research Institute, Mysore. The process has been successfully tried on a semi-commercial scale and consumer trials have shown that it is as attractive, palatable, easily digestible and acceptable as curds obtained from cow's milk.

The groundnut milk curd which is scientifically prepared, properly balanced and rendered nutritious, can be used in the same way as the corresponding cow, buffalo or other animal milk curd; it provides a cheap and useful supplementary diet. The curd also provides delicious butter-milk. In composition and nutritive value the groundnut milk compares well with cow's milk:

Composition.	Groundnut milk.	Cow's milk.
	PERCENTAGE.	PERCENTAGE.
Protein	3.00	3.30
Fat	5.20	3.75
Carbohydrates	3.07	4.85
Ash	0.80	0.75
Total solids ..	12.07	12.65

Vitamin contents.	Groundnut milk.	Cow's milk.
Thiamin	0.65 mg.	0.45 mg.
Riboflavin	0.22 mg.	1.70 mg.
Nicotinic Acid	11.10 mg.	1.26 mg.
Ascorbic Acid	17.70	15.90
Vitamin A	1,400 I.U.	1,320 I.U.

The process is covered by Indian Patent No. 47902 and is now available to industry for exploitation. Those interested may contact the Industrial Economist, Council of Scientific and Industrial Research, New Delhi.

The Problem of Tuberculosis

The annual death roll due to tuberculosis in India works out to about five lakhs. This means that one person dies of the disease every minute in this country. Over and above this, the disease disables others at five times that rate.

As early as 1933, the Public Health Commissioner with the Government of India noted that tuberculosis had assumed epidemic proportions in this country. The problem, difficult from the outset, was further complicated by developments in the post-independence era of the nation. Millions of uprooted people from East and West Pakistan have been streaming into India ever since 1947. The general shortages of necessities of life like food and housing resulting in malnutrition and overcrowding have aggravated the problem.

Only an all-round improvement in the standard of living, nutrition, medical facilities, environmental hygiene and education can meet the problem of tuberculosis fully. The problem, therefore, becomes a vast social issue and not merely a public health question. The control of tuberculosis from all fronts requires considerable funds. Even adequate curative services make such financial demands that these are at present beyond the power of the country to meet. For example, it is estimated that about 500 crores of rupees will be required for the establishment of the minimum number of institutions for tuberculosis and about Rs. 60 to 80 crores a year to run them.

Curative Services

Some advance has been made in improving the curative services. The number of beds for the treatment of tuberculous patients has increased from about 5,000 in 1947 to over 13,000 in 1952. Likewise, the number of clinics has increased from 95 to 118. The Government of India has been giving priority for establishing a certain number of Training and Demonstration Anti-Tuberculosis Centres in their plans for an anti-tuberculosis campaign in India. With the assistance of the World Health Organisation and the UNICEF, it has been possible to establish three such centres in Delhi, Patna and Trivandrum. The objects of these centres are training doctors, bacteriologists, technicians, health visitors, etc., and conducting investigation and research in tuberculosis. Facilities for post-graduate training in tuberculosis now exist in a number of universities like Bombay, Mysore, Lucknow, Calcutta, Madras, Amritsar and Delhi.

Another recent development on the anti-tuberculosis front is the opening of the Vallabhbhai Patel Chest Institute in New Delhi in January this year. The Institute has grown out of the Chest Department of the Delhi University, whose first course for Diploma in Tuberculosis Diseases was started in 1947. Since that date, increasing numbers of doctors from all over India have been taking the course and the World Health Organisation has recognised the Department as a training centre for personnel from the South-East Asia region.

The Central Government has also initiated a scheme for epidemiological research in tuberculosis in collaboration with the WHO. For this purpose a grant of Rs. one lakh has been made available to the Indian Council of Medical Research. The research project contemplated is a composite one consisting of a short-term programme of study of tuberculosis morbidity in different areas and a long

term follow-up investigation of the efficacy of the various methods used for its control. For the latter, a community of about 50,000 people, probably within easy reach of one of the Tuberculosis Centres, will be selected. The cases of T.B. found at the time of the first and subsequent surveys will be followed up with the idea of finding out the factors that contribute to the healing or otherwise of the disease. For this purpose, groups will be put on special regimes of treatment like surgical procedures, treatment with drugs and treatment on general hygienic lines.

Diversional Therapy

A tuberculosis patient usually passes through a long period of heavy emotional stress arising from socio-economic factors like social stigma, separation from the family,

Central Scheme for Tuberculosis Research

A grant of Rs. 1 lakh has been made available by the Central Government to the Indian Council of Medical Research for implementing a scheme for epidemiological research in tuberculosis in collaboration with the World Health Organisation.

Gaining precise knowledge and data of the epidemiology of T.B. in India and assessing the efficacy of control measures under Indian conditions are the aims of the research.

The first step in this field was taken in India in 1940 when the I.R.F.A. (now I.C.M.R.), in co-operation with the Tuberculosis Association of India, appointed a committee to make recommendations on the manner in which such epidemiological surveys should be conducted. A few surveys have been conducted but they are not adequate enough to give a comprehensive picture.

The research project now contemplated is a composite one, consisting of a short-term programme of study of tuberculosis morbidity in different areas and a long term follow-up investigation of the efficacy of the various methods used for its control. For the latter, a community of about 50,000 people, probably within easy reach of one of the anti-tuberculosis centres, will be selected.

The cases of T.B. found at the time of the first and subsequent surveys will be followed up with the idea of finding out the factors that contribute to the healing or otherwise of the disease. For this purpose, groups will be put on special regimes of treatment like surgical procedures, treatment with drugs and treatment on general hygienic lines.



CONDOLENCE MEETING: Shri Sri Prakasa, Governor of Madras, addressing the gathering of citizens at the Rajaji Hall, Madras City, on the occasion of the meeting convened by the Sheriff of Madras, to condole the passing of Sri N. Gopalaswami Ayyangar, a distinguished son of Madras.

problems of job, education for the children, his own treatment etc. Diversional therapy deals with this additional tragedy arising out of the impact of mind on body and has for its main purpose the relieving of boredom and helping in the recovery of the patient by keeping him as happy as possible during his treatment. A diversional therapy programme has been started by the Delhi School of Social Work in co-operation with the Ministry of Health, Government of India, in the Silver Jubilee T.B. Hospital, Kingsway, Delhi.

Before introducing varied activities, contacts were made with each patient for getting an insight into their interests and aptitudes. A small library was established and books were distributed in the wards. Paper flower making was introduced. Language classes were started. Straw string-bag making, leather work, embroidery, knitting and painting were also started. Today in this hospital the patients listen to music, read newspapers and books, play games and hold discussion groups. The centre has also partly become a vocational training agency. An ex-patient, who was at first a student and an inmate of the hospital, has specialised in tailoring and is now a tailoring teacher.

Tuberculosis being a public health and a social problem, society has a positive role to play in the control of its spread. The Central and State Tuberculosis Associations have done great work in this field. The Seals Sale Campaign has provided an excellent opportunity for non-official anti-tuberculosis work in India. The last three Seals

Sale Campaigns have brought in about Rs. 25 lakhs for anti-tuberculosis work.

B.C.G. Vaccination

While there can be no let-up in the effort to improve the curative services, in view of the tremendous financial strain involved, greater importance has to be given to preventive measures. Mass BCG vaccination campaign has been accepted all over the world as one of the most important measures for fighting tuberculosis. Over 50 million persons have been vaccinated with BCG all over the world. In India alone 13.1 million persons have been tuberculin tested and 4.2 million BCG vaccinated up to the end of December 1952. BCG Day was recently celebrated all over India to focus public attention on this eminently beneficial measure for the control of tuberculosis which has become a constant threat to everybody's life. In Delhi State, with the help of the teams loaned by Punjab and Uttar Pradesh, an effort is being made to test over 600,000 people who are considered specially susceptible to tuberculosis, and to vaccinate with BCG all those who need protection.

At the first session of the Central Health Council of which the Central Health Minister is the Chairman and the State Health Ministers the members, held in January this year, a decision has been taken to accelerate the mass BCG campaign and to give it topmost priority, "aiming at protection of children and adolescent groups of the entire population of the country within a period of five to seven years".

DISTINGUISHED VISITOR: Lady Cripps, wife of the late Sir Stafford Cripps, recently visited Madras. Here Lady Cripps is seen with Shri Sri Prakasa, Governor of Madras



Social Value of Probation Work

The Government of Madras sponsored the First All-India Conference of Probation Officers at the instance of Dr. Edward Galway, United Nations Expert on Criminology, who had visited Madras in November 1952, and thus created an excellent opportunity for the comprehensive study and consideration of probation, parole and the kindred correctional services as national problems.

The objects of the Conference were—

1. to bring together colleagues in the same field, giving them opportunities for friendly intercourse;
2. to enable them to discuss the various problems arising from their duties, share their experiences and exchange ideas and notes with a view to improve the standard of their work;
3. to provide a means of disseminating information about probation and a theatre for discussion of questions of common interests;
4. to invite national and international experts to deliver addresses on various aspects of probation and correctional work; and
5. to afford a valuable refresher course for the Probation Officers and enable them to understand the latest trends and techniques in probation work, and use them to the best advantage of the community they serve.

Authorization

The Government of Madras in their G.O. Ms. No. 4245, Home, dated 21st November 1952, authorised the convening of the Madras State Probation Officers' Conference and also permitted the merging of the Conference with the First All-India Conference of Probation Officers. Thus, all the Probation Officers in the Madras State were enabled to attend the Conference. Though it was designated as a Conference of Probation Officers, still all those interested or actually engaged in the administration of justice, law enforcement and the correctional services were invited to become delegates of the Conference.

The Conference was arranged to synchronise more or less with the Sixth International Conference of Social Work held at Madras, but not clashing with any of its programmes, so that many national and international experts in Social Welfare coming as delegates of the International Conference might be requested to participate in this Conference also and thereby afford an opportunity to the delegates of this Conference to make use of this rare and unique chance to enrich their knowledge and skill through the lectures and discussions taking place at the Conference. The organisers' expectations were more than justified.

Leaders like Dr. J. M. Kumarappa of the Tata Institute, Bombay, Dr. Edward Galway and Miss Dorothy Kahn of the United Nations, Miss Eileen Younghusband from the United Kingdom, Mrs. Leibowitz from Israel, Dr. Georges Thelin from Geneva, Mr. William T. Kirk, from New York City, Mrs. Dorothy Banton from Delaware and Dr. Donald S. Howard from Los Angeles, California, took

[From the summary of the proceedings of the First All-India Conference of Probation Officers held at Madras, from 13th to 20th December 1952.]

part in the Conference, in addition to the Ministers and other officials of the Madras Government and other State Governments in this country.

Addresses at the General Session

The addresses at the General Session emphasise important aspects of probation and other correctional services. Brief excerpts from these addresses are given below:—

Sri K. Ramunni Menon, Chairman, Reception Committee:

"The Secretaries of the Conference have shown me the list of those who have accepted our invitation to participate in the Conference and it is gratifying to see that in spite of the short notice, as many as 10 States and 13 Agencies in the country are participating in the Conference and that this gathering here includes not only officers directly engaged in the administration of probation, but also judges, magistrates, members of the bar, police authorities, prison and certified schools officials, prosecuting officers, deans of social service schools, public welfare experts, social workers and representatives citizens and even ministers of other States. This is indeed a very truly representative gathering representing every branch of correctional administrative and law enforcement.

"Our objectives in arranging this Conference are many. First of all, we desire that the facts about probation, parole and the allied services be presented to the nation as a whole. For that we look to the distinguished speakers who will address the different sessions of the Conference. I believe we can also agree that one of our biggest tasks is to explain the idea of probation to the general public. I doubt if there is any other part of our governmental machinery more widely misunderstood or not understood than probation. Ask the man in the street what he thinks of probation and you will be surprised to see him staring at you and saying it is nothing but sentimental effervescence, or mollycoddling the offender. The public must therefore be told of the advantages of probation over other correctional methods and of its potentialities and programme of rehabilitation.

"In the second place we desire to reach some agreement regarding desirable standards in the administration of probation and allied services. I am sure that the technical committees will pay particular attention to this subject.

"In the third place it is our hope that this Conference will point the way to closer co-operation between the Central Government and the Governments of the several States, and I do hope that our deliberations will bring forth concrete decisions along this line. By convening this Conference, we have focussed the country's attention on the problem of probation and allied services and now it is for us to determine how this collaboration may be effected successfully.

"Another important object we have in view in convening the Conference is the formation of a National Organization in which Probation Parole and After-care Officers and the personnel engaged in the various other law enforcement agencies could effectively participate. Such a forum would promote and assist the social welfare of the

Drought Conditions in Tirunelveli and Ramanathapuram districts

The Collector of Tirunelveli has reported that the taluks of Tirunelveli, Nanguneri, Tiruchendur, Sankarankoil and Koilpatti are afflicted by drought. So also the Collector of Ramanathapuram has reported about Tirupattur, Sivaganga, Srivilliputtur and Sattur taluks. Sanctions for certain works and loans have been issued and other sanctions are about to be issued, altogether amounting to nearly Rs. 7 lakhs in Tirunelveli district and to nearly Rs. 4 lakhs in Ramanathapuram district.

community through the practice of good and uniform standards of probation and kindred services, and could further all methods for the effective, scientific and humane treatment of delinquency and its prevention."

Sri K. P. Kuttikrishnan Nair, Chairman of the Conference :

"Probation is the culmination of the process of thinking according to which the sense of value has shifted from property to humanity and the emphasis laid more on the individual who committed a crime than on the crime itself. With the evolution and crystallisation of this process of thinking treatment was adjusted not to suit the crime but to adjust and reform the individual who committed the crime.

"Probation has got many defects but it is the only sound system we have today for the successful rehabilitation and restoration to society of the individuals who have offended against the law. Probation is not a mere sentimental aberration. It is a highly developed process of social adjustment. It has got its techniques and methods for working problems. Probation differs from other methods of correctional treatment in that it is entirely a constructive method of treatment. Probation seeks to assist and not to judge those it serves. Imprisonment diminishes the dignity and status of a human being in society; but probation strengthens it. Not only the individual offender but the whole community benefits by it. Hence it is only practical that probation should be used in more cases in which it is likely to be successful.

"It is the main duty of the Probation Officer to have the help of society in this piece of work. It may be possible to inspire the individual with a desire to live the kind of life that he should live and to instil in him a sense of responsibility. But if the Probation Officer is not able to make society react to the offender's change of outlook of life, it may not be possible for him to continue it. That stigma attached to individuals who commit crime has to be erased completely and society must be able to give him his prior status. The Probation Officer has to marshal all the resources of the community for the rehabilitation of the persons in his charge. Employment is one of the strongest bulwarks against crime. There are very many agencies in the community who could help the Probation Officer in his task and he must make the fullest use of these resources. The transformation of the outlook on

prisoners by society has also to be influenced by the Probation Officer. He must be able to create confidence in both. This is a very difficult task and requires immense initiative, push and broad-mindedness.

"Another important factor for the successful administration of probation is trained magistracy. It is also necessary for the magistrates to understand the spirit and working of probation. They have to equip themselves with all the equipment of probation principles. They have to judge, if the guilt is determined, as to what is the shape of corrective punishment suitable for the criminal and the crime."

Dr. Edward Galway, United Nations Expert on Criminology :

"The United Nations through its Social and Economic Council emphasised that probation offered one of the very best hopes and solutions for a sound social approach to control crime. As a result of comprehensive study there is strong encouragement in most of the countries to adopt probation widely and use it extensively. The prevention of crime and treatment of offenders form a major part of social activities, and the need to give this work top priority has been well recognised in the United Nations.

"There is an enormous amount of knowledge and experience of technique in the Madras State which can be shared among the various States of India. I am sure this Conference will produce a strong and united working feeling among the people who are in the field of probation and lay special emphasis both on social welfare work and correctional administration."

Sri C. Rajagopalachari, Chief Minister of Madras :

"The attitude of the Government in this country towards prisons and prisoners is somewhat different from the attitude of Governments in other parts of the world. Quick revolution does not give the same contact with prison-life as the particular technique we used in India to achieve our Independence. This long contact with prison life has left many features, both good and bad. On the whole, we have a much more kindly attitude towards the inmates of prisons than in other countries.

"The other noteworthy factor in India is that we have in the living memory of our own generation a large body of people given to what might be called 'vocational crime'. Strictly speaking, such people cannot be called 'thieves' because thieving was imposed on them as a profession; they had a family consciousness about it, it was not felt degrading. The criminals themselves, if questioned, would have claimed that they quite well fitted into the pattern of social life and there was nothing anti-social about them.

"Criminology is difficult enough; correction work is even more difficult. The psychology of a prisoner is very difficult to understand. Probation has to deal with this difficult job. Probation work deals with the psychology of the offender and of the prisoner after he had spent some time in the prison. So I was very pleased with the report of the activities of the Probation Department. It is one of which the Chief Executive of the Department could be quite proud. With an expenditure of about Rs. 30 per head, the Department has done a job which probably cannot be done in a prison with ten times that sum."

Sri K. S. Krishnaswamy Iyengar, Chairman, Madras Jail Reforms Committee :

"The benefit of the probation system has not been as widely given to offenders as circumstances demand. The Magistrates who should have applied the probation system have often been found not to resort to this remedy. This is apparently because the Magistrates themselves have failed to appreciate the advantages of this system over imprisonment as a rule. It is, of course, essential that the Magistrates and the Judges who try criminal cases should understand the implications of the probation system and choose those persons only for this treatment who are likely to respond to it. It is unfortunate that in this, as in many other countries, the presiding officers of criminal courts know very little of the technique of sentencing."

Sri V. T. Rangaswamy Iyengar :

"As regard the mode of treatment meted out to criminals, there were four ways, viz., retributive, vindictive, reformatory and corrective. The first two—namely, retributive and vindictive—have long ago ceased. It was only in the later two methods—reformatory and corrective—that probation came into prominence. Without these two principles, the rehabilitation of criminals is an impossibility. In dealing with criminals and giving them proper punishment, a heavy responsibility is cast upon the magistrates

and judges. They should not deal with criminals with the yardstick of quantum of punishment."

Mr. William T. Kirk, New York :

"Probation is an important part of the administration of justice. The wisest judges in any country are those who are most deeply aware of the futility of dealing with the individual offender simply by a routine application of the provisions of law. They understand, also, the inability to truly administer justice without the deepest understanding possible of the individuals with whom they are dealing. It is therefore fair, I believe, to gauge the extent to which a court is modern and forward-looking by the extent to which it makes proper use of well-trained Probation Officers. In every country where properly trained and qualified Probation Officers have been used they have clearly demonstrated that they are an indispensable part of the true administration of justice."

Miss Eileen Younghusband, The United Kingdom :

"It is slowly beginning to be recognised that the essence of probation is the relationship in which the Probation Officer is making use of his scientific knowledge and skill. In other words, probation work is essentially the application of 'case work' within the penal system in order to discover the individual and to help him to change his behaviour in life which will be acceptable and satisfying to him and the society."

Brutus Bags Five Poachers

Some time back police dogs were in the news; their advent in the task of hounding our criminals was first heard of in about May 1951 when trained dogs were added to the police force in the Madras State. Since then these sleuths have not been idle and they have proved invaluable in the detection of crime. Brutus, one of the sleuth-squad, has added one more laurel to his tribe. Brutus has a "nose" for the criminal and he can get the slimmest felon with an unerring instinct; and yet Brutus, contrary to what his name might suggest, is the gentlest fellow while handling—rather mouthing—his catch. It would seem almost a story for Ripley's column "Believe it or not", but it is a fact—the uncanny way this canine detective gets at the right wrongdoer. Listen to his latest achievement!

For some time past the police were intrigued at the mysterious way in which large heaps of scrap iron stocked in the Harbour area, inexplicably evaporated overnight; no white-ants could thrive on such hard diet nor could the briny air melt away scrap metal. The police surmised it must be some human agency which was responsible for the liquidation of this precious dump. On further investigation they discovered that of late unauthorised outsiders were visiting the Harbour both night and day and had made away with what they could lay hands on; thus it was that large quantities of scrap iron were disappearing.

The thieves often managed to run away seeing the policemen at a distance, or managed to conceal themselves successfully among the numerous heaps of coal and scrap

iron, goods waggons, etc., and only a very few could be arrested with great difficulty. It was therefore decided to use the police dogs. Brutus got the assignment this time and he was told off to duty at the harbour area.

Brutus was taken to the Harbour by the Sub-Inspector in charge of the dogs along with the "handlers". Brutus lost no time in tracking the poachers; he picked them out one by one, giving chase to them and leading them gently by their arm; for, though his canine teeth had a firm grip on the sleeve of each of the scrap-lifters, he used only the minimum force, the true police dog he is, and just led the charge to the nearest policemen accompanying him (Brutus), thus causing no hurt or injury, physical or other. Brutus thus bagged five of the pilferers, put them under arrest and handed them over to the authorities.

Only one of the prisoners gave him a bit of exercise in fast running, sprinting fast and as far as Fort St. George and joining a crowd of persons waiting to get into a bus. Brutus gave him chase and tracked him down in the crowd and got a grip of his hand. Meanwhile, the handler, who was running behind, arrived at the spot and took charge of the person arrested by the dog.

Being a conscientious fellow Brutus did not consider his duty ended until all his five prisoners were safely deposited at the police station; even there Brutus kept a watchful eye till the examination was over and it was only after he had satisfied himself that his five "catches" were in "safe" hands, did he retire to have his forty winks until he was called to duty again.

Expansion of Posts and Telegraphs

No Governmental activity touches the common man more intimately than the Posts and Telegraphs Department. Accordingly the Department, which is the second largest utility service of the Government, has been steadily carrying out its plan to reach every village or a compact group of villages.

There has been a considerable increase in the number of rural post offices since Independence. Over 16,000 have so far been opened in the villages since August 1947. The Government is committed to the principle of opening a post office in all villages with a population of 2,000 or more. The number of postal articles handled by the Department is nearly 100 per cent more than what it was in 1938-39. Viewed against the population and size of India, however, much leeway remains to be made up.

The "All Up" Air Mail Scheme introduced in 1949 constitutes a landmark in the history of mail communication in the country. Under this scheme, all inland letters, post cards, money orders and insured letters are carried by air, wherever air transmission is available and advantageous. This has considerably accelerated mail services, especially over long distance. Over 5½ million pounds of mail were carried over the inland air mail routes during the year 1951-52.

Rates Lowest in the World

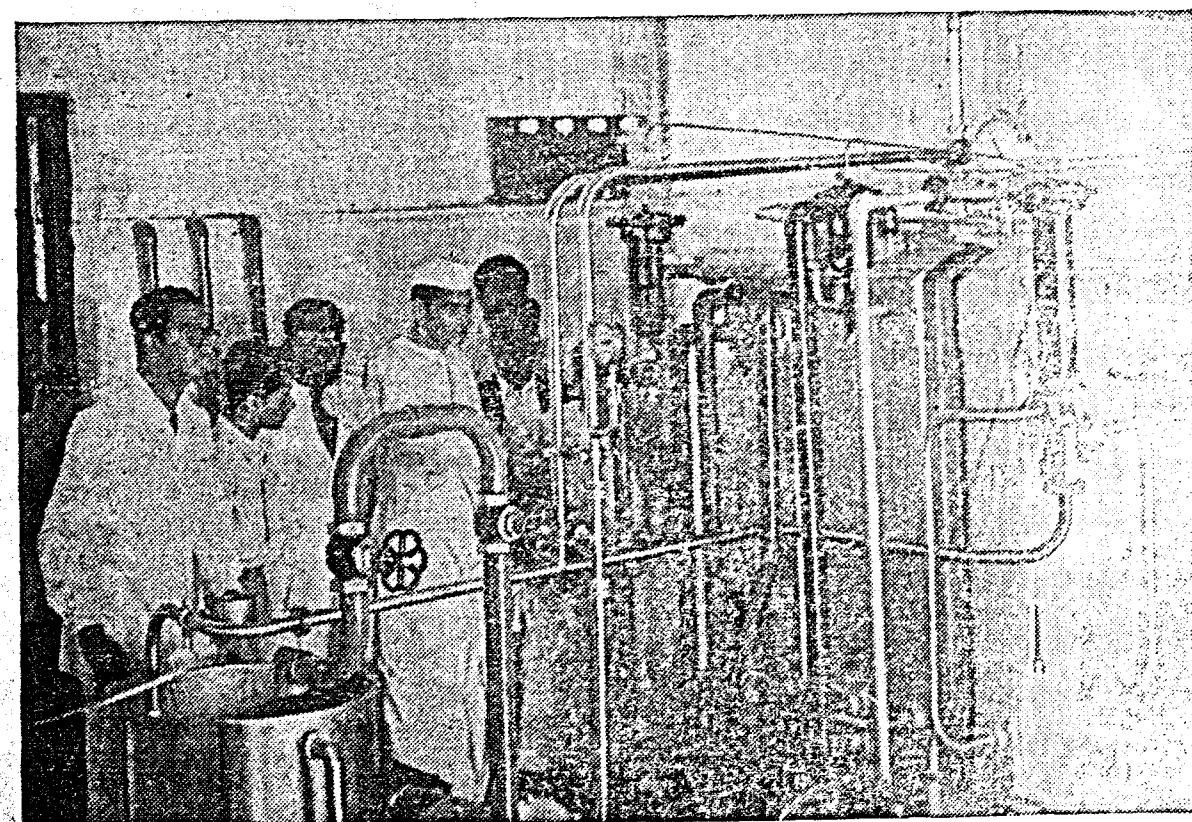
The postage rates in India are about the lowest in the world. In the context of distances over which the mail

is carried and the present level of prices, they certainly are very low. The postage charge on all the postal articles with the exception of the letter and inland letter card does not meet the total cost of handling. While a card sells for nine pies, its printing and handling cost about 50 per cent more.

The Department opened a large number of post offices during the General Elections, and several post offices were converted into Combined Post and Telegraph offices. For the election period all "No Dak" villages were brought under regular mail service and an effort was made to provide a mail service of at least once a week to all other villages, during the fortnight preceding the local polling day.

Telephone Expansion

On the telephone side also, special arrangements were made during these General Elections. One thousand eight hundred and thirty-six telephones were given to the candidates and the parties contesting the elections. This number was more than twice the total number of telephones given during the year 1946-47, i.e., the year immediately preceding the partition of the country. However, since Independence, the increase in the number of telephones has been considerable. While at the time of partition, there were only 278 telephone exchanges and 114,922 telephones, on 31st March 1952 the numbers were 591 and 184,500 respectively. Not only has the



MADRAS MILK CO-OPERATIVE: Sri Amritlal Yadav, Minister for Co-operation, Rajasthan State, recently visited the Madras Co-operative Milk Supply Union depot. Here the Minister and the Registrar of Co-operative Societies, Rajasthan State, are seen inspecting the pasteurising plant.

telephone been taken to smaller towns by the opening of these new telephone exchanges but the facility has also been extended by opening a large number of public call offices connected to the trunks. The total number of public offices is now 1,600. At most of these public call offices a messenger is sent to call the required person, provided a small additional charge of eight annas is paid by the calling party.

To help telephone expansion in India, which would not have been ordinarily possible owing to financial stringency, the scheme popularly known as "Own Your Telephone" was introduced in the year 1949. Under this scheme a subscriber pays an initial deposit of Rs. 2,500 in Bombay and Calcutta and Rs. 2,000 in other places and becomes entitled to a telephone. He does not pay any monthly rental but only a maintenance charge of Rs. 2 per month, in addition to the call charge. This scheme proved very popular and the deposits received under the scheme up to the end of March 1952, amounted to Rs. 2.90 lakhs. More than 11,000 telephones were provided under the scheme up to that date.

100 per cent Increase in Trunk Calls

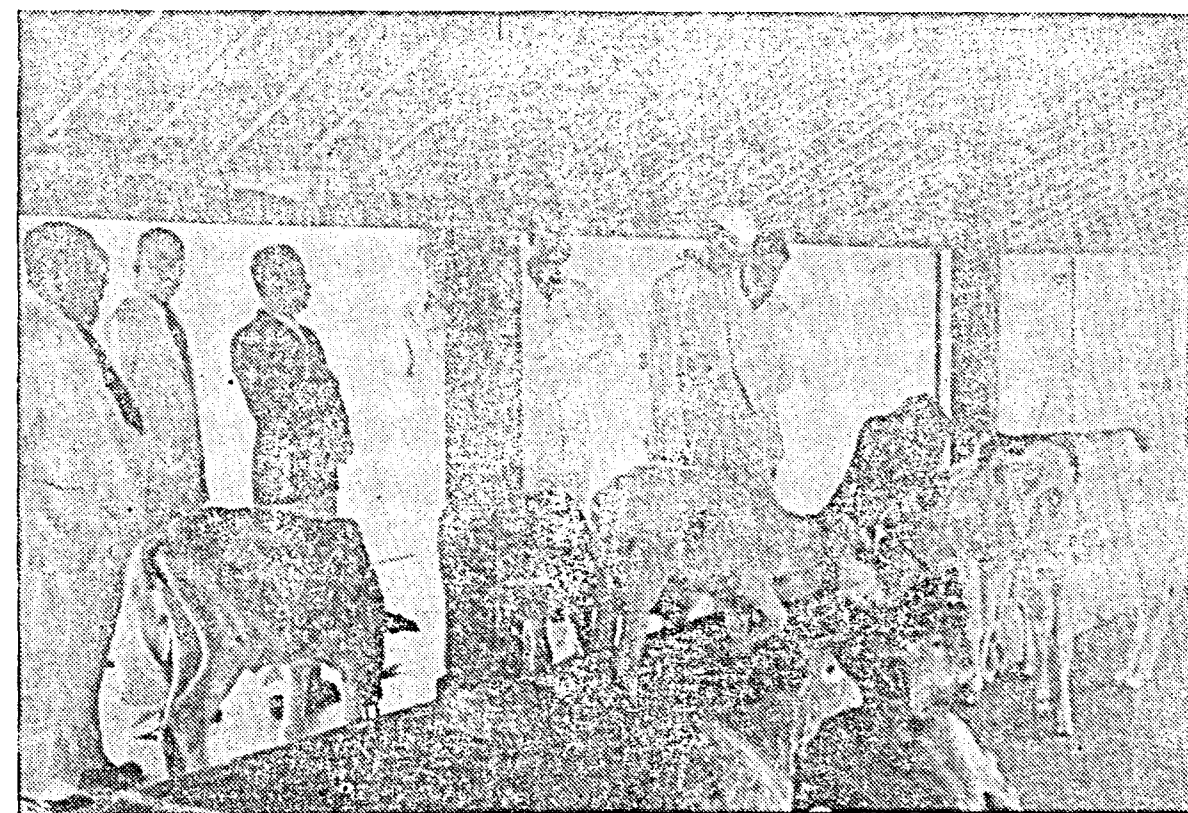
The most marked increase is in the number of trunk calls. During 1951-52, the trunk calls handled were about 8.9 million, which is about twice the maximum number during any pre-partition year. Actually, in the last three years the increase has been about 100 per cent.

While the comparative figures given above appear impressive there is still a very heavy pending demand for telephones. Every attempt is being made to meet this demand by the installation of additional exchanges, new equipment and new telephone trunk circuits. To provide trouble-free service, schemes are now in hand for laying underground cables between all the important centres in the country. When this scheme is completed, the number of circuits available between the main centres would be about ten times the present number and, therefore, not only will the service be trouble-free but the delays will be reduced to the absolute minimum.

The telephones service is also being gradually extended to more and more foreign countries. There is direct Radio Telephone Service to Indonesia, Egypt, Iran and Japan. The service to United Kingdom has been extended to include thirty-four other countries.

The additional equipment installed for the telephone trunks provides for additional telegraph channels also. At present, there are nearly 8,500 telegraph offices and the present telegraph traffic is about 80 per cent more than what it was during 1938-39. The pace of telegraph expansion has been quickened because there are still many subdivisional headquarters which are not yet connected to the telegraph network of the country.

The Indian Languages Telegraph Service is being popularised. It is being extended to new places and now there are 122 places at which such telegraphs are accepted.



HEALTHY OFFSPRING: The Minister for Co-operation (Rajasthan State) Sri Amritlal Yadav inspects the healthy calves frisking in the cattleyard of the Madras Co-operative Milk Supply Union.

The number of these telegraphs is increasing but very slowly. The teleprinter has been modified for typing in the Devanagari script and it is proposed to have those machines at the more important telegraph offices.

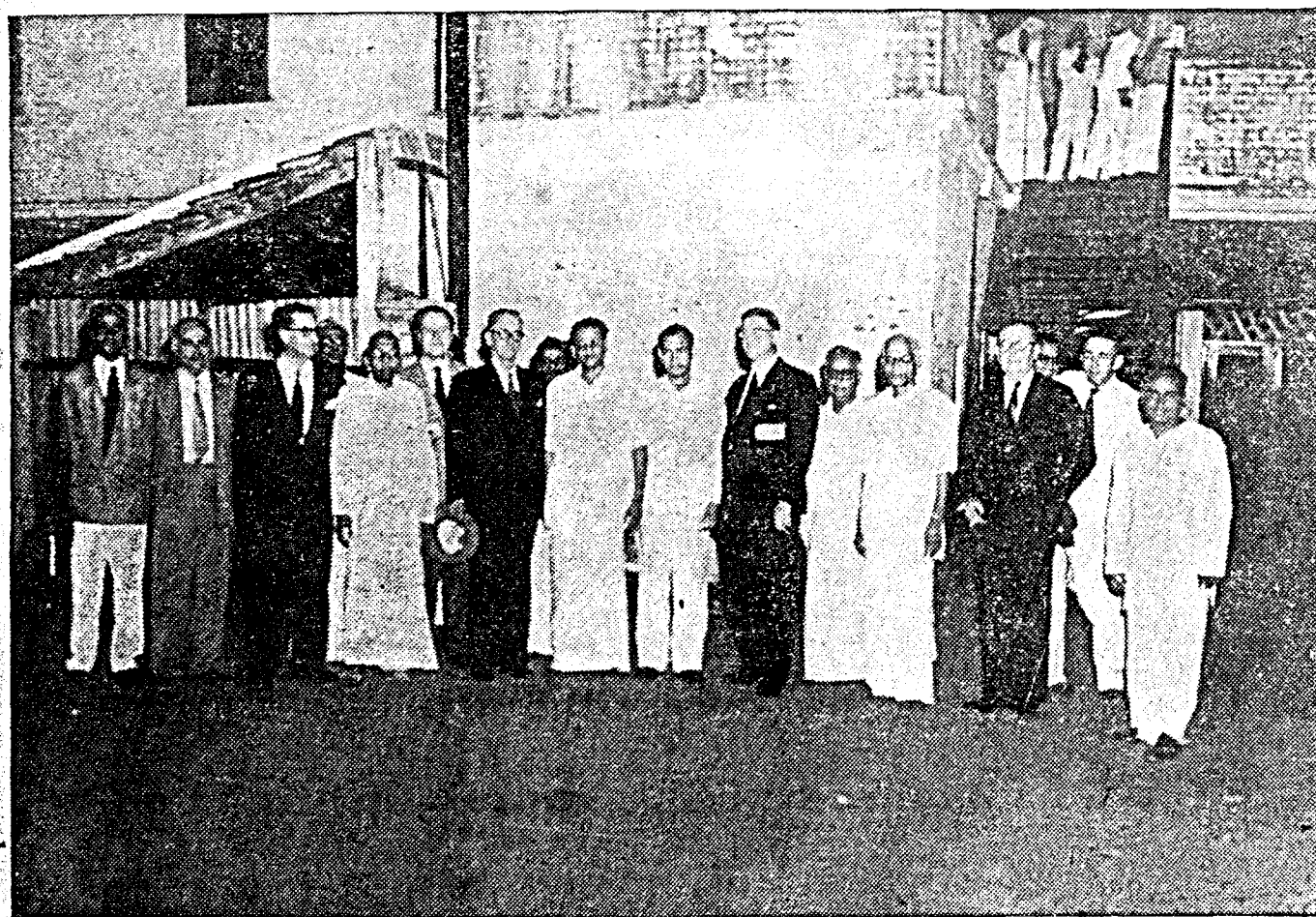
Telex Service

Every effort is being made to reduce the delays in the handling of telegrams. During this year, the Bombay C.T.O. is proposed to be mechanised and the Printergram Service introduced in this City. This will enable subscribers to this service to send or receive telegrams on teleprinters which will be rented to them. It is also proposed to introduce the Telex Service between Bombay and Ahmedabad. This is a teleprinter trunk service which will enable the Telex subscriber in Ahmedabad to obtain any Telex subscriber in Bombay and pass his message over the teleprinter direct to him.

The improvements effected in the working of the Telegraph and Telephone branches have made it possible to reduce the charges. The rates for long distance calls were substantially reduced last year. In spite of the loss in the Postal branch, the P. & T. Department mainly on account

of telephone revenues, is showing an overall profit and is contributing to the general revenues.

The P. & T. Department is implementing a five-year plan for the expansion of the Postal, Telegraph and Telephone Services. This envisages an expenditure of 10—15 crores of rupees a year during the next three years and the doubling of the number of telephones in the country. The other services will also be suitably extended. During this period, it is hoped to make the country self-sufficient in regard to most of the items in use in the P. & T. The Manual Telephone Exchanges and Telegraph equipment continue to be manufactured in the P. & T. workshops at Alipore, Jubbalpore and Bombay. The Indian Telephone Industries at Bangalore will soon start manufacture of Automatic Exchange equipment. The Hindustan Cable Factory at Chittaranjan is expected to go into production this year. As a result of all these activities, it is hoped that the target of (a) opening a P.O. in all sizeable villages or groups of villages having a population of even less than 2,000, (b) opening a telegraph office in every subdivisional headquarters and (c) opening a telephone exchange in all district headquarters and important trade centres, would be achieved in the near future.



VISIT OF AUSTRALIAN PRESSMEN: An Australian Press Delegation recently visited Madras, in the course of a tour of India to study Indian life in its various aspects. Here the members of the Delegation are seen at the Press Club of the South Indian Journalists' Federation on Mount Road, Madras City.

Electricity: Review for January 1953

[A review of activities of the Electricity Department for January 1953 is given below].

Machkund Hydro-Electric Scheme.—Land acquisition proceedings were continued. The Lamptaput Machkund headworks road was completed and the road was being maintained in good condition. The road from Sogun to Jalaput was formed and metalling was done up to a length of 7 miles and 5 furlongs. Work on road dams at 5/2 and 7/2 was progressing. In the diversion dam about 87 per cent of earthwork excavation, 39.7 per cent of rock cutting, 36 per cent of concreting, 55 per cent of masonry and about 68 per cent of flume channel work were completed. In tunnel pond dam, excavation for foundation was finished, and 28 per cent of masonry and 18 per cent of bucket apron concreting were done. Works on flume tunnel, pressure tunnel, pipe tunnel, surge shaft excavation and levelling powerhouse site, were completed. Masonry for filling the pockets round the surge shaft top platform was in progress. Grading of penstock slopes was continued.

Excavating foundation for main dam at Jalaput was continued, and 2,804 units of earth and 919 units of rock were excavated. Drilling investigation bore-holes was progressing for spillway and downstream of dam. Arrangements were being made for driving sheet piles for downstream coffer dam. Excavation for surplus course was in progress. Total labour force during the month was 4,640.

Moyar Hydro-Electric Scheme.—All civil works from headworks to Powerhouse were completed. All the three penstock lines were in service. Two out of the three generating units with the associated transformers were in operation. The III generating unit was commissioned on 7th January 1953 after necessary tests. Certain minor works were in progress.

Pykara III Stage Extensions.—(a) **Pykara Dam.**—Construction of masonry for the wing walls and dam main structure and concreting for R.C.C. core wall were progressing. Work on forming the earth bund at the right flank was also in progress, while erection of scour and power pipes at the left flank was over.

(b) **Penstock and Powerhouse Extensions.**—The fourth penstock line was erected and the hydraulic test was to be done. For the Powerhouse extensions, erection of steel structures was completed and the masonry for superstructure was taken up. Building masonry wall between the proposed 6th and 7th generating units was in progress. Erection of switchgear for Moyar bay was almost completed.

Madurai Thermal Scheme.—Erection of steel chimney was completed. Erection of 10,000 K. V. turbo-alternator set was almost completed. The meter and relays were being tested. Erection of main steam piping was in progress. Pile driving for foundation of one of the three boilers of 55,000 lb./per hour capacity was completed and that for the second one was in progress. Construction of infiltration well at the River Vaigai was started.

South Kanara Scheme.—Tree valuation for 33 K.V. lines was nearing completion. Pole schedules for lines were under study.

Tungabhadra Hydro-Electric Scheme.—(a) **Dam Powerhouse.**—Concreting the inlet portion of the penstock pipe

Nos. 2 and 3 was completed by the Public Works Department and the work in respect of No. 4 penstock was in progress.

(b) **Canal Powerhouse.**—Calyx drilling in the Powerhouse area and deepening trail pits along low pressure pipeline, tail race area, and in surplus area of forebay were in progress. Permeability and evaporation tests in forebay were done.

(c) **Transmission Lines and Sub-stations.**—Detailed survey of Dhone-Nandyal lines, investigation of various river crossings, checking of revised profiles for Dam and Canal Powerhouse section of transmission lines were in progress. Detailed survey of the Banganapalle Sub-station site was completed and plotting of the same was in progress.

Nellore Thermal Scheme.—All electrical works both at Nellore and Gudur are completed. Staff quarters at Gudur were completed. Fencing, water-supply, etc., at Gudur were in progress.

Vijayavada-Visakhapatnam Powerhouse Extensions.—(a) **Vijayavada.**—Arrangements for fixing of rolling shutters, replacing the crane rail for the extended portion of the powerhouse were being attended to. The second

Rates for Domestic Supply of Hydro-Electric Energy

The Government have passed orders specifying special rates for the domestic consumers in the areas of this State served with the hydro-electric energy from the Pykara, the Mettur and the Papanasam powerhouses to whom a quota of energy for consumption per month is fixed under any scheme of restriction for the time being in force.

The charges for consumption of electrical energy for domestic purposes shall be regulated as follows:—

(i) Consumption of energy up to the quota limit fixed per month shall be charged at normal tariff rates; (ii) on all excess consumption over and above the quota fixed per month, the rate per unit shall be double the normal tariff rate applicable for the consumption, provided that this sub-clause shall not apply to services which are classified as essential and for which no quota is fixed.

The rates specified shall be adopted for all the hydro-electric areas whether served by the Government Electricity Department or by the Electrical Licensees.

This order shall be deemed to have come into force on and from the date on which the meter reading for December 1952 consumption is taken at the premises of the consumer.

raw water well and pump house over the same was under construction. Construction of the cooling water pond was taken up.

(b) **Visakhapatnam.**—Extension on the south side was completed. For the west side extensions, concreting of pile cap was completed. Drilling of holes, cutting of purlines to size and fabrication were in progress. Twenty-one pressure piles were cast for the IV Boiler Foundations and further work was in progress. Works on the III chimney foundations were completed. Load test over piles and soil tests were in progress. Since piles did not go to the full depth as contemplated, providing additional piles was under consideration.

Machkund Transmission Lines.—Stubsetting, tower erection, etc., were in progress in Machkund-Visakhapatnam reach. Tower erection was completed in all other reaches, viz., Visakhapatnam-Pedapuram-Vijayawada. Stringing of conductors and earthwire was being done. Civil works were in progress in all the sub-stations. Survey work on the entire 132 K.V. line from Gunnedala to Tadepalli was completed.

Madras Plant Extensions.—Work on natural draught cooling tower No. 2 was completed except for replacement of some damaged sprayer nozzles and fixing of some brass bolts and nuts. Erection of cooling stacks was 80 per cent finished in respect of natural draught cooling tower No. 3. About 73 per cent of work on the erection of second boiler was completed. Work on boiler No. 3 was progressing. Work on turbo-alternator was nearly completed and the trial running of the same was expected to commence in February 1952.

Operation Branch

Hydro Areas.—There was continuous fall in the reservoir levels of the three systems during this month as the inflows were poor and discharges heavy. The storage at Papanasam reservoir got further depleted on account of special irrigation discharges required by the Public Works Department. The 25 per cent cut in consumption was increased to 35 per cent from 5th January 1953 and restrictions on power loads were enforced rigidly.

The number of units generated, peak load and the services connected up during the month in the Hydro systems were as follows:—

Name of System.	System peak load in K.W.	Generation in millions of units.	Services connected.		
			Agricultural.	Industrial.	Domestic.
Pykara ..	41,800	19,873 plus 7,717*	28	3	116
Mettur ..	38,100	9,857	39	..	96
Papanasam ..	20,100	5,865 plus 1,832†	24	..	198

* 7,717 millions of units were generated at Moyar Power-house with a peak load of 24,300 K.W.

† 1,832 millions of units were generated at Madurai Thermal Station with a peak load of 3,700 K.W.

Thermal Areas and Ceded Districts.—The Madras Electricity System was in parallel with Hydro systems during the month, affording relief to the Hydro systems during off-peak hours.

Name of System.	System peak load in K.W.	Generation in millions of units.	Services connected.		
			Agricultural.	Industrial.	Domestic.
1 Madras ..	28,900	12,398	14	26	200
2 Vijayawada—					
(a) Steam ..	9,440	4,347	30+15.5+1	49+68	
(b) Diesel ..	450	0.074			
3 Visakhapatnam—					
(a) Steam ..	4,160	1,664	..	3	35
(b) Diesel ..	924	0.021			
4 Kakinada ..	790	0.144	8	165+35	
5 Rajah-mundry.	782	0.081			
6 Srikakulam ..	120	0.023	..	..	4
7 Ongole (shut down to be used on emergencies).			1	1	4
8 Narasannapetta.	22	0.003			
9 Nellore ..	1,200	0.404	1	..	4
10 Proddatur ..	104	0.032	..	..	..
11 Anantapur ..	215	0.062	2	..	20
12 Kurnool ..	360	0.114	2	1	23
13 Cuddapah ..	245	0.073	..	1	8
14 Nandyal ..	180	0.027	1	..	22
15 Tadpatri ..	65	0.012	..	..	17
Power purchased from Mysore.					
16 Hindupur ..	272	0.104	2	..	4
17 Ceded Districts.	3,720	1,536	9	10	163

In the Madras Electricity System, 29 D.C. services with an approximate connected load of 52.46 K.Ws. were changed over to A.C. during the month.

In the Andhra Power System, Ongole was connected to the Vijayawada-Tenali-Chirala line consequent on the energisation of the Chirala-Ongole 33/11 K.V. line and 24-hour supply was given to consumers in Ongole Town.

During the month, 20 extensions were sanctioned by the Chief Operating Engineers and Chief Engineer for Electricity at an estimated cost of Rs. 9,59,350.

DO YOU KNOW?

Rupees 132.24 crores or about 17.3 per cent of the total revenue of Rs. 766.29 crores of Central and State Governments in 1951-52, was spent during that year on social services, including education and health.

Cement production in India increased from 31.95 lakh tons in 1951 to 35.37 lakh tons in 1952.

During the four-year period ending December 1952, the Income-tax Investigation Commission disposed of 867 references, involving concealment of a little over Rs. 40 crores.

Rural Welfare Activities

[A brief note on the salient features of the activities of Rural Welfare Department in the areas selected for Rural Welfare, during November 1952 is given below]

Tiruchirappalli District.—In Musiri firka, 15 charkas were introduced during the month; 457 hanks were collected. Khadi to the value of Rs. 219-15-4 was sold to the public and the spinners. A sum of Rs. 484 was spent under Rural Water-supply.

In Vengalam and Valikondapuram firkas, two wells were repaired; three adult schools were started; six and four services were performed by bulls and buffaloes respectively; 619 hanks of yarn were collected and Khadi to the value of Rs. 83 was sold.

In Vellakoil firka, 26 mass sanitation drives were conducted in 14 hamlets and 12 cheries by the Rural Welfare staff; 27 soak-pits were newly put up; 26 latrines were provided for the use of men and women; 25 latrines were cleaned and six trench latrines were filled up; 64 compost pits were newly dug up; 28 old manure pits were rectified.

Chittoor District.—A sum of Rs. 1,270 was spent under Rural Water-supply. Two wells were sunk; 47 branch libraries were opened; 900 books were circulated; 38 insanitary pits were filled up; 93 streets and 26 well sites were cleaned; 35 bags of paddy seeds were distributed; 51 compost pits were dug up.

Anantapur District.—A sum of Rs. 7,201 was incurred under Rural Water-supply; 24 old wells were repaired. Eight reading rooms were constructed; about 200 books were distributed to various branch libraries; 18 adult night classes were conducted; 53 latrines were constructed; 186 new compost pits were dug. The stud bulls performed 20 services. Two new charkas were introduced; six spinning demonstrations were conducted and 200 hanks of yarn were collected and paid for.

Bellary District.—A sum of Rs. 1,390 was spent for the improvement of the Harijan well at Kurukunda. A well was sunk in Hardageri village without any contribution from the Government. Another sum of Rs. 3,850 was spent for laying a road; 188 books were distributed by the central library; 27 sanitary drives were conducted. Three charkas and one kisan charka were distributed during the month; 43 spinning demonstrations were conducted. An amount of Rs. 76-12-0 was collected during the month towards the instalments of charkas sold. Slivers worth Rs. 7-15-6 were sold. One co-operative society was started at Yellarthi. A reading room with a radio set and a park at Aspari were set up. With the help of the Panchayat Board, Aspari, three culverts and one septic tank latrine were constructed.

North Arcot District.—A sum of Rs. 1,636 was spent under Rural Water-supply and another sum of Rs. 1,773 was incurred under Village Communications; 244 persons used the reading room; 440 books were circulated; 1,320 members were served by the libraries. Eleven latrines were constructed; 140 insanitary pits were filled up; 62 compost pits were dug; 151 tons of compost were collected. Five poultry units were started; 1,778 trees were planted.

Guntur District.—Fifteen mass and 39 individual sanitation drives were conducted; seven soak-pits were newly constructed; 49 compost pits were formed; 38 manure pits were properly covered or rectified and 27 acres of waste lands were brought under cultivation. Contour-bunding was done in 11.23 acres of land. Two box and four kisan charkas were introduced; 110 charkas were renovated; 15 spinning demonstrations were held; 480 hanks of yarn were produced; 25 adult education classes were conducted and 340 books were distributed to the branch libraries.

Salem District.—Fifteen old wells were repaired and made fit for use; 350 books were circulated and 390 members were served by the libraries; 16 dust-bins were constructed. Drainage lines to the length of 180 feet were laid. Nine cheries were cleaned; seven soak-pits were dug; four insanitary pits were filled up; 31 compost pits were dug; 309 tons of compost were carted to the fields and 1,121 trees were planted. Four co-operative societies were formed; 3,031 hanks of yarn were produced.

Ramanathapuram District.—A sum of Rs. 345-3-0 under Village Communications and a sum of Rs. 2,038 under Rural Water-supply were spent. Roads to the length of about two miles were formed; 17 charkas were introduced; 7,844 hanks of yarn were spun; 29 compost pits were dug; 126 trees were planted; 69 glyricidia seedlings were planted. Sesbania seedlings were planted in about 100 acres.

Coimbatore District.—In Vellakoil centre, 475 persons attended the reading rooms. Four Grama Seva Sangams were formed; 45 members were enrolled as members of the Grama Seva Sangams. Eleven community latrines were constructed; 24 insanitary pits were filled up; 77 manure and compost pits were dug; 150 tons of compost pits were dug; 150 tons of compost was produced; 550 agriculturists were induced to use improved agricultural methods and seeds. The stud bulls performed 25 services.

In Tiruppur centre, roads up to a length of three miles and seven furlongs were formed. An expenditure of Rs. 207 was incurred on Village Communications works; 65 persons attended the reading rooms; 120 books were circulated; 800 members visited the libraries; four Grama Seva Sangams were formed; 45 members were enrolled in the Grama Seva Sangams; 11 community latrines were constructed; 24 insanitary pits were filled up; 77 manure and compost pits were dug; 150 tons of compost was produced; 550 agriculturists were induced to use improved agricultural methods and seeds. The stud bulls performed 25 services.

There was a two-day training course in Agriculture for the Rural Welfare officers and Grama Sevaks on tree plantation and green manure at the Agricultural College, Coimbatore.

Tanjore District.—A sum of Rs. 487-3-0 was incurred towards tank works; 25 charkas were introduced; 48 charkas were repaired; 100 margosa trees were planted. Three acres of lands worth about Rs. 6,000 were donated free of cost.

Malabar District.—A sum of Rs. 1,184 under Rural Water-supply and another sum of Rs. 603 under Village

RURAL RECONSTRUCTION

Communications were spent; 23,000 persons used the reading rooms; 1,900 members were served by the libraries; two stud bulls performed 18 services and buffaloes five services.

In Tellicherry, Kuthuparamba and Mattanur firkas, chemical fertilisers and green leaf manure were applied to 110 acres under paddy and vegetable cultivations; 35 cattle-sheds were improved by spreading litter; 35 charkas were newly introduced and two charka classes were opened. The yarn produced by the self-spinners was exchanged for cloth worth Rs. 105-10-0.

In Payyanur and Madayi areas 13 compost and manure pits were dug and 26 tons of compost manure was produced. Eight latrines were constructed during the month; four-teen Grama Seva Sangams were organised in the Madayi new area. Eight charkas were newly introduced.

Cuddapah District.—An amount of Rs. 600 under Rural Water-supply was spent. Five short camps were organised in the Rural Welfare area; 27 spinning demonstrations were conducted; four vertical charkas were introduced. Thirty-four individual sanitation drives and eight mass sanitation drives were made in the several villages of Rural Welfare areas; 15 cess-pools were constructed; 42 compost pits were dug and 70 manure heaps were properly preserved; 31 adult education classes were conducted by the Grama Sevaks; 157 books were circulated by the branch libraries. Seven ploughing demonstrations with improved types of iron ploughs were demonstrated. Sesbania seedlings were planted in 14 acres of paddy fields.

Tirunelveli District.—Fifteen insanitary pits were filled up. Platform and drains of 40 wells were cleaned; 74 soak-pits were dug; 18 trench latrines were opened; 51 services were performed by bulls and five by buffaloes; 26 charkas were sold. The number of hanks spun was 1,075; 289 books were purchased.

Chingleput District.—Under the Rural Water-supply one well was sunk; 64 adult schools were started; 395 books were circulated; 822 members were benefited by the libraries. Thirty-one maternity cases were attended to. Three latrines were constructed; 72 compost or manure pits were dug; 152 tons of compost were carted to fields.

Madurai District.—Forty-six Harijan cheries were cleaned; 73 adult education classes were conducted; 28 spinning classes were conducted; 58 charkas were distributed at concessional rate and 5,950 hanks of yarn were produced; 600 sesbania seedlings were planted; 146 cess-pools and drainage lines to an extent of 176 feet were constructed. The Grama Sevaks Constructive Workers' Day was celebrated at Kurayur.

Srikulam District.—Forty-four sanitation drives were conducted; eight charkas were introduced; 17 yards of self-spun yarn were woven; 1,362 books were distributed; 26 spinning demonstrations were conducted.

East Godavari District.—Twenty-four compost pits were dug; 54 pits were set right; 16 sanitation drives were conducted; drainage to a length of 1,350 feet was cleaned; 17 tons of compost was taken to the fields; 65 manure heaps were removed. Thirty-three First Aid cases were attended to; 33 spinning demonstrations were held; 3,320 lb. of slivers were sold; 98 old charkas were repaired; 10 new charkas were put in use; 1,540 hanks of yarn were spun. A sum of Rs. 53-8-6 was paid to the self-spinners of the firkas; 470 members were benefited by

the libraries; 338 books were circulated from the central library.

West Godavari District.—A sum of Rs. 2,889 was spent under Rural Water-supply and another sum of Rs. 1,100 was spent under Village Communications.

Nellore District.—A total of 106 individual and 63 mass sanitation drives were conducted; 26 soak-pits and 15 wells were cleaned; nine new soak-pits and three latrines were constructed; 130 compost pits were dug; 281 pits were set right; 119 tons of compost were carted to fields and 3,350 glyricidia saplings planted. Bulls performed 36 services; four new charkas were introduced and nine old ones were set right; 186 yards of Khadi were woven; 5,017 hanks of yarn were spun; 70 spinning demonstrations were held. The central and branch libraries distributed 265 books, and 95 persons were benefited.

South Kanara District.—In Nileshwar firka, two libraries were constructed; six compost pits were filled up and ten tons of compost were carted to fields.

In Kumbha firka, crops were protected from pests in 32.75 acres.

In Manjeshwar firka, one school building was constructed at Kayyer at a cost of Rs. 6,104-11-0. The Government paid a grant of Rs. 500. Two compost pits were constructed. In Mulki firka five insanitary pits were filled up. Two leeching type latrines were constructed.

Visakhapatnam District.—In Pendurthi firka, 28 mass and 62 sanitation drives were held; 65 hanks of yarn were produced; 320 trees were planted; 1,303 books were distributed; 69 adult classes were conducted. 53 spinning demonstrations were conducted; 37 compost pits were dug.

In Kotauratla firka, 23 mass and 59 individual sanitation drives were conducted; 25 adult classes were held; 50 compost pits were dug.

In Araku Valley treas, 18 spinning demonstrations were conducted; 734 trees were planted; 106 compost pits were dug; 154 tons of manures were produced; 59 mass and 30 individual sanitation drives were conducted and 28 insanitary pits were filled up. Six community latrines were put up.

The Nilgiris District.—Sixty-five compost pits were dug. Eleven maternity cases and 1,099 out-patient were treated; 100 hanks of yarn were spun. Khadi worth about Rs. 200 was sold.

Kurnool District.—A sum of Rs. 326 was spent for the construction of wells; 466 books were circulated among the readers; 59 adult night classes were conducted; 32 manure pits were set right. The bulls performed 29 services; 710 trees were planted; 156 tons of manure were distributed; 60 spinning demonstrations were conducted.

DO YOU KNOW ?

India uses about 138.7 crore postage stamps a year.

It costs India railways Rs. 20 per mile to haul a goods-train on the broad gauge and Rs. 14-3-0 per mile on the metre gauge.

There are about 3,000 goshalas and pinjrapoles in India which maintain six lakhs cattle at an approximate cost of Rs. 7 crores a year.

FINANCE

Madras Budget for 1953-54

(Continued from page 9)

The expenditure has gone above the original estimate by about Rs. 3.41 lakhs, very largely on items relating to famine relief.

Capital Expenditure

The revised estimate for Capital expenditure is Rs. 21 crores, as against the original estimate of Rs. 19.86 crores. The bulk of the expenditure is on irrigation—Rs. 10.49 crores—and on electricity—Rs. 8 crores. The excess over the original estimate is largely due to the increased provision on the Tungabhadra Project, the outlay on which is now fixed at Rs. 417 lakhs as against Rs. 290 lakhs originally provided for.

State Trading Schemes

The budget for the year anticipated a net disbursement of Rs. 9 lakhs under State Trading Schemes. The net disbursement is now expected to be Rs. 3.91 lakhs, and this worsening is due to the large stocks of rice and chemical manures expected to be held on Government account at the close of the year.

Loans and Advances

The budget had provided for a net outlay of Rs. 132 lakhs under loans and advances to agriculturists, local bodies, co-operative and other organizations. The revised estimate has now been fixed as a net outlay of Rs. 283 lakhs. The increase is largely due to the more liberal grant of subsistence and takkavi loans to agriculturists in the famine-affected areas.

Open-market Loan

The budget took credit for a loan of Rs. 4 crores from the open market, in spite of a more cautious and conservative policy advised by financial circles. Honourable Members are aware of the success of this Government's flotation of Rs. 5 crores, last August. The response, especially from agriculturists, was very gratifying indeed and the loan was substantially oversubscribed, long before the scheduled time for closure.

The issue price of the loan was Rs. 99-12-0, but the securities are now selling in the open market at about Rs. 100-12-0. A sum of Rs. 525 lakhs was realised and the earlier loan of Rs. 219 lakhs, which had matured this year, was repaid. I am full of hope that an equally satisfactory response will be forthcoming when we go into the market again.

Loans from Central Government and Commercial Banks

The Government of India have agreed to grant us loans to the extent of Rs. 1,031 lakhs this year, and this is made up of Rs. 734 lakhs for irrigation works, Rs. 200 lakhs for famine relief, Rs. 95 lakhs for Grow More Food schemes and Rs. 2 lakhs for other objects. In addition, they have given a short-term advance of Rs. 110 lakhs for agricultural purposes which is repayable before the end of the year. A sum of Rs. 100 lakhs was taken from a commercial bank for Ways and Means purposes and this will have to be repaid in next May.

Ways and Means Budget, 1952-53

The current year opened with a minus cash balance of Rs. 442 lakhs. The commitments on the Ways and Means side are—

	RS. LAKHS.
Minus cash balance	442
Revenue deficit for the year	540
Capital expenditure	2,100
Net disbursements on State Trading Schemes	391
Net disbursements on loans advances and deposit transactions	313
Making up a total of	3,786

As against this commitment, the available resources are—

	RS. LAKHS.
Open market loan less repayment	306
Loans from the Central Government less repayment	1,012
Temporary accommodation from a Commercial Bank	100
Sale-proceeds of securities	1,449
Making up a total of	2,867

This means that the year is expected to end up with a minus cash balance of Rs. 919 lakhs. Since these estimates were framed, we have been making large advances to other States, towards the cost of rice expected to be supplied by them and this may still further increase the minus cash balance at the end of the year. With the sale of securities for Rs. 1,449 lakhs indicated earlier, we have exhausted our Reserves.

Budget Estimate, 1953-54, Revenue Account

I shall now pass on to the Budget proposals for 1953-54. Revenue for the year is estimated at Rs. 6,574.71 lakhs and expenditure at Rs. 6,574.51 lakhs, leaving a nominal surplus of Rs. 20,000. Credit is being taken for an additional receipt of about Rs. 50 lakhs by revising court-fees. Proposals for the amendment of the Court Fees Act have been under the consideration of the Government for some time and it is now proposed to push this legislation through.

No other measure of taxation is being proposed now, except what I had referred to already, namely, what follows from the termination of the Government of India's agreement to tobacco taxation. The taxation measures already approved during the current year, may bring in about Rs. 152 lakhs next year. Receipts under General Sales Tax have been fixed at Rs. 1,400 lakhs, the same as in the revised estimate for the current year. The estimated expenditure for next year is less than the revised estimate for the current year, by Rs. 301 lakhs.

New Schemes

In view of the impending formation of the Andhra State, provision for new schemes has been restricted to those which are more or less continuations of existing schemes. The cost of new schemes during the year is estimated at Rs. 65 lakhs.

Capital Expenditure

Capital expenditure has been provisionally fixed at Rs. 1,842 lakhs which includes Rs. 653 lakhs on irrigation, Rs. 927 lakhs on electricity, Rs. 139 lakhs on buildings and Rs. 75 lakhs for the payment of compensation for abolished zamindari estates. In the matter of extension of electricity to new consumers, the Government have decided to invite contributions from the beneficiaries, towards the capital expenditure. Priority will be given to schemes on which a large measure of contribution is forthcoming from the people. In view of this new policy, the usual provision has not been made for taking up extension schemes.

Ways and Means, 1953-54

The general Ways and Means requirements of the year are—

	RS. LAKHS.
Capital expenditure	1,842
Loans and advances—Net disbursements. .. .	22
Repayment of loans raised in 1938 and maturing in the year and a part of other loans	162
Repayment of loans taken from the Government of India	20
Repayment of loan from a Commercial Bank	100
Making up a total of	2,146

As against this, we may expect a net credit of Rs. 373 lakhs under State Trading Schemes, on account of the stocks of foodgrains and chemical manures in our godowns and a net credit of Rs. 150 lakhs under deposit transactions, making a total of Rs. 523 lakhs. The balance of Rs. 1,623 lakhs should be obtained by borrowing, there being no reserves to draw upon. Our budget is highly deficit, because we do not have in sight the means to meet the capital expenditure.

The Government of India and the open market are our only resources in this respect. We may be able to raise an open market loan of Rs. 500 lakhs again this year. For the balance, we will have to depend entirely on the assistance from the Central Government in some form or other. Our Capital Expenditure schemes are all part of the Five-Year Plan and the finding of resources required for them must be deemed to be a national obligation and not only a problem of this State.

Five-Year Plan

The Five-Year National Plan relating to this State envisages an outlay of about Rs. 141 crores during the five years. Of this sum, Rs. 85 crores cover Capital works on irrigation and electricity, such as the Tungabhadra, the Lower Bhavani, the Machkund, the Moyar and other projects. The balance of Rs. 56 crores is to be spent on Social Services, including aids to agriculture and industry.

The capital expenditure of Rs. 85 crores was expected to be met by withdrawal from the reserves to the extent of Rs. 30 crores, by Central assistance to the extent of Rs. 30 crores, by open market loans to the extent of Rs. 20 crores and by the surplus from deposit transactions

to the extent of Rs. 5 crores. The outlay of Rs. 56 crores on social and other services was to be met from current revenues, i.e., from the normal revenue budgets of the five years, supplemented by additional taxation of about Rs. 20 crores and economies in unproductive expenditure of about Rs. 5 crores.

Broadly, the scheme of the Plan in respect of resources was that the State should shoulder additional burdens to balance the Revenue budgets of the five years, after providing for all schemes in the Plan, which should normally be met from current revenues. If that can be done in all the five years, then there will be sufficient resources in the form of accumulated reserves, Central aid and open market loans, to cover the capital programme. Two, out of the five years of the Plan, have run out.

On the average, the outlay for each year is expected to be Rs. 28 crores, of which Rs. 17 crores may be for irrigation and electricity projects and Rs. 11 crores under other heads. In 1951-52, the capital outlay on irrigation and electricity works was about Rs. 17 crores and the expenditure on other schemes covered by the Plan, was Rs. 10 crores, making a total of Rs. 27 crores, as against the average of Rs. 28 crores. The progress in the first year of the Plan may therefore be considered satisfactory. But on the resources-side of the Plan, the Revenue budget of the State for that year, far from being balanced, showed a deficit of Rs. 5 crores.

In 1952-53, the figures are Rs. 18 crores on irrigation and power and Rs. 11 crores on other schemes, making a total of Rs. 29 crores. The outlay has thus exceeded the average by about rupees one crore, but here again, the Revenue budget has a gap of about Rs. 5½ crores and that too, after taking into consideration the additional receipt of about Rs. 3 crores from the Centre, on the award of the Finance Commission.

For the ensuing year, i.e., the third year of the Plan, we have programmed for an outlay of only Rs. 15½ crores, on capital works, and Rs. 9½ crores under other heads.

The Government had raided the reserves for three years in succession, to balance Revenue budgets, instead of balancing them with additional taxation. The National Plan as far as our State is concerned, appears to be breaking down on the side of resources. But it is largely due to the famine, which has depleted our reserves to the extent of about Rs. 10 crores and also due to our inability to levy fresh taxation under the circumstances prevailing in this part of India.

Assets and Liabilities

The total Public Debt and other liabilities of the State under all heads, is estimated at Rs. 97 crores at the end of the current year. As against this, we hold capital and remunerative assets worth Rs. 134 crores. The position continues to be satisfactory. The question is often being asked, as to what had happened to the Reserves accumulated during the War years. On the 31st March 1946, we held securities worth about Rs. 44 crores in the Reserve Fund and Cash Balance Account.

During the post-war years, we have spent on all capital works, including payment of compensation to zamindars, a total sum of Rs. 87 crores and also lent to agriculturists, industrialists, local and other public bodies a net sum of Rs. 19 crores, making a total investment of Rs. 106 crores. During this period, we borrowed from the Government of

India and the open market, a net sum of Rs. 40 crores. The reserves were utilised to cover the balance of Rs. 66 crores.

Budget Figure for Telugu Districts

The budget estimates of revenue and expenditure of the State, have been distributed between the Telugu area and the residuary area and brought forward as a separate volume. The estimates for Bellary District have been included under the residuary area in that volume, without excluding the Telugu taluks. The methods adopted by the Finance Department for this purpose are not infallible and have no political significance, but are rough and ready ones.

The Revenue in 1953-54 for the Telugu districts, is placed at Rs. 2,077 lakhs and expenditure at Rs. 2,280 lakhs, showing a deficit of Rs. 203 lakhs in the Revenue account. The corresponding figures for Telugu districts in the revised estimates for the current year are, Revenue Rs. 1,934 lakhs and expenditure Rs. 2,461 lakhs, showing a deficit of Rs. 507 lakhs. One reason for the bigger deficit in the current year may be the large outlay on famine relief measures in Rayalaseema.

Of the capital expenditure of Rs. 1,842 lakhs proposed in the budget, Rs. 871 lakhs relate to the Telugu areas, including the Tungabhadra Project and Rs. 971 lakhs to the residuary area. The corresponding figures in the revised estimates for the current year are Rs. 971 lakhs for Telugu areas, including the Tungabhadra Project and Rs. 1,129 lakhs for the residuary areas. It should be clearly understood that these figures cannot and will not operate as a separate budget for the two areas, so long as this State continues a composite one.

Directory of Universities and Institutions of Higher Learning

A Directory of Universities and other Institutions of Higher Learning in India, 1951-52, has been brought out by the Central Ministry of Education.

The Directory lists 30 Indian universities, classifies them according to the affiliating, affiliating and teaching, and residential, teaching and unitary types and gives details about faculties provided by each university. The colleges affiliated to each university are also listed along with details of their various departments.

The publication gives the names of the various institutions where professional education can be pursued in agriculture, commerce, engineering, law, medicine, etc. The Directory also gives details about institutions of higher learning, not affiliated to universities.

New Publication on Railway Working

The Ministry of Railways have just issued a publication entitled *Indian Railways: 1951-52*, dealing briefly with the principal features of railways working during the year.

The book is intended to help the public to understand and appreciate the working of this largest nationalised undertaking. It contains in addition to 111 pages of textual matter, a supplement of 27 graphs indicating the salient features of railway finance and performance, and 22 statistical tables presenting data on different aspects of railway working over a period of 14 years.



AIR FORCE CHIEF'S VISIT: Air Marshal C. E. Gibbs, Commander-in-Chief of the Indian Air Force, recently came to Madras on a three-day visit. The Air Force Chief met the Chief Minister Sri C. Rajagopalachari at the Secretariat.

People's Edition of the Five-Year Plan

A "People's Edition" of the Five-Year Plan has just been brought out by the Publications' Division of the Ministry of Information and Broadcasting. The People's Edition condenses the Plan into a fourth of its original size and is a handy document containing a full authorised summary of the Plan together with a number of illustrative charts and diagrams and pictures. The abridged version retains the substance of the original plan and while simplifying, also preserves, as far as possible, its form and language so that for purposes of general use it can help in the study of the main document.

One distinctive feature of the People's Edition is the inclusion in it of a number of informative charts and diagrams illustrating various aspects of the Plan and the targets of additional production. There are special charts showing the Central and State Governments' plans, major irrigation and power projects, community projects and development blocks, etc. Targets of the Five-Year Plan in the sphere of agriculture, irrigation and power, industry, transport, education and health have been shown in the form of pictographs.

A break-up into main heads of the total expenditure of Rs. 2,069 crores in the Five-Year Plan forms the subject of a special chart which gives a dimensional estimate of the projected outlay in the Plan on agriculture, irrigation, power, transport and communications, industry, social services, rehabilitation, etc.

The location of the various river valley projects in India and which of them are of a multipurpose nature and which are exclusively for irrigation or power, form the subject-matter of a map. Sixty-one major irrigation and power projects of the Centre and the States are shown. New projects which are to be initiated during the latter part of the Plan period, namely the Kosi, Vayna, Krishna Valley schemes, Rihand and Chambal Projects have also been indicated.

Besides, there are a number of statements giving a break-up of the development expenditure in the Plan according to the main heads and according to Part A, B and C States. Break-up of the expenditure of individual States under different heads of developments has also been given.

The Resolution passed by the National Development Council at its meeting in November 9, 1952, finds an important place in the People's Edition inserted as a frontispiece. The Resolution has been signed by Sri Jawaharlal Nehru, Chairman of the National Development Council. It says:—

"Having considered the Five-Year Plan, the National Development Council places on record its general approval and acceptance of the objectives, priorities and programmes embodied in the Plan: affirms the common resolve of the Governments of all the States of the Union of India, in co-operation with the Central Government and with one another and with the support of their people,

to carry out the Plan with determination and achieve its targets; and calls upon all citizens of India to work for the fulfilment of the National Plan."

Priced at Rs. 2-8-0 per copy, the People's Edition will shortly be available on sale.

Naphthalene from Creosote Oil Sediment

A commercial process for the recovery of naphthalene—which is a useful laundry moth repellent—retained in creosote oil, has been worked out at the Central Laboratories for Scientific and Industrial Research, Hyderabad (Deccan).

This residual naphthalene usually separates out in colder climates as a sludge at the bottom of oil containers, carrying along with it the non-volatile impurities and some oil. Since the oil and naphthalene boil in the same range, recovery of the latter by sublimation is not possible. Other common methods of separation are also not satisfactory. Before the last war, this sediment was considered a waste product and was disposed of as a fuel or as an adulterant in the manufacture of liquid disinfectants. When imports of naphthalene (500 tons per annum) stopped, it was considered worthwhile to recover naphthalene from this source.

The February issue of the *Journal of Scientific and Industrial Research* describes the process of recovery.

Chief Minister at Madurai

(See opposite page)

Sri C. Rajagopalachari, Chief Minister, recently visited Madurai.

Pictures show:

(1) The Chief Minister addressing a public meeting at Madurai.

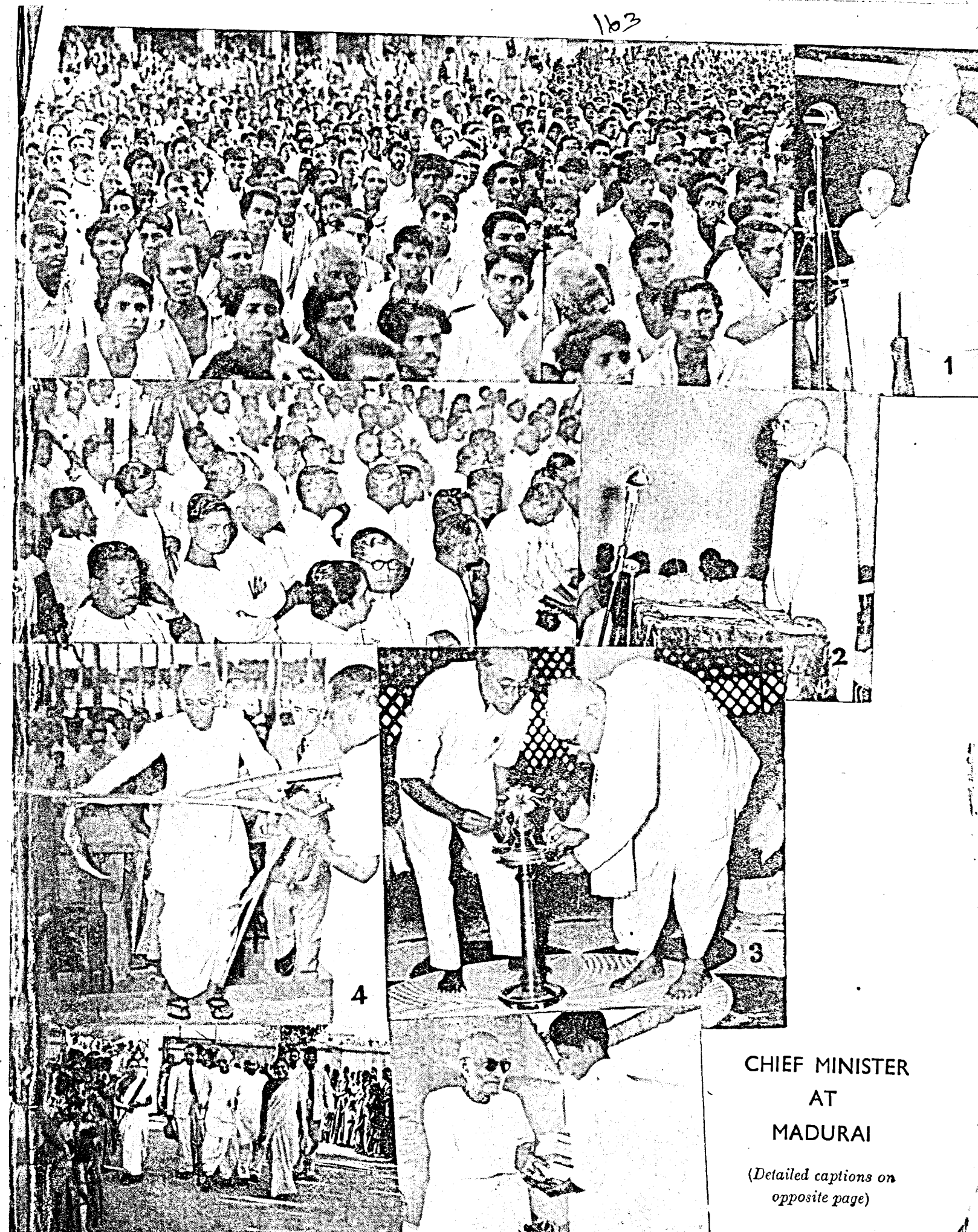
(2) Rajaji talks to the members of the Tamil Nad Foodgrains Merchants' Association, Madurai.

(3) At Gandhigram, Madurai, the Chief Minister lights a *kuthivilakku* (lamp). The occasion was the opening of eight blocks of a building at the village level workers' centre of the Madurai Community Project in Gandhigram.

(4) Cutting the ribbon to signal the opening of the Festival of Art and Carnival organized by the Lady Doak College for Women.

(5) With social welfare workers.

(6) Presenting books to a prizewinner.



CHIEF MINISTER
AT
MADURAI

(Detailed captions on
opposite page)



Registered No. M-4767

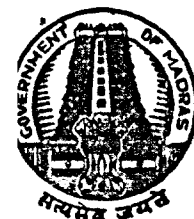
THE PRESIDENT VISITS VISAKH WOMEN'S CO-OP

On his recent tour of Madras State the Union President Dr. Rajendra Prasad paid a visit to the Tailoring Section of the Visakhapatnam Women Cottage Industries Co-operative Society Limited, at the Naval base *I.N.S. Circars*, Visakhapatnam.

This Society was formed in 1946 to train women tailoring, dyeing and printing, knitting and lacework and to provide an honourable independent living to members. From 1948 onwards the Society has taken up tailoring contracts of the Naval establishment *I.N.S. Circars*, besides other work.

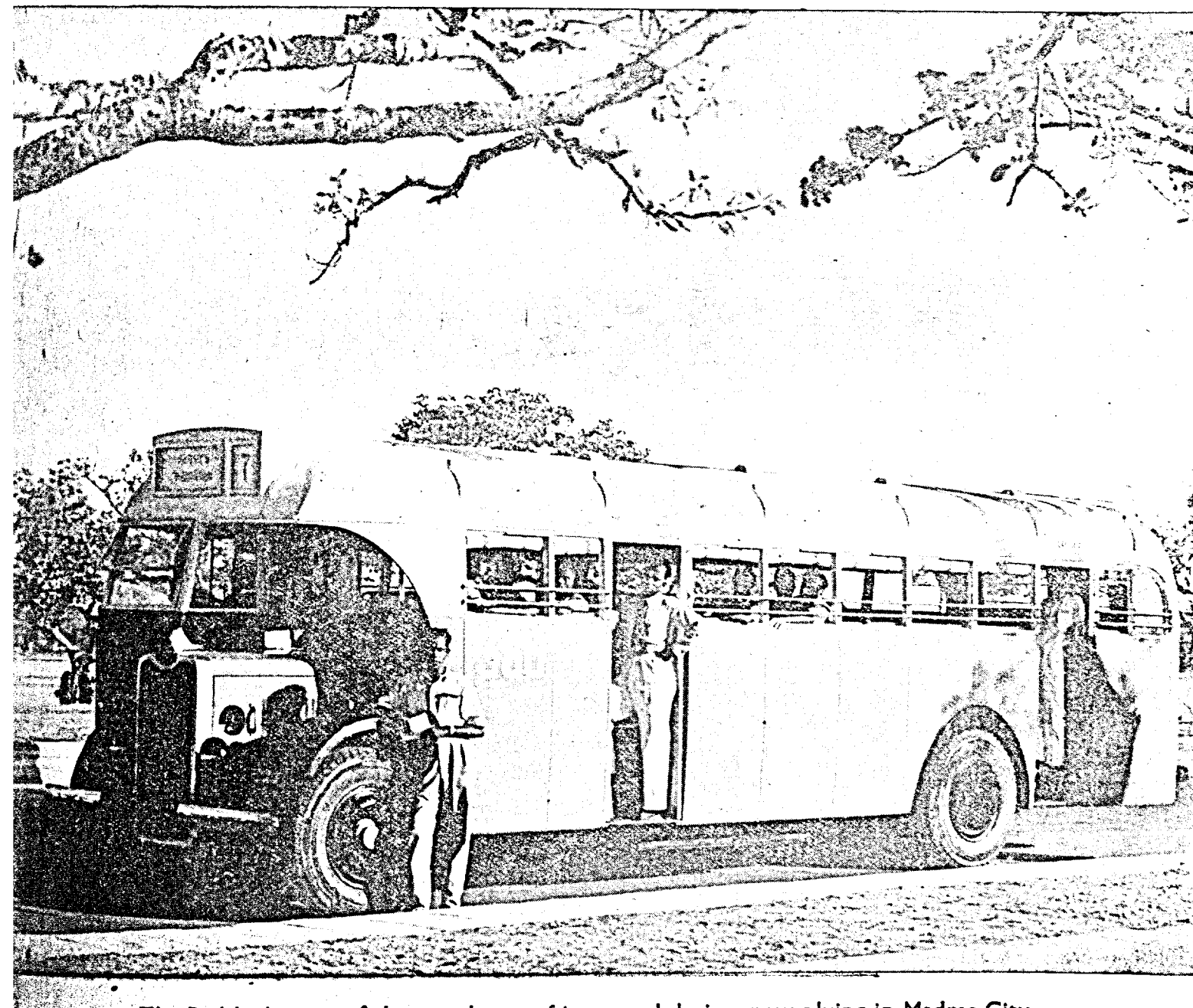
Pictures show :

- (1) Srimathi B. Kamala Devi, President of the Society, showing samples of work done by the members to the President, the Governor of Madras, and Captain B. S. Soman, Naval Officer-in-charge of *I.N.S. Circars*.
- (2) The President studies the working of the Tailoring Section.
- (3) Srimathi Kamala Devi displays the emblem and motto of the Society—'Happy Cottages thriving under the protection of the Dharma Chakra'.



MAY 1953
Price 3 annas

M A D R A S¹⁶⁵ *Information*



The Red Lady, one of the new buses of improved design, now plying in Madras City.

THE GOVERNOR VISITS SERVICE HOME



(one of the following)—
(a) tailoring, spinning and weaving; (b) Housekeeping; (c) Balasevikas (with training in pre-Basic and Basic education) and (d) help for training in Midwifery or Teaching.

Shri Sri Prakasa, Governor of Madras, recently visited the Service Home at Royapuram, Madras City. (Top) Pupils at work in the Embroidery class; (below) Dr. (Srimathi) Jayalakshmi A. Rao, Women's Welfare Officer, shows the Governor samples of work done by the Service Home inmates.



A major problem in social work is the care of deserted wives, widows and destitute women, who, if no relief is forthcoming, may either go astray or commit suicide. Such women find a haven in the Service Homes run by the Women's Welfare Department as part of its preventive and rehabilitation work.

Special cases are admitted after careful investigation, and the inmates are given general education and vocational training for three years. Training includes: *General*—Three R's, mother tongue, science, social subjects, Hindi, home nursing, spinning, cutting and sewing, handicrafts, gardening and music; *Special*—

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Madras Information

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"WE SEEK TO SERVE AND NOT TO COMPETE"

May 1953

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Madras and the Five-Year Plan

Today the Five-Year Plan is a stern reality. The successful implementation of the Plan is the acid test of our right to nationhood. In any country the first part of national resurgence in the political struggle; the second is the hardest—the constructive phase. The Five-Year Plan initiates a cycle of developmental projects, the first half-decade to set a willing pace for the years of labour and achievement to come. Only after passing this period of toil and strain against newer and higher targets can we approach the third and last phase—of national consolidation.

The blueprints and white papers of the National Five-Year Plan indicate the nature and extent of the work we must do, before we claim the reward of a happier, healthier and more prosperous way of life.

Finances of the Plan

In terms of money, the Five-Year Plan involves an expenditure of Rs. 2,069 crores, of which the share of Madras State is Rs. 140.84 crores.

The statement on page 4 shows at a glance the proposed expenditure during 1951-56, the actuals for 1951-52, the Revised Estimate for 1952-53 and the Budget Estimate for 1953-54 in respect of schemes included in the Five-Year Plan:

Flying Start for Madras

It has been significantly remarked that so far as Madras State is concerned, the Plan provides only for the continuation of the many schemes of development that have been under way. This does not belittle the importance of the Plan; on the other hand, it highlights the noteworthy achievements of this State in the post-independence era by the inauguration of numerous development projects and nation-building schemes.

For this very reason, Madras State is in a particularly advantageous position to benefit by the implementation of the Five-Year Plan. Apart from the accent in the past years on projects for progress, Madras State has to its credit many pioneering measures in the sphere of mobilising public support and co-operation, like the rural development scheme and the co-operative movement. There is, therefore, ample ground for sustaining the claim

that we in Madras have the background necessary to approach the task of planning, conscious of our responsibility and confident of success.

Accent on Agriculture

The Madras Plan, like the All-India Plan, is largely an agricultural plan, the expenditure on Agriculture, Irrigation and Electricity being of the order of Rs. 100 crores.

Agriculture comprises mostly Grow More Food Schemes and Land Development and Reclamation Schemes, Minor Irrigation Schemes and Agricultural Supplies Schemes. A few miscellaneous schemes like Agricultural Training and Research, Sugarcane Development, increasing Cotton Production, Plant Protection, etc., are also included under this head.

The total expenditure under the head 'Agriculture' programmed for 1951-52 in the Plan was Rs. 420.08 lakhs. Expenditure actually incurred was Rs. 274.00 lakhs. Good progress was made on Research, Land Development and Reclamation, Minor Irrigation and Manures and Fertilisers. The default was primarily due to non-receipt of equipment, non-availability of plant and adverse seasonal conditions.

In 1952-53, the total amount programmed to be spent under all the schemes comprised under the head 'Agriculture' was Rs. 341.50 lakhs. Against this, the expenditure actually incurred was about Rs. 276.00 lakhs. Appreciably good progress has been made in the execution of Minor Irrigation Schemes.

Under the Plan, a net additional production of 8.60 lakhs tons of rice and millets (base-year 1950-51) is expected to be achieved at the end of 1955-56, inclusive of an additional production of 1.67 lakhs tons of cereals from certain other schemes. As regards cotton, an additional production of 7.5 lakhs of bales is expected to be achieved at the end of 1955-56.

Animal Husbandry

The four-point policy for the development of improvement of cattle in the State, underlines the following lines of activity: (i) better feeding, (ii) breeding to improve nondescript and descript strains of cattle, (iii) segregation of useless cattle, and (iv) prevention of diseases.

Key Village Schemes have been initiated for upgrading stocks. There is provision for Veterinary education, research and for opening a veterinary centre in each taluk. There is now a District Veterinary Officer for each district.

Dairying and Milk Supply

The Madras Co-operative Milk Supply Union, Limited, has undertaken a scheme with Government assistance for increasing the production and supply of milk in the City of Madras. From April 1, 1952, to September 30, 1952, 9.14 lakhs of Madras measures of milk was sold. During 1951-52, the estimated expenditure on Dairying and Milk Supply was Rs. 14.74 lakhs and the actuals were Rs. 4 lakhs.

Fisheries

The schemes for Fisheries include (i) intensive seed collection and distribution for exploiting inland waters, (ii) improvement of indigenous craft and tackle, (iii) salt subsidy scheme, (iv) provision for quick transport facilities, (v) supply of yarn and other materials to fishermen at subsidised rates, (vi) deep-sea fishing and (vii) fish preservation.

Intensive Seed Collection.—The target of five crores of fingerlings fixed for each year was not attained either in 1950-51 (scheme commenced late) and in 1952 (monsoon failed). In 1951-52 1½ crores of fingerlings were stocked, and in 1952-53 (up to September 1952) 36 lakhs of fingerlings were collected and stocked.

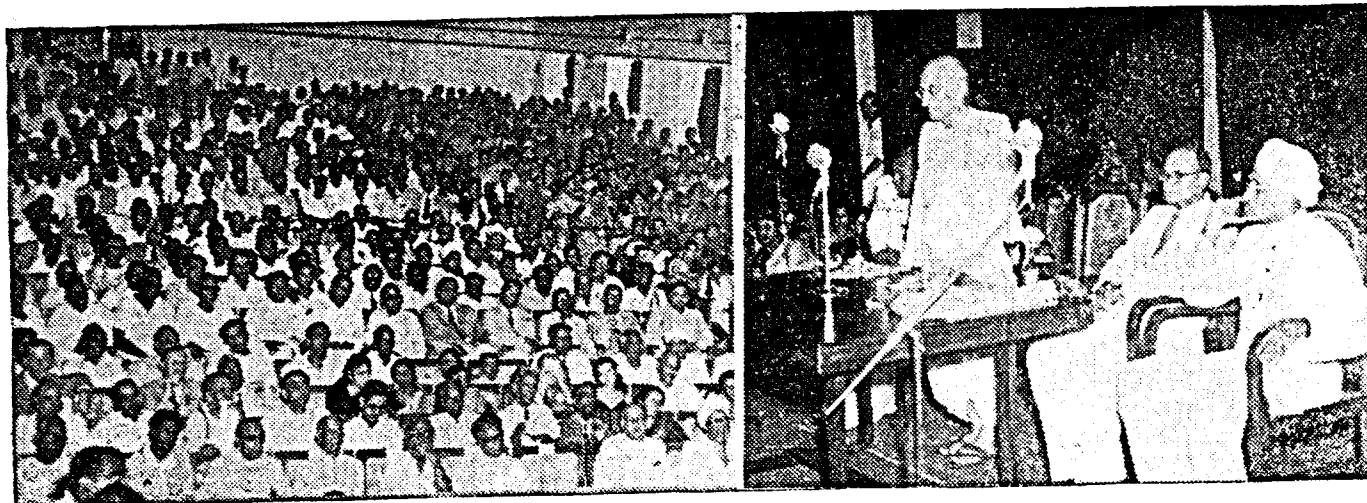
Salt Subsidy.—In the fish-curing yards of the East and West Coasts, the target fixed per year is 71,400 tons. Targets attained were: 1950-51—40,159 tons; 1951-52—74,000 tons; 1952-53 (up to September 1951)—151,139 tons.

Yarn and other Materials.—More than 50,000 nets have been repaired with the yarn distributed.

Fish Preservation.—Government have sanctioned two ice-plant-cum-cold storage units of four-ton capacity for Mangalore and Calicut. One other ice-plant is proposed to be installed at Mandapam.

Forests

The main schemes under 'Forests' are: (i) management of Panchayat



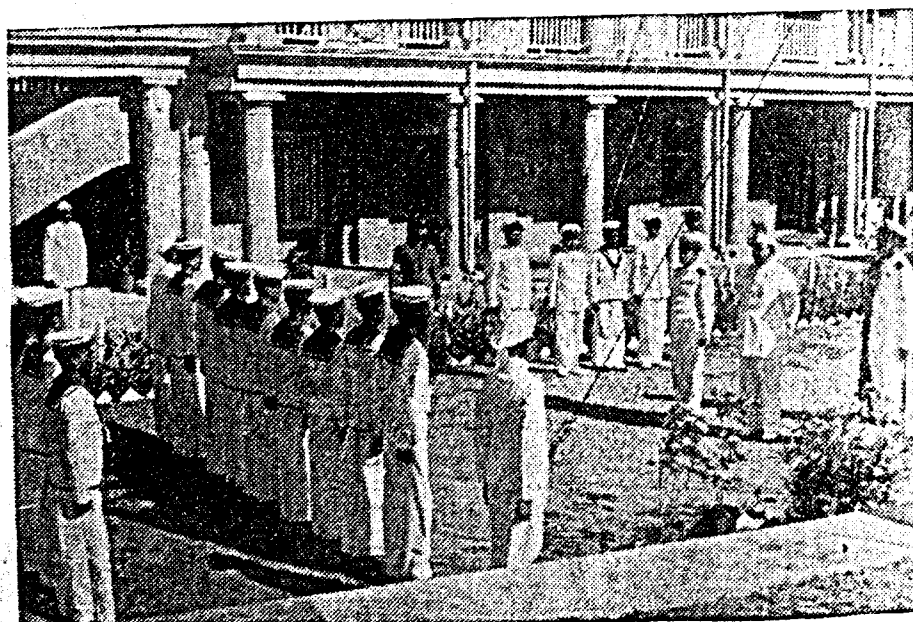
OPENING OF ANNAMALAI MANRAM: Sri C. Rajagopalachari, Chief Minister, recently declared open the Annamalai Manram, the concert hall built by the Tamil Isai Sangham, an association devoted to the encouragement and the advancement of music and allied fine arts. The new building is a welcome addition to the other noble edifices that serve to make Madras a City Beautiful.



CITY ENGAGEMENTS

CHILDREN'S ART: Shri Sri Prakasa, Governor of Madras, opened at Besant School, Adyar, on Thursday, April 10, 1953, an exhibition of children's paintings. The exhibits included the paintings of children of school-going age in the United States and the students of the Besant School, Adyar.

The Governor with Srimathi Rukmani Devi, Director of Kalakshetra, and the Headmaster of the High School, are seen here examining the paintings.



GOVERNOR'S VISIT: Shri Sri Prakasa, Governor of Madras, recently visited the Naval Establishment at Fort St. George, Madras City. Here he is seen addressing the ratings.

	Five-Year Plan, 1951-56.	Actual Expenditure, 1951-52.	Revised Estimate, 1952-53.	Budget Estimate, 1953-54.
		(Rupees in lakhs.)		
I. Agriculture and Community Development—				
1. Agriculture	15.94	2.74	2.76	2.11
2. Community Development Projects	*		55	67
3. Veterinary and Animal Husbandry	1.00	19	19	17
4. Dairying and Milk Supply	50	4	8	2
5. Forest	39	4	5	3
6. Co-operation	1.00	6	8	3
7. Fisheries	1.00	18	12	12
8. Rural Development	2.00	22	27	31
Total I ..	21.83	3.47	4.10	3.46
II. Major Irrigation and Power Projects	84.32	16.76	17.63	15.40
III. Industry—				
1. Cottage Industries	1.71	16	16	15
2. Other Industries	85	37	63	41
Total III ..	2.02	53	79	56
IV. Transport (Roads)	5.00	1.42	1.15	67
V. Social Services—				
1. Education	8.00	1.03	1.22	1.26
2. Medical	3.00	57	45	78
3. Public Health	9.00	1.39	1.40	96
4. Housing	3.00	60	76	62
5. Labour and Labour Welfare	..	..	..	..
6. Amelioration of Backward Classes	4.67	1.23	1.32	1.28
Total V ..	27.67	4.82	5.15	4.90
Grand total ..	1,40.84	27.00	28.82	24.99
	† plus	71 plus	4,17 † minus	4,17 †

* The expenditure on Community Development Projects has not been specifically included in the Plan figures pertaining to States.

† Represents the net expenditure incurred in 1951-52 on account of the purchase of chemical manures and agricultural pipes and fittings.

‡ Represents the estimated cost of technical manures and agricultural pipes and fittings expected to be held in stock at the end of 1952-53 and to be disposed of in 1953-54.

forests; (ii) soil conservation, (iii) further forest reservation including creation of village forests, and (iv) extension of casuarina plantations.

Panchayat Forests.—The system of management of forests by Panchayats proved a failure. By 1951-52 over 3,390 square miles of forest were taken over, and restored to the Forest Department for rehabilitation.

Casuarina Plantations.—To provide against the contingency of a shortage of firewood, large-scale planting of casuarina, especially along the eastern coastal areas, has been taken up. So far 23,428 acres have been planted.

The Co-operative Movement

Under the Plan, co-operation is held basic for rapid socio-economic development on democratic lines. The various schemes under way include co-operative farming, co-operative workshops, land colonisation societies and multipurpose societies for distribution of items required for intensive cultivation.

Loans for Societies in Rayalaseema.—The target for the issue of loans by the Central Banks at Anantapur, Hospet, Chittoor, Cuddapah and Kur-nool, in one year is Rs. 71.68 lakhs, and the subsidy to be given is one per

cent of this amount. This enables the banks to advance short-term and medium-term loans to rural credit societies and marketing societies at 3½ per cent interest.

Cottage Industries.—The main lines of activities are: Introduction of the Visweswarayya Industrialization Scheme in one taluk each of Nellore and Tiruchirappalli Districts; demonstration of oil-pressing by Wardha type of Ghani; establishment of a Central Cottage Industries Research Institute; establishment of regional museums and regional advisory boards; supply of tools to artisans (till March 31, 1952,

Rs 1,50,000 worth of tools were purchased for distribution; raw materials worth Rs. 12 lakhs are also supplied) development of woollen drugget industry; demonstration in tanning; training imparted in coir manufacture at Baruva; glass bangle and bead-making at Kalahasti and scientific glassware manufacture in Madras.

Khadi.—The Government Khadi Scheme, started in 1946, is now being worked in nine Intensive Khadi Centres.

Urban Housing.—For the five-year period a sum of Rs. 260 lakhs has been provided for urban housing schemes, to advance interest-bearing loans to co-operative housing societies organised in Municipalities and Major Panchayats.

Rural Housing.—Provision for the five-year period under rural housing schemes is Rs. 40 lakhs.

Rural Welfare Scheme

The Rural Welfare Scheme of the Madras Government aims at doing intensive development work in the selected areas, with emphasis on inculcating a spirit of co-operation and self-reliance in the villagers. The programme provides definite plans for improving communications and water-supply, organising co-operative societies, introducing better method of sanitation, agriculture, animal husbandry, irrigation and development of Khadi and cottage industries.

Other lines of work include opening of elementary, night and Basic schools; organisation of reading rooms and libraries; installation of community radio listening sets; opening of primary health centres, dispensaries, maternity and child-welfare centres, construction of bathrooms and latrines and starting of leprosy clinics. High priority is given to the supply of electricity in rural areas.

The expenditure incurred during 1951-52 was Rs. 21.98 lakhs as against a Budget Provision of Rs. 26.28 lakhs. In 1952-53, up to September 1952 an expenditure of Rs. 10.87 lakhs was incurred against a provision of Rs. 28.80 lakhs.

Irrigation Projects

The expenditure on Irrigation under the Plan is Rs. 34.08 crores on fourteen schemes, including the three major schemes of Lower Bhavani, Malampuzha and Tungabhadra. The Planning

Commission have provided for a major scheme on the Krishna.

	Total cost in lakhs of rupees.	Additional irrigation in thousand acres.
1 Lower Bhavani ..	907	207
2 Malampuzha Reservoir.	380	40
3 Mettur Canal ..	245	45
4 Rallapad II Stage.	58	12
5 Romperu Drainage.	96	10
6 Cauvery Delta Drainage.	30	..
7 Manimuthar ..	398	20
8 Upper Pennar ..	84	6
9 Bhairavanitippa.	93	11
10 Araniar ..	95	3
11 Walayar ..	100	8
12 Mangalam ..	45	4
13 New G.M.F. Schemes in charge of Public Works Department.	73	..
14 Tungabhadra ..	1,820	250
	4,424	615

Work at Tungabhadra is proceeding according to programme. In 1952-53 irrigation for only 30,000 acres instead for the anticipated 100,000 acres of second-crop in the Krishna Delta, could be had. The project will be effective as from June 1953, with water available for irrigation.

Sale of Wheat Products

The Government of Madras have decided to sell wheat products, namely, flour, sooji and atta to consumers and merchants without any limit on the quantities, in view of the present availabilities in the State.

The consuming public and the merchants may avail of this opportunity to purchase their requirements.

In respect of the schemes 1-12, a sum of Rs. 420 lakhs was the budgetted expenditure during 1951-52, and the actual expenditure was Rs. 436 lakhs. For 1951-52 the estimated expenditure was Rs. 436 lakhs. For 1951-52 the estimated expenditure is Rs. 451 lakhs, and the Budget Estimate for 1953-54 is Rs. 388 lakhs.

Power Schemes

The implementation of the electricity schemes in the Five-Year Plan progressed satisfactorily during 1951-52 and 1952-53.

The power schemes under the Plan are:

	Total cost.	Expenditure for five years.
(RUPEES IN LAKHS.)		
1 Moyar Hydro-Electric Scheme.	464	95
2 Pykara III Stage Extensions.	489	208
3 Papanasam II Stage Extensions.	336	199
4 Machkund Hydro-Electric Scheme.	682	432
5 Machkund Transmission Lines.	803	455
6 Madras Plant Extensions.	1,043	771
7 Nellore Thermal Scheme.	101	41
8 Madras-Mettur Inter-Connection Scheme.	218	95
9 Transmission Lines and Distribution Systems.	2,393	1,785
10 Tungabhadra Hydro-Electric Scheme.	794	643
11 Acquisition of Electrical undertakings.	450	300
Total ..	7,773	5,024

Items 1 to 10 above are under execution. Item 11 above has been slowed down on account of the present financial stringency.

The total generating capacity when the schemes in execution are completed will be 176,000 KW during the

Special Remission Sanctioned In Cuddapah

The Government have sanctioned the grant of wet and dry remissions for Fasli 1362 on the scale and in the areas mentioned below in the district of Cuddapah which have been affected by adverse seasonal conditions:

Area I: Comprises Talamanchipatnam firka, five villages in Muddanur firka, 10 villages in Thilla-proddatur firka and Medidine in Peddandluru firka in Jammalamadugu Taluk, Lingala, Vemula, Thondur and Pulivendla firkas and five villages in Simhadripuram firka in Pulivendla Taluk, Rayachoti, Galivedu and Chinnamandem firkas, eight villages in Lakkireddipalle firka, seven villages in Veeraballe firka, 13 villages in Chekrayapet firka and two villages in Tsundupalle firka in Rayachoti Taluk, and 16 villages in Palugurallapalle, 10 villages in Munnelli and 14 villages in Kalasapad firka in Badvel Taluk. This area is entitled to remission of land revenue at the following scale:—

Wet Lands: (a) Full remission on wet lands with an outturn of four annas and below. (b) Half remission on wet lands with an outturn of above four annas and below eight annas.

Dry Lands: (a) **Food Crops:** (i) Full remission for lands with an outturn of four annas and below; (ii) Half remission for lands with an outturn of above four annas and below eight annas. Food crops, for this purpose, consist of cereals and pulses. (b) **Non-Food Crops:** (i) Full remission for lands grown with crops with an outturn of below four annas; (ii) Half remission for lands grown with crops with an outturn of four annas and above but below eight annas.

Area II: Comprises eight villages in Simhadripuram firka in Pulivendla Taluk, and rest of the villages not included in Area I in Lakkireddipalle firka, Veeraballi firka and Chekrayapet firka in Rayachoti Taluk. This area is entitled to remission of land revenue at the following scale:—

Wet Lands: (i) Full remission on wet lands with an outturn of four annas and below; (ii) No remission on wet lands with an outturn exceeding four annas.

Dry Lands: (a) **Food Crops:** (i) Full remission for dry lands grown with crops with an outturn of four annas and below; (ii) No remission for dry lands grown with food crops with an outturn exceeding four annas. (b) **Non-Food Crops:** (i) Full remission for lands grown with crops with an outturn of below four annas; (ii) No remission for dry lands grown with non-food crops with an outturn of four annas and above.

The Land Revenue Reforms Committee examined the feasibility of replacing the present land revenue by a sales tax and by various types of agricultural income-tax, but found these alternatives unacceptable. The Committee has recommended that the present system of periodical resettlement of land revenues should be abandoned and replaced by a simple system of sliding scale of assessment. It has also recommended the imposition of an agricultural income-tax (to be applied to plantation areas in the first instance), a surcharge on larger holdings carrying an assessment of over Rs. 150 and a special charge on commercial and other valuable crops. These are being examined by Government.

Co-operation

"Promote co-operative organisations for the cultivation, marketing and processing of agricultural products and for the purchase of farm supplies and equipment." [3 (h)]

During 1950 an experimental scheme of a co-operative joint farming society was formed in the Krishna District. It is proposed to start another such scheme in the Nilgiris District.

At the end of June 1951, there were 38 Better Farming or Agricultural Improvement Societies which are intended for the propagation and supply of improved varieties of seed, manure and implements. There were also seven Agricultural Demonstration Societies.

The number of co-operative marketing societies in the State was 274 in 1950-51. Eleven marketing societies in seven districts undertook processing activities. A scheme of Village Co-operatives on the basis of "One Village One Society" for the association of cultivating ryots with the Government's food production efforts was initiated in April 1950 in seven districts and extended to 10 more districts in August 1952.

Diversification

"Encourage diversification of agricultural production whenever this can help raise the living standards of the farm and non-farm populations." [3 (i)]

The agricultural part of the Five-Year Plan of the Madras State has set targets of additional production of cotton, oilseeds, and sugar besides foodgrains. In the 53 firkas selected for intensified rural development and in the six centres of the Community Project Scheme, great emphasis is laid, *inter alia*, on diversification of agricultural production and attainment of regional self-sufficiency.

Rural Industries

"Take steps directed towards rational diversification of their economics so that agricultural development may proceed as part of an integrated programme of economic development." [3 (j)]

"Encourage the establishment of industries in rural areas, including co-operatives, small-scale and cottage industries,

and especially industries using indigenous agricultural products as their raw materials and thus assure such industries a place in the economic life of the country." [3 (k)]

Improvement of the village economy by diversification of occupation is sought to be attained by several schemes such as the Sir M. Visweswaraya Industrialisation Scheme and the Village Industries Scheme. There are also several industrial schools providing training in special village industries. Special Advisory Boards have been constituted to stimulate the development of specific cottage industries in selected areas. A Survey of Cottage Industries has been undertaken regarding the structure and conditions of cottage industries. It is proposed to establish a Research Institute for Cottage Industries.

Education

"Expand and develop programmes of literacy and general education in the rural areas." [3 (m)]

An Adult Education Scheme was inaugurated in 1948 to liquidate illiteracy among adults. Rural colleges have been opened to enable persons with main educational qualifications to acquire greater knowledge.

Farming

"Ensure that adequate agricultural research through Governmental services or otherwise, is undertaken." [3 (n)]

"Establish or expand services for the education of the farmer in the technological and economic aspects of agricultural and rural life through such measures as agricultural extension services and model farms." [3 (o)]

A new enlarged scheme of agricultural extension work has been undertaken by the Department of Agriculture. Improved methods are demonstrated on cultivator's own land. Dissemination of knowledge on improved methods is done through publication of journals and pamphlets in regional languages, exhibitions, radio, lantern slides, cinema films, etc.

Labour

"Improve the economic, social and legal status of agricultural wage labourers in plantations and other large estates." [3 (p)]

Government assign to a rural labourers lands for house site which become their own, where the conditions of assignment are fulfilled.

Under the present programme, the Minimum Wages Act is proposed to be enforced by the end of 1953 in the agricultural sector. Under the Act, rates of wages for plantation and estate labourers have been fixed.

Backward Classes

"Recommend that all Governments responsible for populations which are not economically advanced, including those Governments responsible for the administration of non-self governing Territories, in addition to taking such of the measures described above as may be required, should ensure that the interests of such populations are fully protected."

Land Revenue Remission in Anantapur

The Government have sanctioned the grant of wet and dry remissions for Fasli 1362 in the areas which have been affected by adverse seasonal conditions in the Anantapur District. The areas to which remission has been sanctioned and the scales of remission sanctioned are mentioned below:—

Area I: 26 villages in Tadpatri Taluk; 93 villages in Penukonda Taluk; 82 villages in Hindupur Taluk; 146 villages in Kadiri Taluk; four villages in Madakasira Taluk; 55 villages in Dharmavaram Taluk.

Wet Lands: (a) Full remission on wet lands with an outturn of four annas and below. (b) Half remission on wet lands with an outturn of above four annas and below eight annas.

Dry Lands: (a) **Food Crops** (Cereals and pulses): (i) Full remission for lands with an outturn of four annas and below; (ii) Half remission for lands with an outturn of above four annas and below eight annas. (b) **Non-Food Crops:** (i) Full remission for lands grown with crops with an outturn of below four annas; (ii) Half remission for lands grown with crops with an outturn of four annas and above but below eight annas.

Area II: 60 villages in Anantapur Taluk; 34 villages in Kalyandrug Taluk; five villages in Tadpatri Taluk; four villages in Hindupur Taluk; 31 villages in Madakasira Taluk; five villages in Dharmavaram Taluk.

Wet Lands: Full remission on wet lands with an outturn of four annas and below; (ii) No remission on wet lands with an outturn exceeding four annas.

Dry Lands: (a) **Food Crops** (Cereals and pulses): (i) Full remission for lands grown with crops with an outturn of four annas and below; (ii) No remission for dry lands grown with food crops with an outturn exceeding four annas. (b) **Non-Food Crops:** Full remission for lands grown with crops with an outturn of below four annas; (ii) No remission for dry lands grown with non-food crops and with an outturn of four annas and above.

The Government have also directed that (a) the collection of the loan instalments due in Fasli 1362 be postponed to Fasli 1363 in Areas I and II; (b) the unremitted kist of Fasli 1361 be postponed to Fasli 1363 in Area I; and (c) the collection of cesses due in Fasli 1362 in Area I be postponed to Fasli 1363.

PLANNING

irrigation season and 149,000 KW during the non-irrigation period. The anticipated peak demand will be 232,560 KW. The Government are therefore pressing for the inclusion of the Periyar Scheme (Rs. 10.48 crores; 75,000 KW) and the Kundah Scheme (Rs. 23.00 crores; 75,000 KW).

Community Projects.—The Community Projects programme was officially inaugurated on October 2, 1952, in all the six Project areas. Items of work relating to drinking water supply, sanitation, public health, roads, education, agriculture, etc., are well under way. The scheme is making good progress in all the areas.

Amelioration of Scheduled and Backward Classes.—The various measures undertaken by the Government for the amelioration of the conditions of Harijans and Backward classes generally fall under the following headings: (i) Education, (ii) Public Health, and (iii) Other schemes. Education concessions include non-levy of fees in schools and colleges, running of Harijan Welfare Schools, provision of midday meals, and sanctioning of residential, non-residential and boarding grants.

The depressed communities badly need houses. The Government assign vacant land, or acquire private land and provide house-sites. Pathways, wells, burials grounds, latrines, flaying enclosures, etc., are provided at Government cost. In 1951-52, 18,471 house-sites were acquired, cost of acquisition being about Rs. 5-60 lakhs.

The expenditure on ameliorative measures for the last three years has been as follows: 1950-51—Rs. 1.05 crores; 1951-52 Rs. 1.23 crores; and 1952-53—Rs. 1.32 crores (Revised estimate).

Medical Services and Public Health

In respect of the Medical side, the Plan provides for the expansion of facilities for medical education, improvements to hospitals and dispensaries, opening of new tuberculosis clinics and sanatoria, intensification of the anti-leprosy campaign, construction of infectious diseases hospitals at Madurai and Visakhapatnam, opening of eye departments and eye clinics, and provision for research.

On the Public Health side, provision has been made for water-supply and drainage schemes (including rural

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MADRAS INFORMATION

Sales Tax Act: No Accounts in Marwari and Gujarati

The Government have directed, in supersession of the orders dated October 1, 1948, that with effect from the account year commencing from April 1, 1953, the provisions of Section 13, which are wide enough to permit dealers to maintain their accounts in Hindustani, the lingua franca of the Indian Republic, or in English, be strictly enforced. The concession allowed to dealers by a previous order to maintain their accounts in Marwari and Gujarati languages has been cancelled.

water-supply) anti-malaria schemes and a number of small schemes dealing with rural sanitation, nutrition research and health publicity.

Some of the schemes included are not new schemes, but those already under execution. The expenditure incurred on the schemes included in the Plan is as follows:

	Accounts 1950-51.	Actuals 1951-52.	Revised Estimate 1952-53.
(RUPEES IN LAKHS).			
Medical ..	44.10	57.00	45.00
Public ..	118.45	139.00	140.00
Health.			

Urban Water-supply and Drainage.—The expenditure on Urban Water-supply and Drainage schemes was roughly estimated at Rs. 71 lakhs in 1951-52, Rs. 80 lakhs in 1952-53 and a total of Rs. 420 lakhs for the five years. In 1951, the total amount of grant and loan was Rs. 64.09 lakhs.

Rural Water-supply.—The expenditure on Rural Water-supply schemes is roughly estimated at Rs. 69 lakhs for 1951-52, Rs. 60 lakhs for 1952-53 and Rs. 300 lakhs for the five years. The actual expenditure for the two years 1951-52 and 1952-53 was Rs. 170.51 lakhs.

Education

Under the Plan, a programme for the development of certain educational

schemes as primary education (including Basic education), university education, technical and vocational education, social education (adult education), other schemes (education of defective children), involving an expenditure of Rs. 8 crores was drawn up.

No special schemes have been drawn up; those already in existence, which are easy to implement and which will continue even after the five-year period, have been included in the programme. Good progress has been made. The number of Basic schools in 1952-53 was 715 with a strength of 76,240, as against 507 with a strength of 51,000 in 1951-52. The number of Basic training schools in 1952-53 was 60, as against 56 in 1951-52.

Industries

For large-scale industries, the policy has generally been to supplement the advances already made by private enterprise. In the Madras Plan, provision has been made for Rs. 85 lakhs which will enable the opening of polytechnics, workshops, factories and laboratories.

Highways

Transport and communications are the lifelines of economic development. The provision in the Madras Plan is Rs. 5 crores, the ultimate aim being to bring every village within two miles of a district road or highway.

The actual expenditure in 1951-52 on road works (including tools and plant) amounted to Rs. 142 lakhs. During the first half of 1952-53, the actual expenditure incurred was Rupees 13.44 lakhs. Delay in land acquisition proceedings and non-receipt of equipment led to the short outlay, but better progress will be achieved in future.

People and the Plan

Presenting the Plan to the nation, the National Development Council calls upon the State Governments to carry out the Plan with determination "with the support of their people." Further, the Council calls upon "all citizens of India to work for the fulfilment of the National Plan."

If the National Plan is to succeed, this country must hum with activity, in Prime Minister Nehru's eloquent phrase, "to the music of the muscles".

LAND REVENUE

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MADRAS INFORMATION

Agrarian Reforms in Madras State

By DR. B. NATARAJAN, Economic Adviser to the Government of Madras

The Economic and Social Council of the United Nations studied the problem of land reform, and, at its session in September 1951, adopted a resolution "that appropriate measures of land reform designed to achieve improvement of the conditions of the agricultural population and an increase in agricultural production must in many countries be regarded as a necessary part of any effective implementation of comprehensive programmes for economic development".

This Resolution outlined a formulated programme of measures to be adopted by the member-Governments, appropriate to the circumstances in their respective countries in the interest of landless, small and medium farmers.

At its sixth session in November-December 1951, the Food and Agriculture Organization (F.A.O.) considered this Resolution, and arrived at the conclusion that the elimination of defective features from existing agrarian structures is not only essential to economic progress, but also to the promotion of social stability, peaceful progress, human dignity and freedom. The Food and Agriculture Organization therefore assumed major responsibility in dealing with the problem of agrarian structure.

For the due discharge of its responsibility, F.A.O. wanted to have full information on the action taken by member-Governments to implement the resolution of the Economic and Social Council. A comprehensive report on agrarian reforms was prepared for the F.A.O. A brief account of this report in the form of the action taken in Madras State on the various sections of the original Resolution relating to the agrarian reforms, is given below:

Agrarian Reforms

"Provide opportunity for the cultivator to acquire ownership of land." [3 (b)]

"Enact and enforce legislation which will prevent the charge of exorbitant rentals on agricultural land." [3 (f)]

Land Revenue Reforms Committee:

To examine agrarian and land revenue problems of this State in a comprehensive manner, a Land Revenue Reforms Committee was set up in May

1950. It examined the question of reform of ryotwari land tenure, land revenue assessment and administration and conditions of cultivating tenants and agricultural labour. The recommendations of the Committee are under consideration by the Government.

Legislative Enactments:

In the legislative sphere, several Acts have been passed with the object of abolishing all systems of landlord tenure, fixing fair rent in the erstwhile zamindari area and improving landlord-tenant-labourer relationship.

(i) Madras Estates (Reduction of Rent) Act, 1947, provided for the reduction of rents of occupancy ryots in estates to the level of ryotwari assessments in the neighbourhood. The work of scaling down rents was completed in two years.

(ii) Madras Estates Communal Forests and Private Lands (Prohibition of Alienation) Act, 1947, aimed at the prevention of alienation of land and destruction of forests by properties to make immediate gains.

(iii) Madras Estates (Abolition of Zamindari) and Conversion into Ryotwari Act, 1948, abolished the Zamindari and Inam tenurial systems prevalent over 26 per cent of the total area of the State. The Government acquired the rights of the estate holders on payment of compensation and ryotwari tenure is being introduced in the estates.

(iv) Malabar Tenancy (Amendment) Act, 1951, was an amendment to the Act of 1929 which sought to regulate the complex tenurial conditions prevalent in the Malabar District. The Amendment provided for fixity of tenure for all classes of tenants and prescribed a machinery for the simultaneous settlement of fair rents and the preparation of a record of rights for all holdings.

(v) The Tanjore Tenants and Pannaiyals Protection Act was issued as an Ordinance in August and passed as an Act in December 1952. It aimed at the improvement of relations between landlord, tenants and farm labourers and defined and regulated tenant landlord relationship. It fixed maximum rents payable to landlords and the wages of Pannaiyals (farm labourers).

Land Holdings

"Establish on undeveloped and newly reclaimed lands secure and equitable tenure conditions, including opportunity for ownership in family sized holdings." [3 (d)]

The Land Revenue Reforms Committee recommended that in future no person should be allowed to acquire holdings carrying an assessment exceeding Rs. 250 and that the subdivision of holdings below the "unit of profitable cultivation" should be prevented by legislation. This is under Government's consideration.

Agricultural land colonization co-operative societies function with the objectives of reclaiming and cultivating waste lands and improving the economic condition of Harijans and agricultural labour. A holding allotted to a member is impartible and subdivision and fragmentation are prohibited. In the year ending June 1951, there were 30 such societies for civilians and 11 societies for ex-servicemen.

Agricultural Credit

"Establish or expand national and local institutions for providing agricultural credit at reasonable rates of interest and take legislative or administrative measures to assist in the reduction of agricultural indebtedness." [3 (e)]

Agricultural co-operative credit societies provide agriculturists with short and medium-term loans. At the end of June 1951, there were 16,330 agricultural credit societies in the State which issued during the year loans amounting to Rs. 765.29 lakhs. Co-operative Land Mortgage Banks supply long-term credit needed by agriculturists. During the year the 129 Primary Land Mortgage Banks disbursed loans amounting to Rs. 84.20 lakhs.

The Madras Agriculturists Debt Relief Act passed in 1938 incorporated the principle of compulsion in the scaling down of debts. Up to the quarter ending March 1952 debts to the extent of Rs. 5.04 crores have been scaled down due to the operation of this Act.

Tax Structure

"Review the tax structure and administration with a view to eliminating inequitable tax loads and related charges on the cultivator of land." [3 (g)]

in policies and laws relating to the transfer of land." [4]

Government's policy of amelioration of backward classes is directed mainly towards the eradication of illiteracy and insanitary housing conditions. For Harijan and backward families without any house sites of their own, provision is made for granting house sites of three to five cents of land. The formation of House Building and Cottage Industries Co-operative Societies for backward classes has been given a high priority. In the Harijan schools run by Government, midday meals are served to the pupils. Grant of scholarships and provision of hostel accommodation, sinking of drinking water wells in Harijan villages, etc., are some of the other important schemes for their amelioration.

ASPECTS OF BROADCASTING IN INDIA

Publications Division, Ministry of Information and Broadcasting, Government of India, Old Secretariat, Delhi. Pages 92.] [Price, annas twelve.

This symposium by experts of All-India Radio makes a spirited effort to present the problems and possibilities of broadcasting in India to the layman. Some of the main topics discussed are news broadcasting, music, programmes for children, rural broadcasting, radio drama, feature programmes, serious broadcasts, listener

research, wavelengths, shortwave reception, external services and the listening habit.

While there is vast potential scope for development, the present state of broadcasting admittedly does not present an encouraging picture. There are 800,000 radio sets for a population of 36 crores, which means that there is only one radio set for 450 persons. Lack of adequate power resources, economic handicaps, the need to cater to different groups (urban, rural, university, armed forces, labour, intellectual), and in different languages (th

main bulk of AIR's broadcasts is in twelve major languages; news bulletin are broadcast in 29 Indian and foreign languages)—all these factors tend to complicate the problem of ensuring the advancement of broadcasting in India.

The contributors to the symposium evince a lively interest in the problems arising in their particular fields, and in their respective notes offer refreshing sidelights to the main theme, at times even apparently contradictory. For instance, Som Nath Chit says: "Civilised man must rebel against the tyranny of the printed word"; but K. S. Srinivasan observes: "In fact, contrary to popular belief, radio and print are complementary, not competitive media." However, all the writers are unanimous in condemning learned speakers who affect the heavy essay type talk instead of trying to capture the intimacy of the spoken word.

What about AIR and music? Sri Narayana Menon declares: "Instead of the musician patronising broadcasting as in the West, here broadcasting has taken on the role of a patron." Hardly a healthy state of affairs, but AIR can gaze with pride on at least one feature which has attained immense popularity—the National Programme.

—P.V.S.

Tribes Advisory Council

Sri Chodey Mallikarjunudu has been appointed as a member of the Tribes Advisory Council in the place of Sri E. T. Kunhan, M.L.A., who has resigned.

TENDER NOTICE

1. Sealed tenders will be received by the General Superintendent, Public Works Workshops and Stores, at his office at Old Jail Street, Madras-1, up to 3 p.m. on 20th May 1953 for the work of stitching Tarpaulins.

2. Particulars of the tender and prescribed forms will be issued free of cost on application on all working days commencing from 20th April 1953 and up to 7th May 1953.

3. Earnest money to be deposited along with the tender is Rs. 500.

K. SUBRAMANIAM,

General Superintendent, P.W. Workshops, Madras.

Remission Sanctioned in Vinukonda Taluk

The Government have sanctioned the grant of wet and dry remissions for Fasli 1362 on the scale mentioned below in 45 villages in Vinukonda Taluk in Guntur District, which have been affected by adverse seasonal conditions:—

Wet Lands: Full remission on wet lands with an outturn of four annas and below.

Dry Lands: (a) *Food Crops* (Cereals and pulses): (i) Full remission for lands with an outturn of four annas and below. (ii) Half remission for lands with an outturn of above four annas and below eight annas. (b) *Non-Food Crops:* (i) Full remission for lands grown with crops with an outturn of below four annas. (ii) Half remission for lands grown with crops with an outturn of four annas and above but below eight annas.

The Government have also directed that the collection of loan instalments due in Fasli 1362 be postponed to Fasli 1363, that the unremitted kist of Fasli 1361 be postponed to Fasli 1363, and that the collection cesses due in Fasli 1362 be postponed to Fasli 1363.

Blind Relief Work

By SRI A. B. SHETTY, Minister for Health

The people of this district must be grateful to the Rotary Club of Tiruchirappalli and the Indian Red Cross Branch at this place for undertaking this kind of blind relief work in this district. The committees who have drawn up your scheme of field work and the doctors who are rendering free service by going to villages deserve special thanks of the public. The report of your sub-committee shows a good record of very useful work. The high incidence of eye diseases and the large number of cases of blindness which could have been prevented by proper care and timely treatment which you have found during your visits to the villages reveal a very sad state of affairs.

The incidence of blindness must be similarly high in other districts also. The All-India Conference for the Blind held at Bombay last year has drawn attention to the need for taking immediate steps for the prevention of blindness and for reducing its high incidence in this country by a scientific approach to this problem. Apart from the blinding affections, there must be widespread ocular ill-health requiring medical advice and treatment.

Simple Precautions

Blindness for the most part is preventable when the people are sufficiently educated to adopt simple precautions and they avail themselves of early and proper treatment for the injuries and diseases of the eye. Facilities for treatment are provided in the Government Ophthalmic Hospital in Madras City and in the eye clinics in 22 of the district headquarters hospitals. Besides these, there are the private clinics of eye specialists. Recently I had occasion to see the good work they are doing at the Moses Gnanabaranam Eye Hospital, Coimbatore, which celebrated its Silver Jubilee at the end of February. We have about 200 eye specialists in our State, of whom half the number are private practitioners.

There is great need for more eye hospitals and clinics and more specialists in this line. The treatment of many eye diseases is said to have

From the Address by Sri A. B. Shetty, Minister for Health, at the Blind Relief Seminar, Tiruchirappalli.

become marvellously effective after the advent of antibiotics. The villager, not realising that his complaint requires modern treatment, uses the old-fashioned and harmful remedies of quacks, or he delays going to eye specialists for treatment. The operation of "couching" performed by quacks for removing cataract has the disastrous effect of causing loss of sight. The public must be duly warned against subjecting

number of operations in the minimum amount of time.

But the post-operative results have not been found to be as successful as they have been claimed to be. Mobile camps for eye work in rural areas should be properly organised with an eye expert and trained assistants. Pre-operative and after-care are essential. An eye operation that once goes wrong can seldom be rectified. This Committee has, therefore, not favoured the practice of mass eye camps. The work you do here is on right lines. You visit villages, examine cases, give advice to individual patients and send to the hospital cases which require operation or careful treatment. You are also doing much needed educative work telling people how to take care of their eyes, get timely treatment and prevent the dangers of the loss of eyesight.

Major Diseases

It has been found that about 30 per cent of the blind people in India lost their eyesight by the age of 21 and particularly in the first five years of their life. The major diseases responsible for the loss of eyesight in this younger group are said to be smallpox, keratomalacia, ophthalmia neonatorum and conjunctivitis. These are easily preventable. Vaccination will prevent smallpox. Adequate animal fats in children's diet will banish keratomalacia. One or two drops of weak silver nitrate solution in the eyes of every baby at birth will prevent ophthalmia neonatorum. Simple lotions will cure conjunctivitis. Health Inspectors, maternity assistants and school teachers can undertake elementary and preventive work, if they are given instruction on the hygiene and the care of the eye.

The Second Health Ministers' Conference which met in 1948 recommended to State Governments that mobile eye clinics based on eye hospitals should be organised for work in the surrounding villages. A modest scheme drawn up for this purpose came up for consideration at the time of the Budget last year, but it has had to be deferred due to financial stringency. I am glad that voluntary effort has taken up this pioneer work in this district.

Gift of Maternity Ward

The Government have accepted with thanks the offer of the Central Co-operative Stores, Limited, Vellore, to construct a maternity ward of four beds in the Government Dispensary, Wallajapet, and to provide the ward with furniture and equipment and hand it over to Government for maintenance.

themselves to this kind of dangerous operation.

Mobile Units

The percentage of curable and preventive blindness is put down as 50 per cent or more of the cases of blindness in India. The great mass of poor people do not and cannot avail themselves of the services of qualified ophthalmologists. The All-India Conference for the Blind held at Bombay last year has, therefore, recommended that mobile ophthalmic units should be provided in every district to carry medical relief to the villages and to arrange to despatch serious cases to the hospitals for proper treatment.

The joint committee appointed by the Central Advisory Boards of Health and Education have, in their report on blindness in India, published in 1944, observed as follows:—"There is a consensus of opinion that at the present stage, mobile units are essential to a thorough attack on eye diseases and in educating the villager to the proper care of the eye." Some of the eye camps held in rural areas have obtained much publicity by performing large

The Scourge of Cancer

By PROFESSOR JOSEPH C. AUB, Professor of Research Medicine, Harvard University, Boston, U.S.A.

Cancer is the rapid growth of tissues anywhere in the body which spread locally and goes to distant parts of the body as well, where it also grows. Thus it is different from normal tissues, for normal tissues retain their size, practically as often as the usual size and they stay in their place; they do not spread to distant parts of the body. We do not know the cause of many Cancers. They come without apparent reason. But any chronic irritation is apt to produce a Cancer.

And in India, betel nut and tobacco leaf with lime, which is chewed, causes more Cancer of the mouth than throughout Europe or anywhere else. It would be better if this habit is stopped; but even so, most cancers come without known cause.

Diagnosis

How does Cancer show itself?

It shows itself by any lump which grows, such as a lump in the breast, any lump on the skin as well; any sore which does not heal on the skin, or mucus membrane, is also suspect and any unusual discharge from any of the body's openings should also make one wonder what is causing it. These are dangerous signals which should be attended to and they should represent an indication for any one to go to the doctor at once and have a thorough examination, and let the doctor make certain of the diagnosis. For early diagnosis is the key of successful treatment and in early stages of the disease, Cancers can be cured. The best treatments remain those that have been tried for many years, namely, surgery and X-rays. If the Cancer cells can all be destroyed, the disease is cured.

If the patient delays and the cancer spreads, then treatment becomes much more difficult and more prolonged. That is the reason for consulting a good doctor as soon as possible. It is true that early diagnosis is often difficult and often delay must be allowed, to be sure of what is the cause of the trouble and how it should be treated; but this delay should be the problem of the doctor, not the patient.

Treatment

The present treatment is not ideal; we would like to have to a drug which

makes Cancer cells turn back and become normal cells, so that they do not continue to divide, and so that they do not go to far parts of the body and grow there. No such drug exists now but progress is being made, new forms of treatment are being found and gradually treatment is improving. So far, only certain tumours are benefited. No drug exists to cure and improve all tumours, and most drugs are not worth trying because they do little or no good. Surgery and X-ray remain the treatment of choice.

Much research work is now in progress. In America, both the Government and also private gifts collected by a drive once a year, by the American Cancer Society, are making resources available for research, so that many scientists are now busy on the problem because there is money to support it and because the facilities are available and the various tools.

Research

Since this has occurred, more and more scientists have turned to the problem. It must be also realised that that there is excellent research work going on in India, which is recognised throughout the world and treated with the greatest respect. The problem is a very fundamental one and it is a very difficult one; as an example, infections which are caused by bacteria infections, like Diphtheria or Smallpox and all the others, like boils, these are caused by bacteria or viruses.

Refugee Dealers Exempted from Sales Tax

The Government have directed that the exemption granted in the order, dated December 9, 1951, exempting refugee ration dealers in the mofussil from paying Sales Tax for a period of one year from the commencement of business be extended for the second year of business also. The exemption is subject to the condition that the Deputy Commissioner of Commercial Taxes may grant the exemption only in deserving cases.

They are very different in the cells of man and they therefore can be treated more readily because they are influenced when the human cells are not, or they may be worm infestations and, of course, the worm is also very different from man and so will respond to treatment which will not harm the cells of man. The antibiotics such as Penicillin, have helped to solve infections in a wonderful way, by affecting bacterial growth and not injuring our own cells.

Advances

Advances have also been made in relation to worms and gradually great advances are being made also in the virus diseases, which, like Poliomyelitis or Infantile Paralysis, the scientists are gradually learning how to handle. But Cancer is a change in one's own cells. It is just a small change. It is really a change which allows these cells to divide continuously instead of stopping dividing like normal cells do; therefore, the problem is much more difficult. Therefore, to find something which can distinguish between normal cells and abnormal cells, is to find something very subtle. But the desirability is to find something which will destroy the one cell, the tumour cell, without injuring the other cells.

I think it is easy to see it is a very difficult problem. It is easy to see that the progress in it will be slow. Progress is going to take time. You must expect that. And, now you have to be satisfied that progress is being made. We are beginning to understand what makes cells divide and, sooner or later, we will find out how to control this cell division, both in the normal cells and Cancer cells.

This is a difficult and a serious disease, which baffles scientists now, but it is highly likely that it won't baffle them for too long. In time, the riddle should be solved.

(A.I.R., Madras)

Public Call Offices

A telephone public call office at Tiruvaiyaru connected to Tanjore exchange and another at Mandaya connected to Mysore exchange were opened in April 1953.

The Next Revolution

By SRI J. M. LOBO PRABHU, I.C.S., Secretary, Development Department

Try, whenever I speak in public, to sow the seeds of new ideas. Like the biblical seed some fall on rocks, some are choked by weeds, but some do thrive. For my persistence in this habit, some one called me a Casanova of causes in which role I could stir another idea, that of *striraj*, or the rule of the world by women. Without flattering you, I feel that if women took over the reins from men, the world may be free from fear of war, and India may be free from want. If there is to be at all another revolution in India, that will be by women.

The men have achieved a political revolution and won the freedom of the country. They have not done much since. This is because they lack the capacity for details. They can struggle for horizons, but they cannot see what is before their noses. With women details dominate, and our problem today is one of details, of finding and adding little things that make large totals.

Survey of Problems

A survey of our problems will easily establish this. In Agriculture, the yield of our fields is about half of what is possible, because the cultivator, bound by custom, will not make many little changes which research shows to be essential. It is calculated that the yield would increase up to 40 per cent if he green-manured his fields, by 30 per cent if he used pedigree seed, by 30 per cent if he transplanted his rice, by at least 20 per cent if he consolidated his holding and by various similar percentages if he contour-banded, intercultured and otherwise followed the proper discipline.

And nearly all these measures are within his capacity because they only require labour of which he has more and to spare, being fully employed only for about less than half the year. These details do not interest him, but they should interest his women who have a natural capacity for economy. The problem therefore is to extend the

ingenuity and industry which women show in the kitchen to the fields, which are the source of food.

In Health, it is being increasingly realised that prevention is more important than cure, but how few know or care about diet, social hygiene, or prophylaxis against epidemics and their causes, although all this is largely within their means. Even treatment is vitiated by ignorance and prejudice, with the result that the few hospitals and doctors are burdened with illness arising from avoidable causes.

Facilities Wasted

In Education, the limited facilities offered by the State are largely wasted, only 33 per cent of the children enrolled becoming literate because the parents do not care or help. In public works, whether village roads, community tanks and pastures, and general problems of sanitation, indifference and lack of organisation account for continued neglect in the face of unemployed time being available with all concerned.

In industries, in markets, individualism is so strong that vast improvements which could arise from small

individual contributions, are delayed. In everything, the pervading temper is of indifference to details, characteristic of men who have been ground down by centuries of foreign rule.

Role of Women

The question is, can women do better? Yes, if they can emerge out of another domination, that of their men. In the years of foreign and disturbed rule, women who once shared life fully with men, have been pushed into their homes, even as a measure of security. In the present conditions such seclusion has become unnecessary, and the position women have enjoyed in their homes, can be extended outside. This is not an idle hope. Women have always exercised power over men. In India perhaps more than elsewhere, they have frequently shown leadership, there being many Ranis of Jhansi throughout our history. In fact, the most useful concepts have been typified by women, learning by Saraswathi, wealth by Lakshmi, action by Devi.

The question really is how to bring women out. This is a task which the more fortunate of you, who have the



NAVAL VISITOR: Capt. Stopford, O.B.E., R.N., of H.M.S. Ceylon, accompanied by Commander S. P. N. Nair, I.N., Resident Naval Officer, Madras, called on the Chief Minister at the Secretariat recently. The picture shows Capt. Stopford with Chief Minister.

(From the address by Sri J. M. Lobo Prabhu, I.C.S., Secretary, Development Department, on the Hostel Day of the Madras Medical College Ladies Hostel).

benefit of the same education as men, have to face. Lady doctors will have to take the lead, as they were the first to enter into fields reserved for men and have by their experience, the best knowledge of human nature. It is therefore not enough for you to cure the physical ailments of your sex; you have to devote yourself to develop your sex socially and economically. This may appear an alien role to your profession, but is really part of it, because the more full the life of women becomes, the less will be scope for illhealth.

Campaign Strategy

What is the strategy for drawing women out? The first step is to convince yourself that you can do, what men can do. Bernard Shaw thought that women failed because they competed among themselves and not with men. You have to compete with men, both in knowledge and action. There is need to educate, or at least inform

women on all important problems. This is a task more important though more difficult, than the social work now done by organisations of women. Yet it is a task most promising of results, because if a woman can be convinced, she will do by herself all that needs to be done.

Can we begin a campaign to inform women? Men can help but women themselves will have to discover and pursue ways of reaching their sex. In towns they can hold meetings, in villages, they will have to reach the masses largely through books, plays, songs, pictures and special campaigns. The important thing is to bring women out of their own world, into the outer world which men are mismanaging. The revolution has to be of the thought processes of women, based on wider knowledge of themselves and of prevailing conditions.

I have suggested that whatever Government attempts to do in villages

should be for and through women. It should be shown by you, even in a small area, that this is possible simply by enlightening women. For my part, I believe there is no determination like that of women, and that to build this determination on enlightened self-interest is the first task of those who wish to transform the country.

This is what I meant by *Striraj* and the next revolution. Democracy when it is real rules out revolutions, because it is by itself a continuing revolution in which new ideas find their expression. Men will not supply much to the continuing revolution but women can do so, because there are new worlds for them to conquer. They have only to be informed and convinced in order that they may storm the Bastille of ignorance, indolence and poverty. Let women only have more light and they will supply all the heat required for the revolution to transform the country.



RELIEF FOR LABOUR: A conference of employers and representatives of labour was held at the Madras Secretariat on April 4, 1953, to devise relief measures for assisting labour affected by unemployment due to power cut. Dr. U. Krishna Rao, Minister for Industries and Labour, presided.

The Chief Minister Sri C. Rajagopalachari is seen addressing the conference. The Minister for Public Works, the Commissioner of Labour and the Secretary, Development Department, were also present.

The Library Movement

By SRI S. R. RANGANATHAN, Professor of Library Science, Delhi University

The Madras Library Association has entered its twenty-sixth year and recently celebrated its Silver Jubilee. It was founded on January 31, 1928. Its overall objective is the promotion of the Library Movement in Madras State. How far has it achieved this objective? What was its method of work in the past? What should be its method of work in the future? Such questions naturally arise in our mind today. These questions are local in scope. The answering of these will be facilitated by a prior study of certain fundamental questions—more universal in scope. These concern the very idea of the Library Movement.

What is the Library Movement? What is its genesis? Why is it necessary? How is it to be achieved? We may consider these questions first.

Social Movement

The Library Movement is a social movement. It seeks to raise the general level of life of the community as a whole. It is not turned merely on a section of the community, like the Anti-Slavery Movement or Feminist Movement. It is not confined to a particular aspect of social life, like the Prohibition Movement or the Moral Rearmament Movement. There is a third factor. The Library Movement is concerned with a method of social betterment rather than with social betterment by itself.

In this, it differs from the movement for democracy. Democracy aims at equality of rights, equality before law and equality in the distribution of wealth. Different communities have achieved this objective by different methods. Some had adopted peaceful non-violent methods. Others had used violent methods. The Library Movement, on the other hand, seeks to lift the general level of the community as a whole, by a particular method.

Feeding the Mind

It seeks to work through the mind. It is based on a timeless principle. This principle has been enunciated in a beautiful epigram in the Brihad Aranyaka Upanishad. मनोमयः अयं पुरुषः। Man is essentially mind.

Social betterment is the integration of the betterment of each individual in society. The betterment of a person is the integration of the betterment of his body, mind and soul. The epigram from the Upanishad emphasises that a prior cultivation of the mind is necessary for physical betterment. Perhaps it may also lead to spiritual betterment as a limiting point. The Library Movement, therefore, adopts the feeding of the mind as the means for securing social betterment.

Formal education at school or college is a well-known means of feeding the mind. However, the Library Movement differs from it in one essential respect. Education at college or school depends upon the immediate presence of a teacher. There is interference and help by a third party almost every day. But the Library Movement provides only for self-education—self-education through books. The third party merely adopts Sita's way स्मारयामि न शिष्यये। 'I only remind you'. I do not teach you. Again, school education has necessarily to be confined to a short duration in the life of a person. But self-education through libraries is a lifelong affair.

Public Project

The Library Movement is then the movement for the service of books, as a public project, to one and all of the members of the community. It further insists on making service of books free. A subscription-library does not come within the Library Movement. There is a reason for making book service free. Book service satisfies mental want. Mental want is not compelling as physical want. It is not enticing as emotional want. Physical hunger will make a person pay for his food, then and there. Emotional craving, such as urge to witness a boxing match or a cinema show makes even the poorest pay for such a show. Few will similarly pay for a book borrowed for study. Many would prefer to keep the cash with themselves than to pay it for the use of a book.

Moreover length of the purse and desire to read do not go together. They are often negatively correlated. For these reasons payment for library

service has to be indirect—not at so many rupees for so many books read. The cost of the library service of a community has to be met from taxes and rates paid by all persons, in the measure of their taxable capacity—rather than their reading capacity.

Democratic Origins

The Library Movement is an offshoot of modern democracy. Democracy insists on equal opportunity not only for food, clothing and shelter, not only for entertainment and elementary education, but also for information of all kinds and for life-long mental development. Democracy of this vast sweep began to develop about a century ago. It developed first in the Western countries. At that time the Indian community was lying in a state of cultural exhaustion. Even when the Indian National Congress was founded, there was little thought of democracy.

It took shape in India only after the return of Mahatma Gandhi from South Africa. He stressed democracy in a spectacular way. He adopted the life of the under-privileged rustic in food, clothing and shelter. He thus ushered in the sense of democracy more by example than by precept. The Library Movement is but one of the many corollaries of the Gandhian Movement, which took about 15 years to mature. Thus, the founding of the Madras Library Association in 1928 was not mere chance. It was not an isolated event. It is part of the democratic texture laboriously taking shape in India.

To every Citizen

Viewed as part of the democratic movement, the Library Movement is not satisfied with isolated libraries here and there in the State. It is not satisfied with the provision of library service for the intellectual aristocracy alone. The Library Movement stands for a steady, continuous development of a comprehensive library system reaching every citizen. The establishment of a State-wide, interconnected grid is the objective of the Library Movement. The Madras Library Association works for it.

In the growth of the Library Movement in the Madras State, the Association has been functioning as a

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library. Several factors are necessary to plant the Library Movement and to grow it. These were all cared for.

Public Contact

Till the outbreak of the World War II, the Association had been endeavouring to make the public library-minded. This it did in several ways. It made systematic and intimate contact with the Local Bodies and the public of each district. The majority of Local Bodies were convinced of the need for public library service. They asked the Government to give them full-fledged library powers. The contact with the younger generation is even more intimate. The institution of Reading Habit competition was one method used.

The publication of lists of books for study as a follow-up to the texts prescribed for the school final examination was another method. Training of teachers in School Library Work

was a third method. The co-operation of the Madras dailies in the promotion of public relations was splendid.

For several years, the Association arranged for two series of talks in Tamil. One series was called "Something about Everything". Eminent scientists and other scholars and public men were kind enough to expound their subjects in Tamil in a popular style. The second series was called "Everything about Something". In this series, about ten talks were given in Tamil on each of several specified subjects according to a syllabus.

Models and Schools

The Association also published some of the talks in "Everything about Something" series in Tamil. These acted as models for books on current thought, for service to adults through public libraries. The Association has published also about 20 books on Library Science. These books cover

most of the aspects of work in libraries. Some of them describe library techniques suited to our conditions. But many of the volumes are both basic and of universal appeal. These have produced a considerable effect on library thought in other countries also.

Another piece of work done by the Association with considerable forethought was the establishment of a School of Library Science. After running it for three years, the Association turned it over to the care of the University. The persons trained in this school are now managing most of the important libraries not only in the Madras State but throughout India. It has also led to the establishment of Library Schools in some other Universities.

An outstanding development is the establishment of Master's Degree and Doctorate in Library Science at the University of Delhi, the first of its kind in our Commonwealth. This school at Delhi is manned entirely by persons trained at the Madras School.

Library System

A comprehensive State-wide Library System cannot depend on voluntary gifts or charity. Endowments like the Carnegie benefaction were possible till a generation ago.

But the tax-pattern of today does not allow accumulation of money in private hands. This makes such endowments impossible. At the same time, the functions of the State have now extended far beyond the original ones of protection from attack from without and maintenance of law and order within. The State has itself to promote industries. It has to finance educational institutions. It has also to maintain the public library system. The maintenance of the library system is necessary to keep the people informed about their own rights and about their duties to the State and the community.

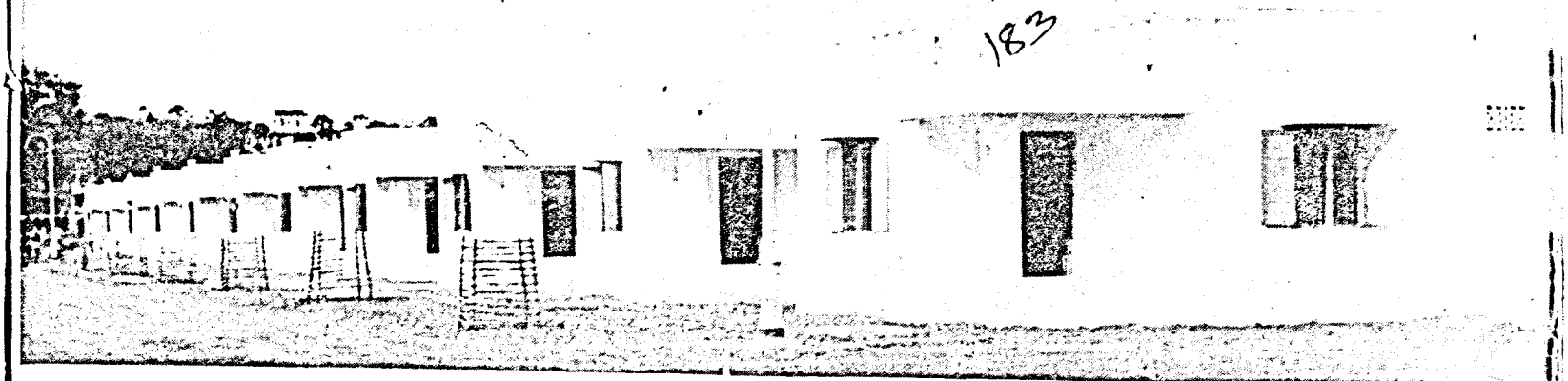
It is also necessary to fit the people to practise their diversified vocations with sufficient skill in the use of the latest techniques evolved, from time to time, anywhere in the world. For these reasons, a modern democracy cannot endure long unless it is backed by a State-wide, closely-knit library system. This has become an essential part of public life today, that every State is

Krishna Anicut at Vijayavada

Reports have appeared in certain sections of the Press that although the Central and State Highways Departments have reached an agreement over the proposal to build a bridge-cum-regulator across Krishna River at Vijayavada, and the Central Government have agreed to contribute to the cost of the scheme, the State Government are "unwilling" to sanction the scheme and execute it. Commenting on the report, which incidentally appeared in its columns also, the *Praja Patrica*, in its editorial in its issue dated 6th March 1953, has alleged that the State Government have refused to sanction and execute the scheme for the present, presumably in view of the formation of the Andhra State.

It is true that the State Government have made very special efforts to have the scheme drawn up and have had it discussed with technical officers of the Central Roads Organisation, who have tentatively agreed that the proposals are suitable. After examining the question of the amount of contribution to be asked for from the Centre to cover the bridge and road portions of the scheme, the State Government have to address the Government of India for the contribution, as well as their concurrence to the proposed alignment of the National Highway, with which that Government are concerned, and to the cost of the work, as no work the cost of which exceeds Rs. 1 crore can be sanctioned and taken up without their concurrence. Proposals for a work of this magnitude, which may cost about Rs. 2½ crores, cannot be designed, scrutinised, and executed without the most careful examination.

The State Government are pursuing the proposals vigorously, and the allegation about refusal of sanction is false. To say that the Central Government had agreed to the scheme and to contribute towards its cost and that the State Government have deliberately refused to sanction the scheme and execute it is mischievous. The public are requested not to encourage or be misled by such malicious propaganda.



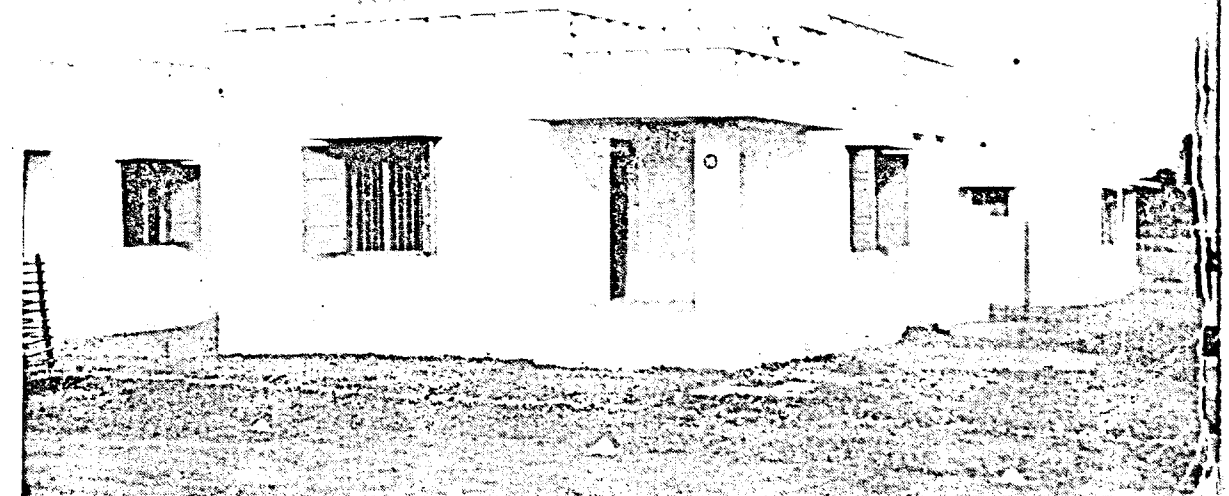
NANDANAM COLONY

The Chief Minister declared open on March 15, 1953, the housing colony of the Madras City Improvement Trust near the Chingleput Collector's Office. The colony was named "Nandanam" after the centenary of the Tamil Year.

Left: Sri C. Rajagopalachari also laid the foundation of the community centre in the Nandanam Colony.

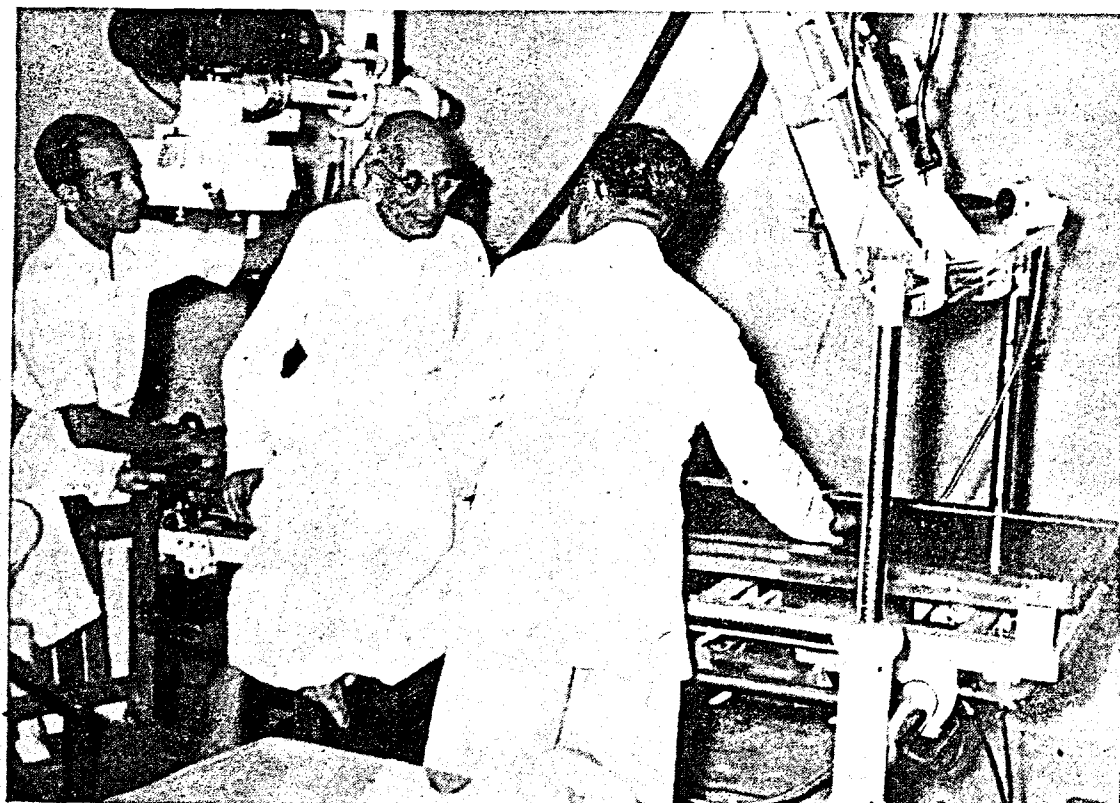
Right: A typical house.

Built in three designs, the houses cost Rs. 5,600, Rs. 7,000 and Rs. 7,700, respectively. Rent ranges from Rs. 40 to 55 per month; 36 houses have been built, and 36 more will be constructed.





FIGHT AGAINST T.B.



Pictures show the Chief Minister examining the clinical facilities and the X-Ray apparatus in the Sanatorium.

A fervent appeal to the charitable minded people of Tanjore to donate generously to the Mahatma Gandhi Sanatorium, Sengipatti, was made by Sri C. Rajagopalachari, Chief Minister, presiding over the first anniversary celebrations of the Sanatorium. The institution is 18 miles from Tanjore, off the Tanjore-Tiruchi main road.

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obliged to have a Library Act to establish its library system. It has to be maintained out of public funds. It has also to be manned by a technical cadre of public servants.

Pioneer State

In India, Madras is the first State to have such a Library Act. The credit for preparing the ground for this goes to the Association. The credit for piloting the Library Bill goes to Sri. Avinashilingam Chettiar. It is also a matter of pride that the assent to this premier Library Act in India was given by our own Rajaji when he was Governor-General of India.

The Library Movement of the Madras State has by now been put on its rails. It has next to be helped to put on steam. Some years ago the Association induced the Government to provide a professional staff for the Connemara Public Library. It is now the State Central Library. It is a Copyright Library. Government should now endeavour to make that Library assume all the functions assigned to it by the Library Act.

Thirty-Year Plan

The District Library Authorities should be helped by the Association to implement the Act as quickly and as efficiently as possible. The work it has to do in the future is thus one of development rather than spade-work. This is a more responsible work. It is also a more profound work. Our democratic Government will not hesitate to make use of its services. A Thirty-Year Development Plan has already been worked out. It is published by the Association as *Handbook to the Madras Library Act*. This *Handbook* has anticipated the impending political development. A development plan has been worked out separately for Tamil Nad and Andhra Desa.

Here is a picture of the Library personality of the Madras State as it should become. It is like the wish of the midwife for the personality of a newborn baby. The Tamil Nad and the two West Coast Districts should together have, apart from the State Central Library, 21 City Library Systems, 13 Rural Library Systems, 400 Branch Libraries and 12,000 Delivery Stations served by 600 Travelling Libraries. Andhra Desa will have, besides the State Central Library, 13 City Library Systems, 12 Rural Library Systems,

200 Branch Libraries, and about 10,000 Delivery Stations, served by 500 Travelling Libraries.

Librarians

Tamil Nad and the West Coast Districts will together require 250 professional librarians and about 3,500 semi-professionals. Andhra Desa will require about 160 professional librarians and about 2,000 semi-professionals. The State should arrange for the training of these professional men within the next few years. The pace of library development will be determined by the rate at which librarians can be trained.

I am sure that if the Government and the Association continue to work hand in hand, the library future of the Madras State will be assured. Its economic and social development will be accelerated. Within one generation, Madras State can become second to none in the world in its provision for the continuous enlightenment and self-education of one and all of its citizens. May this wish become a reality!

(A.I.R., Madras)

P.W.D. Civil Works

The following are the salient features of the report reviewing the Civil Works of the Public Works Department in progress in 1950-51.

Revenue.—The receipts under minor heads during the year amounted to Rs. 13,20,423.

Expenditure.—The total expenditure during the year on works and repairs under all heads was Rs. 157-93 lakhs, as compared with the final expenditure of Rs. 150-93 lakhs in the previous year. The figures include Deposit Works, Civil Defence and Post-War Works but exclude Military, Irrigation and Highways: Water-supply and Drainage Works (Contribution) come under the category of Deposit Works.

Repairs.—The total value of buildings in charge of the Public Works Department was Rs. 15,00,16,340. The cost of repairs to these buildings carried out by the Public Works Department and the occupying Departments amounted to Rs. 26,11,521 and Rs. 5,23,409 respectively.

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Kendall Humanity Medal to Head Constable

Head Constable No. 1145 named Petchimuthu is the proud recipient of the Kendall Humanity Medal, awarded by the Executive Committee of the Bombay Humanitarian League, for his valiant deed in saving the life of a woman in the most trying circumstances.

Head Constable Petchimuthu of Tirunelveli District was on duty at the Huzur Treasury at Kokkirkulam. On the morning of January 7, 1952, he was taking his bath in the Tambirabarni River at 7 a.m. He noticed a woman struggling in the water and being washed away by the current. The hue and cry raised by the people on the bank of the river at the time attracted the attention of the bold Head Constable, who unhesitatingly plunged into the river, swam to the place and rescued her. She was rendered first aid and taken to her house.

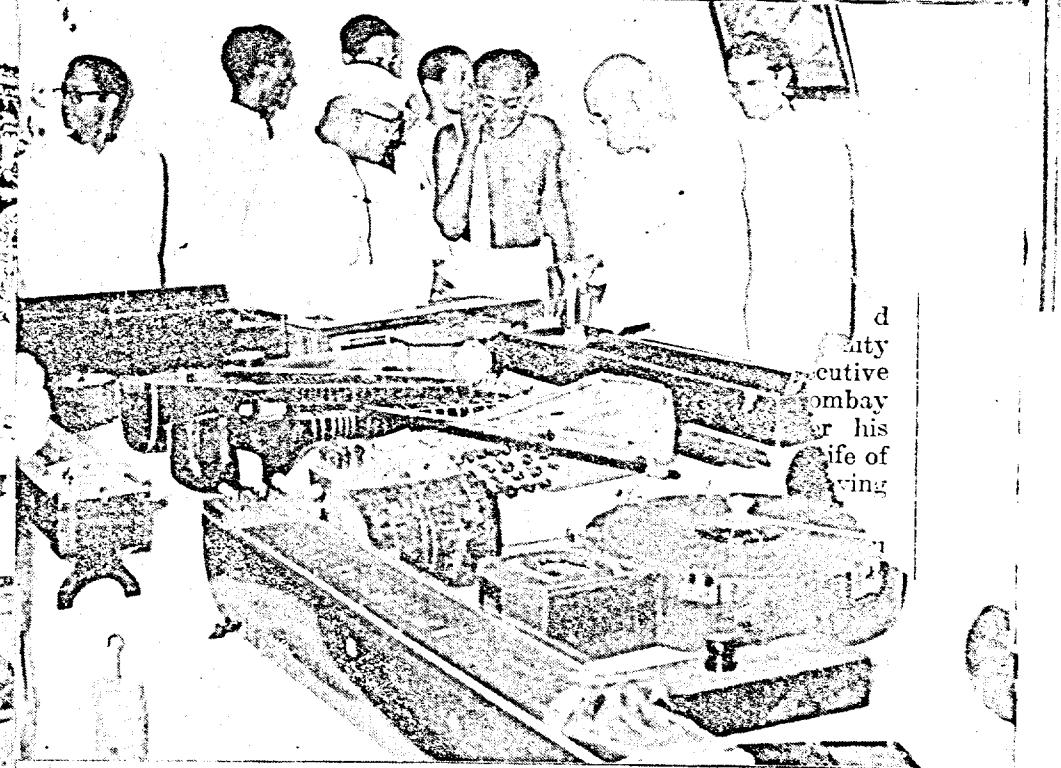
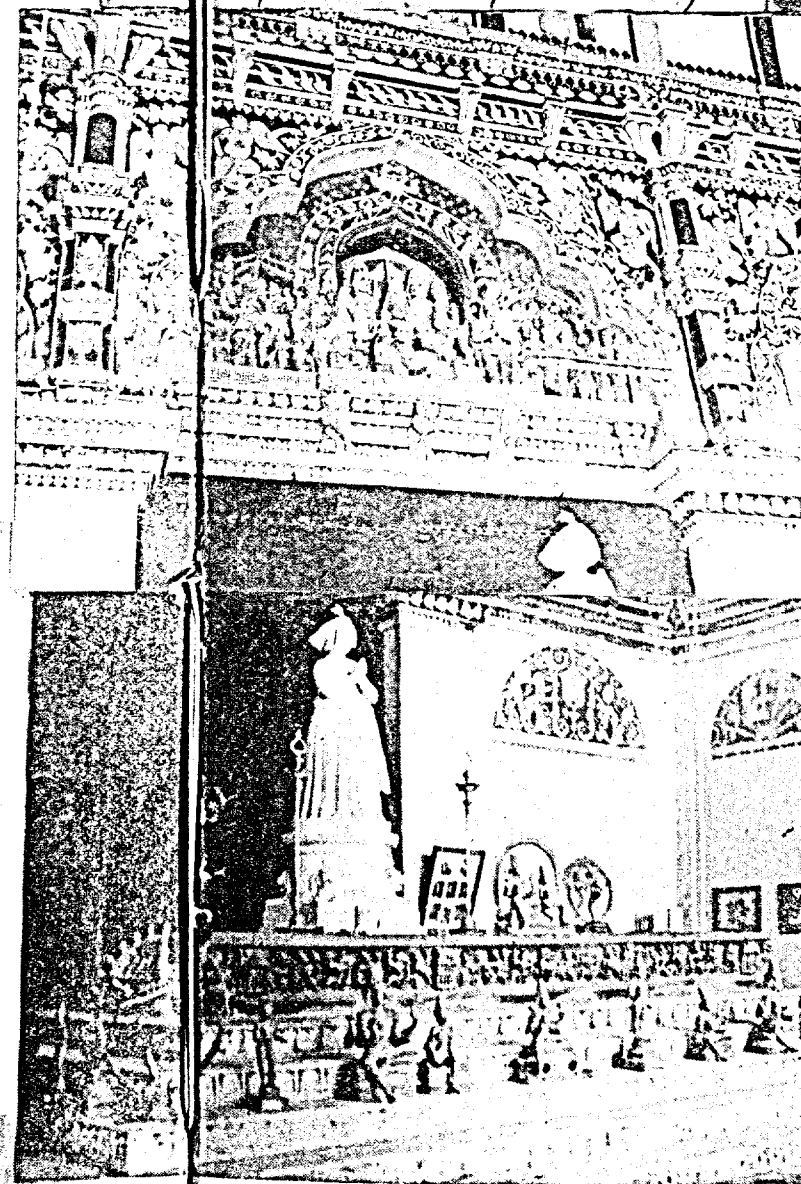
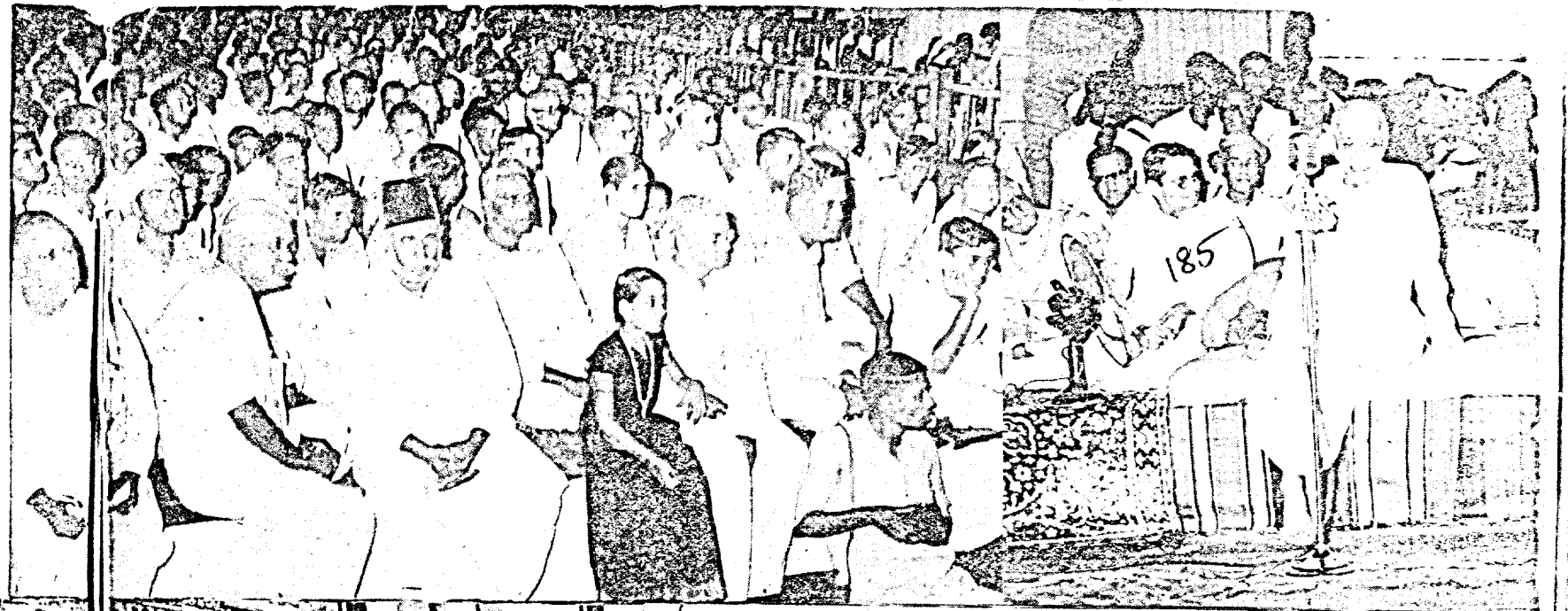
The great personal risk involved in this heroic act never entered the mind of Petchimuthu. The people on the bank, who were witnessing this commendable action, appreciated the courageous part played by the Head Constable in rescuing the woman at great personal risk.



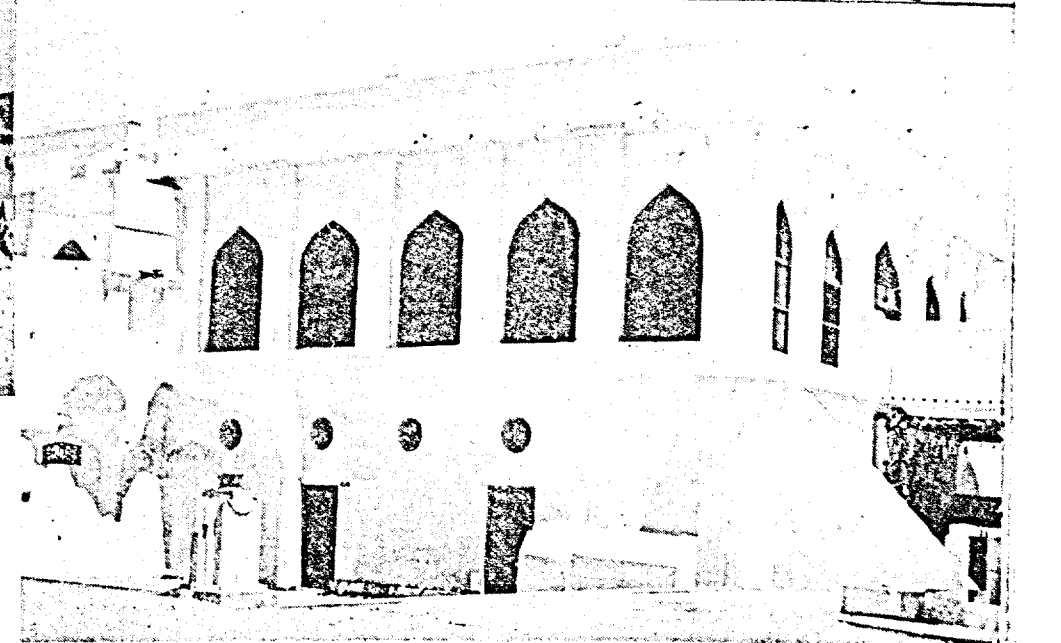
TANJORE ARTS FESTIVAL

The Chief Minister Sri C. Rajagopalachari recently declared open the renovated Sangeetha Mahal and the Arts Festival in Tanjore.

Features of the Festival were the creation of a Permanent Art Gallery inside the Tanjore Palace, the renovation of the ancient Sangeetha Mahal, and the construction of an amphitheatre in the quadrangle enclosed by the Saraswathi Mahal, the Durbar Hall and other buildings.



The Sangeetha Mahal, a hall with excellent acoustic properties, is believed to have been constructed by Sevappa Naik, a ruler of Tanjore, in the sixteenth century, and can accommodate 1,500 persons.



Keeping A Jewel Intact

Ranked as one of the wonders of the world, the Taj Mahal at Agra has won over by its beauty thousands of tourists from the various regions of India and from abroad. Fergusson, in his monumental survey of Eastern Architecture, gives it unstinted praise. After referring to its extreme delicacy, the beauty of material employed in its construction and the complexity of its design, he wrote: "It is the combination of so many beauties and the perfect manner in which each is subordinated to the other, that makes up a whole which the world cannot match."

The construction of the Taj was spread over a long period. The white marble mausoleum took 14 years to build, with the mosque on the west and the main gateway on the south, while the outer court and its cloisters were added subsequently and the entire group was completed in about 22 years.

How much did it cost Emperor Shah Jehan to build the Taj?

The marble and sandstone used in the construction came from State quarries and the semi-precious stones and jewels from the imperial stores; and this probably accounts for the court chroniclers not including these big items in the expenditure on the Taj recorded in the *Badshahnama*. However, estimates vary from 50 lakhs to six crores of rupees. But, again, Tavernier's remarks in this connection indicate another item of expenditure. "The scaffolding", he says, "is held to have cost more than the building, for not having (enough) wood, they had to make it of bricks, as also the centering of the vaults."

Hand of Time

Beauty, however immaculate, does not stay the hand of time and the slow but deadly erosion of the years has affected this jewel of Indian architecture also; conserving the jewel intact is an undertaking of extreme delicacy in which the Archaeological Department of the Central Ministry of Education has been engaged for over a decade now.

It was in the year 1936 that leakage was first noticed in the main dome. Extensive repairs were immediately proposed. But in view of the national importance of the monument the

Government of India set up the Taj Advisory Committee to give expert guidance on the matter. Its recommendations were implemented in the year 1941-44 at a total cost of Rs. 92,000. Only urgent measures on the facing of the dome of the mausoleum like pointing open joints of marble facing with special lime mortar, resetting damaged stones and repairs to inlay work were completed during this period. For completing this work after thorough examination of the drum and dome the cost of the scaffolding that had to be put up alone amounted to about Rs. 45,000.

Advisory Committee

In 1944, an expanded Taj Advisory Committee was appointed by the Government to study further the problems of the conservation of the Taj Mahal. This Committee made its final recommendations in 1944 and the Archaeological Department was entrusted with the implementation of the recommendations which are progressively being carried out. The Government of India earmarked a sum of Rs. 3,50,000 for special repairs to the Taj. It was proposed to spend Rs. 80,000 annually for a period of five years commencing from the year 1947-48. The work is in progress but the completion will take at least another two years.

The outside of the main dome having received necessary attention, its inner surface was taken up. During the heavy rains of the year 1948-49 patches of sweating became noticeable inside the dome. This could only be attributed to percolation of rain water through the joints on the outer face of the dome and therefore it was decided to re-point the entire facing of the dome with special lime mortar. This work is nearing completion and it is expected that after this treatment the dome will be rendered watertight. The work is being carried out with the help of rope ladders and cradles hung from the finial at the top at a nominal cost as compared with the erection of a scaffolding all round the dome.

Among the other measures on hand now are repairs to the facade of the marble basement. It has been noticed that after rains water kept oozing out from several places along the facade.

This was apparently due to the accumulation of water in the brick core underneath the marble pavement, and to remedy this, marble slabs all along to a width of about four feet from the edge of the platform were removed and cracks and holes below the slabs were thoroughly grouted.

Problems of Conservation

The main problem of conservation has been to retain the original structure and design intact. The original Taj Advisory Committee had made the proposal that the four *chhatris* (kiosks) around the main dome of the Taj should be dismantled and rebuilt as they had become structurally unsound. But in 1941, the Archaeological Department, true to its tenets as also to the principles of scientific archaeological conservation, stressed the utmost importance of the preservation of the original fabric to the maximum degree possible and insisted that the superstructure of the domes, being on the whole intact, should not be dismantled and that the pillars and other damaged members could be changed if the domes were properly cribbed.

In the actual execution of the work, great care and patience had to be exercised to see that no void was left while resetting the new members, and that the fitting of the capitals over the pillars, which had to be inserted last between the shaft and superstructure, was perfect, for it was on this alone that the success of the whole work depended.

The chiselling out of the decayed members required an equal amount of skill, care, patience and industry. Thus, the originality of the fabric of these four *chhatris* has been maintained, involving a change of as many as 29 out of the 32 pillars. Besides, repairs to these *chhatris* has been accomplished in less than a lakh of rupees as against several times this amount which would have been spent if total renovation as suggested by the original committee had been undertaken.

Surface Decoration

This type of care has been exercised not only in the conservation of structural design but also in the repairs of

Better Facilities for Train Travel

surface decoration. Thus, in the repair of the kiosks around the dome, special marble from Makrana in Jodhpur was imported, having the same blue tinge as used by the original builders. For replacing damaged slabs along the facing of the platform, black marble was imported from Alwar. For inlay work on the facade of the mausoleum, semi-precious stones such as Petonia, a variety of bloodstone, and Ratak, a variety of jasper, have been procured with great difficulty as pieces of these stones of large size are not easily available in quantities. Badal, another variety of jasper, is not procurable anywhere in India and arrangements for getting it from Pakistan are being made.

Moghul inlay decoration is a craft perfected through generations and the Archaeological Department has sought to benefit from the skill which has been handed down from father to son through the centuries. The local craftsmen employed in this work have inherited this art from their ancestors who gave decorative touches to the Taj in the time of Shah Jehan. Local craftsmen again, have been recruited for replacing decayed red sandstone slabs with new *jallies* (lattice work) exactly similar to the originals.

The total amount spent so far over the repairs of the Taj since 1940-41 is about Rs. 4 lakhs. It is a very small fraction of the original cost of the mausoleum, unique all the world over for its beauty, which grew up beside the waters of the Jamuna to cherish the memory of a lost happiness.

Punished for Corrupt Practices

During the month of November 1952, a Tahsildar, a Hindi-Pandit, a Clerk of the Judicial Department, an Attender of the Finance Department, a Special Demonstration Maistry of the Agricultural Department, two Prohibition Guards and two Constables were dismissed, and a Tahsildar, a Divisional Accountant of the Highways Department and a Store-keeper of the Jail Department were compulsorily retired and an attender of the Public Department was removed from service. Nine others were awarded less severe punishments.

Within the last five years increasingly more amenities have been provided to make lower class travel on Indian Railways appreciably more comfortable. During the year 1952-53, provision of about Rs. 3 crores has been made for this purpose and an equal amount is proposed to be spent during 1953-54.

In all this, it is the comfort of the third-class passengers, who contribute the bulk of the railway revenues, that is in view.

It is a planned programme, these passenger amenities. In long-distance third-class railway travel, a revolutionary change has been brought about with the introduction of Janata Expresses. Not only does this eliminate overcrowding in composite mail and express trains, but the journey is made more comfortable with better accommodation and facilities and greater speed.

Reservations

Third-class passengers today can reserve their seats in advance for long-distance travel. Advance booking of this type is available from 33 stations for 84 important trains. To prevent short-distance passengers crowding into these compartments, both at the starting and wayside stations, special travelling ticket examiners travel in these coaches for en route checks.

Another factor designed to prevent overcrowding in trains is the introduction of additional trains. During 1952 alone, 142 new passenger trains were introduced.

Electric Fans

Today, for the comfort of passengers during summer months all long-distance trains have third-class bogies with fans. During the first six-months of 1952-53, about 3,000 additional electric fans were provided in third-class coaches.

The newly introduced third-class carriages are modelled to make travelling more comfortable. Park-bench-design seats give added sitting comfort. In long-distance trains for which advance booking facilities exist, sleeping space is provided for the passengers. With wash-basins installed in the lavatories and adequate water-supply ensured for sanitary purposes, the aim is to soften the rigours of a journey as

much as possible. Each bogie carries 300 gallons of water, with facilities for frequent replenishment.

Waiting Rooms

Now awaiting completion are more than 300 new waiting halls and rooms at station platforms. For third-class passengers, over 200 waiting halls are under construction. The accent now is on the provision of waiting-room facilities at small stations, while existing facilities are being expanded at others.

Raised platforms and extensions to existing ones are being pushed forward to accommodate the increasing number of passengers awaiting trains. Previously uncovered small stations are being covered now. A number of small stations are to have electric lights, too.

Automatic self-printing ticket machines at certain major junctions today solve the problem of long queues at booking windows. Additional booking windows, with separate counters for long distance and women passengers, relieve the congestion at train timings.

Drinking Water

To provide cold drinking water for passengers in summer months, electric coolers have been installed in over 50 railway stations. This ensures cold and hygienically pure water to the ever-increasing number of railway passengers.

Normally, drinking water is supplied through hydrants and *Gharas* on push-carts or in the shelters at the stations. During summer months, large numbers of additional water-men are employed to serve water to the passengers. The arrangements are that at all important stations a team of at least three water-men should cover each stopping passenger train for supplying drinking water to the passengers.

Amongst other amenities provided for long-distance third-class passengers are bathing facilities and covered platforms with fans.

An adequate number of passenger guides, posted at main stations, today provide the help required by passengers about train timings and other details. These guides assist the passengers in purchasing tickets, securing accommodation and in many other ways help to make travel more easy and relaxed.

Are Forests Necessary?

By SRI K. A. BHOJA SHETTY, Assistant Conservator of Forests and Working Plans Officer, Coimbatore South Division

Why a Forest Department? This question arises in the minds of most people in this country when they hear of the Forest Department. The man in the street knows practically nothing of this Department and he is rather sceptical about the necessity for it. He believes that forests grow by themselves and that a Forest Department with all its paraphernalia of professional staff, forest techniques, forest research and forest protection is an unnecessary infliction and a drain on the coffers of the State. The reason for such misconceptions is obvious. The forest officer rarely comes in contact with the public and his work is even more rarely seen.

Even the section of the public which comes in contact with the Forest Department, namely, the population adjoining the forest lands and which is dependent on the forests for many of its needs, such as timber, fuel, manure leaves and other forest produce, regards the Department as an unnecessary and irksome obstacle. The villager believes that it is his inherent right to have free access to the forests and the forest official who is doing the policeman's duty in protecting the forests is naturally a source of annoyance to him.

Forest Resources

Many strange popular misconceptions prevail about forests and forestry. The first of these delusions is that our forests contain an inexhaustible store of timber, firewood and other forest produce. The people believe that there are vast areas of dense forests in this country which have not yet been tapped for their resources. They also believe that all that one has to do is to fell and remove whatever is available in the forest and Nature will replenish the stock in due course. Nothing can be farther from the truth.

The total area under forests in the Madras State is about 21,600 square miles, which is only about 17 per cent of the area of the State, whereas the accepted minimum for a prosperous and balanced economy is 25 per cent of the area. Besides, it must be remembered that it is not the entire area of these forests, but only a portion of it, that is productive or remunerative.

Some of the forests contain only scrub growth too poor for any exploitation while some forests especially on steep mountain slopes need to be preserved as such to ensure a perennial supply of water through streams and rivers to the population.

Hence the area of forests in the State actually available to supply the needs of the public is very limited and the unpleasant fact is that our existing forests can barely supply the requirements of the population, even on the present low level of consumption. Any improvement in the supply conditions can only be brought about by intensive application of science to forest management and forest utilisation.

Value of Forests

Yet another delusion entertained in the minds of the public is that forests are just a reserve of land awaiting conversion to more profitable uses. There is a clamour from the people for extending cultivation into the marginal forest lands and the plea is that any area which is fit for producing food crops must be brought under the plough. No doubt there is scarcity of food in the country and no one will dispute the compelling need for increasing food production. But any policy which aims at extending agriculture at the sacrifice of our forests will be disastrous to the economy of the country.

Forestry has been termed as the handmaid of agriculture and nowhere does this apply with greater force than in India which is essentially an agricultural country. Apart from their ordinary domestic and agricultural requirements of timber, fuel, thatching and fodder grass, grazing and numerous other minor products, in many parts of the country the people are largely dependent on the forests for their very existence. Limited as our forest resources are, it stands to reason that this sacred treasure entrusted to us should be preserved and conserved.

Another misconception which is widely entertained is the notion that forests grow by themselves and that a Forest Department is an unnecessary burden on the tax-payer. A forest officer is frequently asked, "What

exactly is the nature of your work?" Most fantastic notions prevail among the people regarding the duties of a forest officer. They range from the romantic delusion that most of the time of a forest officer is taken up in shikar and picnics, to such unsympathetic notions that the main job of a forest officer is to oppress the poor villagers who venture into the forests to get their requirements of fuel and timber. It is evident that what the Forest Department lacks is propaganda in order to bring home to the public the vital importance of this Department for the welfare of the nation and service rendered by it to the people.

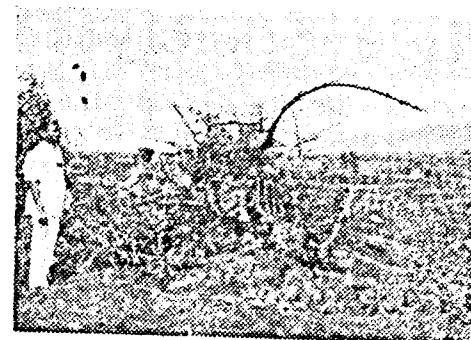
Danger and Damage

A very large part of a forest officer's time is taken up in protecting his forests against the various dangers which threaten their existence. Of these dangers, damage caused by man is by far the most acute. Illicit removal of timber, fuel and other produce, grazing of cattle without permits and goat browsing are some of the offences frequently committed. Man is also responsible for forest fires which cause considerable damage by destroying valuable seedlings which form the future crop. A lighted torch thrown by a wayfarer or an unextinguished fire left by the camping persons may start a conflagration.

Apart from such negligence, fires are also caused wilfully by graziers to burn the dry grass and to get a flush of green grass early in the season. It is an obvious duty of the Forest Department to meet the demands of the public regarding their requirements of timber, fuel and other forest produce. The Department is alive to its obligations and does its best to meet them. But uncontrolled felling and lopping of trees, unrestricted grazing and frequent fires will spell ruin to the forest and it is the primary duty of the Forest Department to enforce rigid protection of the forests under its custody.

Development

A forest officer's work does not end with the protection of his forests. The forest must be developed, improved and worked to get the maximum benefit from them. Not only do forests need



RECLAIMING FOREST AREAS: Agricultural Department tractors reclaim forest areas in the Goonda Forest. The reclaimed land is for the resettlement of ryots displaced from the areas submersible under the Tungabhadra Project.

close management but the management has to be in the hands of personnel who have the necessary technical knowledge. Forestry is a long-term enterprise in which mistakes cannot be readily detected or speedily corrected and hence long-range views are essential for the management of forests. A forest officer must use his technical knowledge to bring the forests into a most productive state by encouraging species which are valuable and discouraging the useless ones. Scientific forestry consists in a calculated interference with natural processes with a view to growing trees of the right species and of the right size as rapidly as possible. Where natural regeneration is uncertain or uneconomical, a forest officer must evolve methods of artificially regenerating the required species. Thus in the Madras State, the Forest Department has to its credit vast plantations of teak, wattle and plantations of fuel species such as casuarina, eucalyptus and many other species.

Proper exploitation of the forests also requires considerable skill and knowledge. The yield from any forest area has to be accurately calculated and exploitation has to be controlled accordingly, in order to safeguard against overfelling or underfelling. A thorough knowledge of the utilisation of various forest produces is also necessary, so that there may not be any waste in exploitation.

Forests are the national assets of our country and the Forest Department is there to protect and conserve, improve and extend these forests, so that not only the present generation but also the future generations may derive the benefits from them.

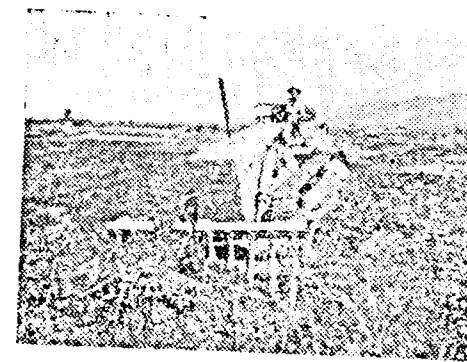
(A.I.R., Madras)

Report of Public Service Commission for 1951-52

A total of 25,172 candidates appeared in 1951-52 for the departmental and special tests conducted by the Madras Public Service Commission as against 21,503 in 1950-51.

A total of 8,733 candidates appeared for the competitive examination for appointment to the Ministerial Services. A special competitive examination for regularisation of temporary appointments in the Ministerial Services was also conducted in which 1,409 were successful.

The examiners of the special and departmental tests held in June and December 1951 were of the opinion that the candidates continued to appear for these special test examinations without adequate preparation and their answers were lengthy and rambling, much of which was beside the point, and that the performance in the departmental tests was on the whole satis-



RAKING: After clearing trees and shrubs, the D. 6 tractor with 'Rootraker' attachment in front uproots tree stumps.

factory in June 1951 but it was not so in the tests held in December 1951.

The Commission held competitive examinations comprising only an oral test in the shape of an interview for direct recruitment to 34 classes of posts in the State and Subordinate Services during the year, as against 53 in the previous year. No competitive examination comprising both a written and an oral test for recruitment to the State Services was held as also the competitive examinations for groups II and III Services during the year.

The Commission advised the Government on 16 appeals, 13 memorials or petitions, 17 proposals for disciplinary action, seven cases relating to reimbursement of the cost of defence incurred by public servants and 13 references relating to the grant of pension.

Grants for Relief

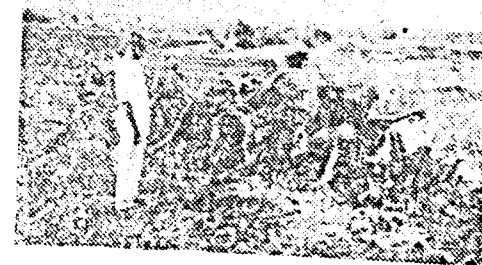
In January 1953, the Government sanctioned a grant of Rs. 2,43,800 to the Chittoor District Board for certain road works undertaken for the relief of unemployment among agricultural labourers.

In February 1953 the Government sanctioned a grant of Rs. 55,000 to the Tirunelveli District Board for unemployment relief works.

Merit Certificates for Manufacture of Compost

In South Arcot District, the following persons were awarded certificates of merit for having manufactured the maximum quantity of rural compost in their taluks, during the Intensive Cultivation Scheme Compost Week held from October 2, 1952 to October 10, 1952:

- 1 Sri B. Doraiswami Reddiar, Kotteripondy village, Gingee Taluk.
- 2 Sri S. Muthukumaran, Vadalakudy village, Chidambaram Taluk.
- 3 Sri Muthuswami, Sirumalai village, Vriddhachalam Taluk.
- 4 Sri Rangaramanuja Odayar, Chinasevalai village, Tirukoilur Taluk.
- 5 Sri Ganesa Odayar, Thagadai village, Tirukoilur Taluk.
- 6 Sri Arunachala Iyer, Manalurpet village, Tirukoilur Taluk.
- 7 Sri R. Gopalakrishna Reddiar, Endal village, Kallakurichi Taluk.
- 8 Sri D. Sundara Reddiar, Palur village, Cuddalore.



FIT FOR CULTIVATION: Forest areas are thus cleared for cultivation. Tractors do the job quickly, efficiently and cheaply.

Kunnathur Jaggery Co-operative Society

Kunnathur is the biggest centre for the marketing of palm jaggery in this district. About 3,000 maunds of jaggery are sold at the shandy every week. As there is a concentration of coconut trees in the adjoining villages, coconut jaggery is available in the shandy throughout the year. It is roughly estimated that 44,268 maunds of palmyra jaggery and 57,157 maunds of coconut jaggery are produced in the area during a year. The Kunnathur Jaggery Marketing Co-operative Society was started on its work on 25th February 1953 for the benefit of the tappers around Kunnathur to enable them to get a reasonable price for their jaggery. Twenty-two primary jaggery co-operative societies are affiliated to this marketing society for the present and more number of societies will be brought in, in course of time. Four individuals belonging to the tapper community are also

admitted as members. The paid-up share capital of the society is Rs. 2,800.

Since 1949, there was a move from the leaders of the tappers in this area for organising a co-operative marketing society for securing a better return for the jaggery produced by the tappers. But it was found that without Government help in the initial stages the society could not function satisfactorily. Recently Government agreed to lend the services of a Senior Inspector free of cost to work as the Secretary and to meet half the cost of a shed and a furniture to the extent of Rs. 1,000.

Marketing

Marketing of jaggery through co-operative societies was always contemplated by Government ever since the introduction of Prohibition. The Board of Revenue has issued orders from time to time requiring the surrender of jaggery by tappers to co-operative societies as a safeguard against the misuse of licences by the tappers. The functions of this society are in consonance with those orders of the Government.

Each primary jaggery society collects jaggery from its members on either Saturday or Sunday of each week and this is at once graded into two sorts according to quality. The jaggery is taken to the marketing society on Monday, which is also the local shandy day. The president of the society arranged for the lease of about three acres of land by the Nadar Education Board and himself provided a temporary shed for carrying on the business of the society for the time being.

The first sale commenced on 16th February 1953. The marketing society sells jaggery in auction, lot by lot. Merchants from various districts participate in the auctions. They bid lot by lot and each lot is sold to the highest bidder. This ensures the best test of purchaser-resistance and secures the maximum possible price to the tapper.

At the shandy

At the shandy the tappers sell their small lots individually to brokers. Very rarely do they know the weight for which the price is paid. Lot prices are the current fashion at the shandy.

In rare cases a spring balance is used by brokers but apart from its being hopelessly unreliable, the readings convey no meaning to the illiterate tappers. The hurry of the tappers to get the price of the jaggery in order to enable them to make purchases of their domestic requirements in the shandy reduces their bargaining power. The broker passes on the stocks to a local agents who later on pass on the stocks to their principals mostly in Madura. It is estimated that in this process, the tapper loses eight annas to Re. 1 per maund of jaggery, nefarious methods adopted by these middlemen adding to such loss.

In the scheme of sale to the marketing society the entire business is done by agency basis, the tappers paying a total commission of six pies per rupee of sale-proceeds. When the tapper surrenders jaggery to the primary society, he is given an advance equal



CLOSE-UP of the auction. The marketing society sells jaggery in auction, lot by lot. The tapper thus gets the maximum possible price. The primary Society gives advances to the tapper.



WEIGHING; Correct weights are ensured by the society. The President of the society has arranged for the lease of three acres of land, and has provided a temporary shed for business purposes.

to 50 per cent of the market value of jaggery surrendered. This amount is deducted from the sale-proceeds of the jaggery when it is sold in the course of the coming week.

Advantages

The principals coming from Madura and elsewhere also benefit by the system adopted in the marketing society. At present they depend entirely on brokers for the collection of jaggery from individual tappers and they have got to pay the price demanded by the brokers, besides normal brokerage and commission. The pooling of

Excise and Prohibition Work in 1951-52

Reviewing the administration of the Madras Excise and Prohibition Department during the year 1951-52, the Government have observed that close and constant attention should be paid to evasion of law in which experience is making offenders more proficient. They add that greater control measures should be taken to see that the concession to tap palm trees for sweet toddy is not misused and that surreptitious inflow of liquor into the State from the adjoining States is stopped. The Government have taken control measures for restricting the manufacture, import, use and sale of varnish including French polish, etc. They have also taken steps for restricting imports of spirituous preparations into the State. It is hoped that these measures will achieve the results desired in restricting the import and consumption of these preparations for illicit purposes in the State.

The following are the other salient features of the Government's review:—

Liquor and Spirits.—There was an increase in the total revenue derived from principal kinds of liquor and spirits. The increase in revenue is mainly due from Indian-made rectified spirit licences and gallonage fee on denatured spirit and Indian-made foreign spirit. The increase in the total revenue of duty on denatured spirits and spirituous medicinal preparations, however, was very pronounced. The increase in the consumption of denatured spirits from 959,812 gallons to 4,050,525 gallons may have been in part due to the import of French polish and varnish

jaggery in the marketing society enables them to shake off their dependence on these middlemen.

It is observed that the marketing scheme affects petty middlemen adversely. Naturally they oppose the scheme and through various channels they have striven to persuade the tappers not to sell their jaggery through the marketing society. In spite of this adverse propaganda, however, the tappers coming into the scheme are only increasing. While 331 maunds of jaggery was brought to the marketing society on the first day of

and in part to increased industrial consumption, but the possibilities cannot be ruled out that some addicts rendered these spirits potable for personal consumption. There was also a large increase in the import duty collected on spirituous medicinal and toilet preparations. The increased import of spirituous preparations may be due to the revocation on these preparations from January 1952.

Opium.—There was a decrease of 28.2 per cent in the consumption of opium during the year. There was no cultivation of hemp plant during the year.

Offences.—The total number of cases in the 26 districts of the State showed increase. While it may be stated that the increase in the detection of offences is due to greater vigilance, the possibility cannot be denied that there may be a corresponding increase in illicit distillation and consumption. While Prohibition has no doubt stopped a large proportion of the population from drinking, there is a small section, which in the absence of public disapproval, is indulging in making and consuming illicit spirit.

Ameliorative Activities

During the quarter ended December 31, 1952, the Co-operative Department undertook the following ameliorative activities connected with Prohibition:—

Provision of employment to ex-tappers.—With two new jaggery manufacturing societies organised during the quarter, there were 2,121 societies at the end of the quarter. They produced 2.69 lakhs of maunds of jaggery worth Rs. 12.23 lakhs. Though the

output was not much, as it was the off-season in most of the districts, it exceeded the output of 1.42 lakhs of maunds in the previous quarter. These co-operatives provided alternative employment to 3,405 ex-tappers. As many as 180 ex-tappers were employed during the quarter as agricultural labourers, five as watchmen or peons and 719 in other kinds of employment.

The average price fetched at the society was always more than that at the shandy, the difference ranging from Re. 0-5-6 to Re. 1 per maund. It is hoped that in course of time every tapper in the locality will realise the advantages of the scientific trade that is done on his behalf by the marketing society and that every block of jaggery produced in the area will be sold through this society.

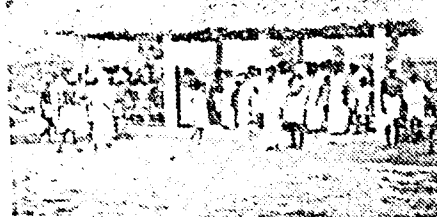
Palm Gur Development.—The Palm Gur Instructors conducted training in the improved method of jaggery manufacture in 89 centres and trained 676 ex-tappers. In the districts, 56 demonstrations were conducted explaining the improved process of jaggery manufacture. The Palm Gur staff participated in the All-India Khadi Swadeshi and Industrial Exhibition held at Madras from December 18, 1952 to February 8, 1953. The neera parlour run by them was an attraction. They demonstrated the manufacture of palatable products from palm gur and neera and of white sugar from palm rab.

Propaganda and Counter-attraction.—In December 1952, the Chandra Co-operative Party staged the anti-drink play *What the Vintners Sell* written by Sri J. M. Lobo Prabhu, I.C.S. Propaganda on Grow More Food and Intensive Food Production schemes was also carried on.

Coffee and tea stalls run by private individuals and the milk bars run by some of the milk supply societies continued to be popular with the ex-addicts. Aerated water, butter-milk and tender coconut juice have become popular drinks. The Central Tea Marketing Board is supplying tea in the urban areas of some districts.



CART-LOADS: A few of the palm jaggery carts at the marketing yard of the Kunnathur Jaggery Marketing Co-operative Society. About 3,000 maunds are sold at the shandy every week.



AUCTION SHED: Business is done here in this temporary auction shed. Twenty-two primary jaggery co-operative societies are affiliated to the Kunnathur Marketing Society.

Electricity: Review for February 1953

Review of work done by the Electricity Department during February 1953 is given below:—

Machkund Hydro-Electric Scheme.—Land acquisition proceedings were continued. Metalling for the Soguru-Jalaput road was continued up to a length of seven miles and seven furlongs. Work was progressing for road dam at mile 2/0, 5/0 and 7/2. Further work on diversion dam was progressing. Sixty-eight per cent of flume channel was completed. In tunnel pond dam, excavation for foundation was completed and 32 per cent of masonry and 27 per cent of concreting were completed. Pressure tunnel and surge shaft were also completed. Masonry for filling the pockets round the surge shaft top platform was progressing. Pipe tunnel and flume tunnel were completed.

Grading of penstock slopes was continued. Levelling power-house site was completed. Foundation, excavation and levelling transformer yard were progressing. Excavation of foundation for main dam at Jalaput was progressing and 2,881 units of earth and 1,260 units of rock were excavated so far. Drilling investigation of bore-holes for spillway, driving street piles for down-stream coffer dam and excavation for surplus course were progressing.

Moyar Hydro-Electric Scheme.—All civil works from head works to power-house were completed. The three generating units were in service. The residual works were progressing. Work on the third transformer awaits receipts of the transformer which is reported to have been shipped from the United Kingdom.

Pykara III Stage Extensions.—(a) **Pykara Dam.**—Construction of masonry for the wing walls and main dam structure and concreting for R.C.C. core wall were progressing.

(b) **Penstock and Power-house Extensions.**—Erection of steel structures was completed and masonry for the superstructure was progressing for the Power-house Extensions. The foundation for machine pits were almost completed.

Madurai Thermal Scheme.—Pile driving for foundation of boiler No. 1 was nearing completion. Concreting of raft

and R.C.C. matting for boiler No. 2 was completed. Feed water tank cover support work was taken up. All arrangements for the trial run of the 10,000 KW. turbo-set have been made and the tests will be taken up after satisfactory trials. The auxiliaries of the turbine set were being tested.

South Kanara Extensions.—Tree valuation work was in progress.

Tungabhadra Hydro-Electric Scheme.—(a) **Canal Power-house.**—Trial pits excavation work was completed and trial pits were deepened along L.P.P.L.

India Tops the List in Textile Trade

An extract from the unpublished report of the Commercial Secretary, Embassy of India, Buenos Aires, for 1951-52, is given below:

Textiles: Purchases during 1951-1952, 123,000 tons at 1,060 million pesos—recorded increase of 28 and 87 per cent respectively over the previous year. They included cotton goods valued at 501.8 million pesos and jute, hemp and other fibres valued at 394.7 million pesos. Hessian purchases accounted for 70,500 tons valued at 302.4 million pesos, cotton yarns 7,000 tons at 278 million pesos and coloured cotton cloth 1,100 tons valued at 111.2 million pesos. Under this group prominent suppliers were Brazil with 5,463 tons valued at 215,124,000 pesos (cotton textiles accounting for 208,344,000 pesos), France with 2,728 tons valued at 128,399,000 pesos (cotton textiles 109,750,000), Italy with 2,350 tons at 80,957,000 pesos, Peru with 3,087 tons at 56,832,000 pesos, Switzerland with 888 tons at 54,510,000 pesos, Netherlands with 1,788 tons at 40,703,000 pesos, U.S.A. with 1,444 tons at 30,998,000 pesos and U.K. with 1,788 tons at 25,987,000 pesos. India no doubt topped the list with the supply of 71,035 tons of jute goods valued at 305,109,000 pesos.

and tail race. Calyx drilling was progressing at the intake at forebay.

(b) **Transmission Lines and Sub-stations.**—Profiles and tower schedule were prepared from the Dani-Bellary line. The same for Guntakkal-Coorg and Bellary-Guntakkal lines were being completed. Detailed survey in Dhone-Nandyal line was nearing completion. Site plans with acquisition proposals were being prepared and finalised for the Banganapalle Sub-station.

Vijayawada-Visakhapatnam Power-house Extensions (Vijayawada).—Work on second raw water well was continued. Work on pump-house was progressing.

Visakhapatnam.—Pile foundations and erection of steel superstructure for the southern annexure and coal bunker for the west side extension were completed. R.C.C. flooring from ash pit on the extended portion was also completed. Work on VI boiler and III chimney were progressing.

Nellore Thermal Scheme.—All electrical works both at Nellore and Gudur were completed. Staff quarters at Gudur were also finished.

Machkund Transmission Lines.—Tower erection, stub-setting, etc., under the above scheme in Machkund-Visakhapatnam reach were progressing. Stringing of earth wire and conductors were being done in the Visakhapatnam-Vijayawada section and is nearing completion. Civil works were progressing at all the sub-stations.

Madras Plant Extensions.—All structural steel work for the building was erected. The work on Natural Draught Cooling Tower No. 2 was completed except for replacement of some damaged sprayer nozzles, etc. Erection of cooling stacks was completed for Natural Draught Cooling Tower No. 3. Eighty per cent of erection of boiler No. 2 was completed. Coal conveyors 1, 2 and 3 and coal crusher were commissioned on 20th February 1953. Erection of double wing tripper and wagon tripper was completed. Erection of 15,000 KW. turbo alternator has been completed and it has been put on trial run.

Work on the boilers under II Stage Extensions was commenced.

Operating Systems

Hydro Areas.—The water conditions in Hydro areas deteriorated further

during the month. The 35 per cent cut in consumption was increased to 50 per cent from 1st February 1953.

The 2,000 KVA. transformer No. I was tharged on 29th January 1953 and was paralleled with transformer No. II at Virudhunagar Sub-station. One 5,000 KVA. 66-33/11 KV. transformer was commissioned at Pasumalai Sub-station. Erection of 110 KV. O.C.B. on Singarapet No. 1 feeder oil circuit breaker was completed and commissioned on 18th February 1953.

Sri Agarwal, Secretary, Central Board of Irrigation and Power, visited Papanasam Power-house on 5th February 1953.

The number of units generated, peak load and the services connected up during the month in the hydro areas were as follows:—

Name of the System.	System peak load in KW.	Generation in millions of units.	Services connected.		
			Agricultural.	Industrial.	Domestic.
Pykara ..	36,000	20.914 + 8.39 *	50	1	179
Mettur ..	40,500	2.383	45	..	33
Papanasam.	16,700	2.740 + 2.900 †	17	..	209

The services shown against Pykara do not include those connected in Ootacamund division.

* 8.390 millions of units were generated at Moyar Power-house, the peak load of the station being 25,200 KW.

† 2.90 millions of units were generated at Madurai Thermal Station, the peak load of the station being 3,800 KW.

Thermal Areas and Ceded Districts.—The Madras Electricity System stations were running in parallel with Hydro systems during this month also affording relief to the Hydro stations during off-peak hours and availing a small amount of relief during peak load hours.

The peak load, generation and the number of services connected up during the month in the several areas were as follows.

In the Madras Electricity System 49 D.C. services with an approximate connected load of 83.43 KW. were changed over to A.C. supply on a voluntary basis during the month.

During the month 13 extensions were sanctioned by the Chief Operation Engineers and Chief Engineer (Electricity) at an estimated cost of Rs. 4,33,280.

Using the Sun's Energy to Cook Food

The utilisation of solar energy for heating or cooking food has long attracted attention and several attempts were made during the last century in this direction. The information available, however, is scanty and no attempts appear to have been made to assess the efficiency or the output of the devices designed for cooking food, making use of the sun's energy. The leading article in the March issue of the *Journal of Scientific and Industrial Research* gives a survey of the literature on the subject and describe the studies conducted at the National Physical Laboratory, New Delhi, in the development of an efficient solar cooker.

The devices designed for cooking food may be considered under two groups: those using direct absorption of solar heat, the "hot box" consisting of an insulated box blackened on the inside and covered with one or more glass sheets, and those in which the rays are first concentrated and then utilised for heating or cooking.

India, has abundant solar energy available almost throughout the year. This, combined with the hope of alleviating the general shortage of fuel in India, made it worthwhile to investigate the possibility of using solar heat for cooking. Investigations have demonstrated that a direct reflector type cooker has economic and commercial possibilities in India. The output of reflectors of reasonably small size is enough to enable cooking not only during the noon hours but also during a large part of the morning and the evening hours. A number of such small cookers with metal reflectors have been set up and are working satisfactorily.

Power Cut in Cochin

Following the power shortage caused by the low water storage in the hydel reservoir in the Travancore-Cochin State, the Government have imposed a 33-1/3 per cent cut on supply of electricity to all industrial concerns and a 25 per cent cut on supplies for general purposes in the Fort Cochin area.

Name of System.	Peak load in KW.	Generation in millions of units.	Services connected.		
			Agricultural.	Industrial.	Domestic.
Madras	29,800	12.707	13	15	209
Vijayawada—					
(a) Steam ..	9,420	4.164	15	11	210
(b) Diesel ..	430	0.016			
Visakhapatnam					
(a) Steam ..	4,260	1.631	..	2	36
(b) Diesel ..	1,100	0.066			
Kakinada ..	870	0.064	17	1	54
Rajahmundry ..	800	0.049	..	..	..
Srikakulam ..	120	0.021	..	..	4
Narasannapeta ..	19	0.003	..	..	..
Nellore	1,150	0.380	1	2	84
Proddatur ..	104	0.026	2	1	2
Anantapur ..	220	0.060	2	3	33
Kurnool	360	0.104	..	3	27
Cuddapah ..	240	0.077	6	..	22
Tadpatri	68	0.012	..	..	8
Nandyal	170	0.029	..	1	18
Power purchased from Mysore—					
Hindupur ..	738	0.072	..	..	6
Ceded Districts ..	3,840	1.488	14	11	123

District Census Handbooks to be Published

The 1951 Census Report, Part II, which has been published by the Government of India, contains statistical information mainly at district level and does not contain information for smaller units like villages, panchayats, towns, etc., within the respective districts. With a view to present census statistical information for units below the district level, the Madras Government have undertaken to print and publish a District Census Handbook for every district and for the City of Madras based on the information collected at the 1951 Census.

This publication will be more useful than the simple Village Statistics of the past. It will contain all the population and economic tables with a summary for each taluk containing particulars of population under the various livelihood classes, the social and cultural tables, a table showing the household (size) of agricultural and non-agricultural classes, backward and non-backward classes in respect of households selected on random sample basis, tables giving

figures of livelihood classes by age groups, age and literacy in respect of the ten per cent sample population, an occupational abstract, statistics of population in each village and ward of each town by livelihood classes, and tables showing small-scale industrial establishments.

Besides this, there will be an introduction containing as far as possible taluk-wise information regarding physical features, soils, rivers, rainfall, irrigation facilities, crops grown, water-supply, drainage, sanitation, medical relief, etc. An up-to-date district map will also be appended to it showing the district and taluk boundaries, all National and State Highways, major and other district roads, important topo details such as railway lines, big towns and canals, rivers, hills, and villages with a population of over 5,000 as at the 1951 Census and other important land works.

The Handbook for each of the districts and for the City of Madras is expected to be printed and published

shortly. The sale price of the Handbooks will not be uniform but will vary according to the number of pages of printed matter of the respective District Census Handbook. Prices will be fixed after the Handbooks have been printed.

In view of the widespread public interest displayed in the first census of Free India, the Government desire that the likely demand for copies of the District Census Handbook relating to each district should be ascertained beforehand and sufficient number of copies printed so as to meet the demand in full, at the minimum price necessary to cover cost.

All persons and institutions interested in securing copies of the District Census Handbooks are requested to intimate their requirements to the Deputy Secretary to Government, Public (Elections) Department, Fort St. George, Madras-9, and to place firm orders in advance for copies on the Superintendent, Government Press, Mount Road, Madras.

MADRAS BANANAS

A MONOGRAPH

BY

K. CHERIAN JACOB, L.Ag., F.L.S.
(formerly of the Madras Agricultural Service), Coimbatore

Pages xii + 228]

[Price, Rs. 7-6-0

84 illustrations

Contents

History and area; nomenclature; description; origin of varieties; names of varieties; commercial varieties in Madras State; cultural practices; banana products and dietetics; analysis of the fruits, and six appendices, bibliography and index

PRINTED BY THE SUPERINTENDENT, GOVERNMENT PRESS, MADRAS.

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MADRAS INFORMATION

Madras State Cyclone Relief Fund

Sri C. Rajagopalachari, Chief Minister, Madras State, has issued the following statement :—

I am very grateful to my brothers and sisters in Malaya and Burma who have taken great pains to organise collections for those who have suffered in the recent cyclone in Tanjore and Tiruchirappalli. I received very handsome donations from time to time and the Prime Minister has returned recently with amounts placed with the Agent of the Government of India in Malaya and the Embassy in Rangoon towards this object totalling over Rs. 52,000. The details of the amounts are given below :—

Name of donor	Amount. RS. A. P.
All Burma Tamilian Association, Rangoon, through the Embassy of India, Rangoon.	30,564 0 0
Regional Indian Congress, Perak	10,020 0 0
Tamilnad Cyclone Relief Fund Committee, Negri Sembilan, through the Agent to Government of India, in Malaya, Kuala Lumpur.	9,999 0 0
Dr. V.R.N. Menon, Lumut, Perak	2,145 0 0
Honorary Secretary, Cyclone Relief Fund Committee Indian Association, Muar, through Representative of Government of India in Malaya, Singapore.	1,589 0 0
Indian Labourers of Kerilla Estate, Temangan, Kelantan.	1,432 0 0
Dr. Ganga Ram Dovedi, Mawchi Mines Limited, Mawchi, through the Embassy of India, Burma.	998 0 0
Cyclone Association, Batu Pahat	966 0 0
Manager, United Sua Betong Rubber Estates Limited, Labis, Johore.	962 0 0
The Secretary Indian Association, Kuala Trengganur, through Representative of Government of India in Malaya, Singapore.	928 0 0
Staff and labourers of Labis Bahru Estate, Segamat, Johore.	437 0 0
Messrs. Shaw Brothers, Kuala Lumpur, through the Representative of Government of India in Malaya, Singapore.	400 0 0
Kanganis and labourers of Lungi Plantations Limited, Layang-Layang, through the Representative of Government of India in Malaya, Singapore.	352 0 0
Manager, Jong Landor Rubber Estates Limited, Tapah, Perak, through Representative of Government of India in Malaya, Singapore.	312 0 0
Sikhs of the Police Depot, Kuala Lumpur.	310 0 0
General Manager, Oil Palms of Malaya Limited, Layang-Layang.	307 0 0
Indian labourers of Lubok Kawah Division of Kuala Muda Rubber Estate, Sungei Patani Kedah, Malaya, through the Agent to Government of India in Malaya, Kuala Lumpur.	249 0 0

Name of donor.	Amount. RS. A. P.
Labourers and staff of Bukit Badong Estate, Selangor, through Agent to Government of India in Malaya, Kuala Lumpur.	226 0 0
Dr. V. R. N. Menon, Lumut, Perak	156 0 0
Mr. Towkay San Ching Chew	155 0 0
Mr. C. Y. Lien	31 0 0
Sri A. K. P. Menon	31 0 0

MADRAS CHAMBER OF COMMERCE.

The following are the donations made by the member firms of the Madras Chamber of Commerce towards the Madras State Cyclone Relief Fund.

Donations in Cash

	RS. A. P.
Messrs. A. & H. Harvey. Ltd., Madurai	10,000 0 0
Messrs. Volkart Brothers, Madras	each.
East India Distilleries and Sugar Factories Limited, Madras.	2,500 0 0
Messrs. Parry and Company Limited, Madras.	each.
Messrs. Shaw Wallace and Company Limited, Madras.	
Richardson and Cruddas Limited, Madras.	1,000 0 0
Messrs. Best and Company Limited, and their Associates the Crompton Engineering Company (Madras) Limited.	each.
Gordon Woodroffe and Company (Madras) Limited, Madras.	500 0 0
Messrs. T. A. Taylor & Co. (Madras) Limited, Madras.	250 0 0
The Bombay Company Limited, Madras.	each.
Messrs. Brunnschweiler and Company, Madras.	
Messrs. Fraser and Ross, Madras	100 0 0
Messrs. Grahams Trading Company (India) Limited, Madras.	each.
Shalimar Paint Colour and Varnish Company Limited, Madras.	30 0 0

Donations in Kind

	Value RS. A. P.
The Buckingham and Carnatic Company Limited.	4,250 0 0
The Bangalore Woollen, Cotton and Silk Mills Company Limited.	2,675 0 0
Messrs. Binny and Company (Madras) Limited.	2,500 0 0
Messrs. W. A. Beardsell and Company Limited. (One bale Mettur Mull).	1,056 0 0
Imperial Chemical Industries (India) Limited.	1,000 0 0

Other Donations

Sri T. Natarajan being collections made by Hindu Seva Sangam, Kutiyapitiya.	222 0 0
Sri Narasimhabarathi, Mysore	211 6 0

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MADRAS INFORMATION

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MADRAS INFORMATION

Name of donor	Value RS. A.
The Honorary Treasurer, North Arcot District Committee, Madras State Cyclone Relief Fund, Vellore.	191 0 0
Amount contributed by the Warden and members of the Victoria Students Hostel, Madras-5.	163 0 0
The Treasurer, Carnatic Lodge 2031, Madras.	150 0 0
Sri S. Kasturi on behalf of the staff of the Reserve Bank of India, Banking Department, Madras.	134 2 0
Sri Y. R. Gaitonde, on behalf of Messrs. T. N. and F. H. Briggs (Tanners) Limited, England.	133 0 0
The President, Bharath Devi National Youths League, Madras.	120 12 6
The Pullangode Rubber Produce Company Limited, Malabar.	120 0 0
The Secretary, National Youth Congress, Tirunelveli.	113 3 11
Sri K. N. Srinivasan being donation made by the staff of the Karur Vysya Bank Limited, Coimbatore.	102 8 0
Sri S. B. Authikesavalu Chetty, Honorary Secretary, Handloom Cloth Merchants' Association, Salem.	101 0 0
Sri K. Mariappa Chettiar, Secretary, Hindu District Cremation Society, Tiruchirappalli.	each.
Rotary Club, Cuddalore	100 8 0
Sri P. M. Subbiah Chettiar, Ramanathapuram District.	100 6 0
Mr. J. R. Bimbrahw, B.Sc., Delhi ..	100 0 0
The Secretary, West Madras Purasawakam Co-operative Bank Limited, Madras.	101 0 0
Srimathi Lakshmi N. Menon, M.P., Patna.	25,921 4 11
Total miscellaneous contributions below Rs. 100.	1,355 8 6
Total ..	27,276 13 5

Second Instalment

The following member firms of the Madras Chamber of Commerce have sent their second instalment of donations to the above Fund.:-

	RS.
Messrs. Burmah Shell Oil Storage and Distributing Company of India Limited.	2,500
The Metal Box Company of India Limited.	2,000
The Standard Vacuum Oil Company ..	1,500
The Imperial Tobacco Company of India Limited.	1,000
Messrs. Gillanders Arbuthnot and Company Limited.	500

Name of donor	RS.
Messrs. Rallis India Limited	500
Messrs. Glaxo Laboratories (India) Limited.	500
The General Electric Company of India Limited.	500
The Firestone Tyre and Rubber Company of India Limited.	250
The Indian Oxygen and Acetylene Company Limited.	250
Total ..	9,500
Messrs. Caltex (India) Limited	1,000
Messrs. Associated Electrical Industries (India) Limited.	500

Fortnight ended 10th February 1953

	RS.	A.	P.
The Government of the Federation of Malaya, Kuala Lumpur.	38,781	4	0
Sri R. Venkatarajulu, Editor, <i>Tamil Nesan</i> , Kuala Lumpur.	15,000	0	0
The Honorary Secretary, Madura District Committee, Madras State Cyclone Relief Fund, Madurai.	10,203	0	0
All Malaya Nattukottai Chettiers' Chamber of Commerce, Kuala Lumpur.	6,500	0	0
The Secretary, Tamil Nad Cyclone Relief Fund Committee, Matunga, Bombay.	3,001	0	0
All Indian Khadi Swadeshi and Industrial Exhibition, Teynampet, Madras.	each.		
The Burmah-Shell Oil Storage and Distributing Company of India Limited, Madras.	2,500	0	0
The Metal Box Company of India Limited.	each.		
The South Madras Electric Supply Corporation Limited, Tennur, Tiruchirappalli.	2,000	0	0
Contributions by the Indians in Central Kedah.	each.		
The Chief Ordinance Officer, Vehicle Depot, Avadi.	1,903	3	0
Collections by sale of tickets for wrestling at Madichiyam (through Revenue Divisional Officer, Dindigul).	1,770	0	0
South Arcot Electric Distributing Company Limited, Madras-4.	1,500	0	0
The Chairman, Madras Port Trust, being collections from the employees of Madras Port Trust.	1,081	10	6
The Standard-Vacuum Oil Company ..	1,500	0	0
The Commissioner, Coimbatore Municipality, Coimbatore.	1,111	0	0
Contribution from some members of the Madras Jewellers and Diamond Merchants' Association, Madras.	1,001	0	0
Sri M. S. P. Solai Nadar, Dindigul ..	1,001	0	0
The Secretary, South India Club, Calcutta-29.	1,001	0	0

	RS.	A.	P.
The Imperial Tobacco Company of India Limited.	1,000	0	0
The Guntur Power and Light Company Limited, Madras.	each.		
The West Coast Electric Supply Corporation Limited, Madras.	900	0	0
Madurai District Central Co-operative Bank Limited, Madurai.	750	0	0
The Municipal Council, Chidambaram ..	700	0	0
The District Board, Salem	665	2	0
The Carnatic Electric Supply Corporation Limited, Madras.	649	3	0
The Vellore Electric Supply Corporation Limited, Madras.	615	7	0
Messrs. Chandrie & Co., Limited, Madras.	613	14	5
The Chairman, Women's Indian Association, Madras.	501	0	0
Indian Residents of Herpendon Rubber Estates, Kapar, Selangor, Malaya.	each.		
Sri Prithiviraj Kapoor, Prithvi Theatres, Bombay-4.	500	0	0
The Mill Stores and Machinery Merchants' Association, Madras.	each.		
Madura-Ramnad Co-operative Wholesale Stores Limited, Madurai.	350	0	0
The Secretary, Salem Co-operative Wholesale Stores Limited, Salem.	318	0	0
Sri A. S. Subbaraj, M.L.A., Bodinayakanur.	315	0	0
Messrs. Gillanders Arbuthnot and Company Limited.	305	0	0
Messrs. Rallis India Limited .. .	300	0	0
Messrs. Glaxo Laboratories (India) Limited.	each.		
The General Electric Company of India Limited.	250	0	0
The Honorary Secretary, Malabar District Committee Provincial Welfare Fund, Kozhikode.	each.		
Sri P. Natesan, Jammi Buildings, Madras-4.	249	8	0
Staff and Labour Force of Padanag, Gajah Estate, Kapar.	222	15	11
The Revenue Divisional Officer, Cochin.	220	0	0
M. & S.M. Railway Employees' Union, Perambur Branch.	each.		
Messrs. India Company Limited, Madras.	220	0	0
The Firestone Tyre and Rubber Company of India, Limited.	each.		
The Indian Oxygen and Acetylene Company Limited.	250	0	0
The Pudukkottai Electric Supply Corporation Limited, Pudukkottai.	each.		
Ellore Electric Supply Corporation Limited, Madras.	249	8	0
Chittoor Electric Supply Corporation Limited, Chittoor.	222	15	11
Sri K. M. S. Lakshmanier, Madurai ..	220	0	0
Ponnamaravathy Electric Supply Corporation, Pudukkottai.	each.		
Staff and Workers of Kudang Estate, Batu Arang, Selangor, Malaya.	220	0	0
Donation by the Canara High School Council and the pupils and staff of the school, Mangalore-3.	each.		

	RS.	A.	P.
The Kanadukathan Electric Supply Corporation Limited, Chettinad.	200	0	0
Sri A. Rama Iyer, M.A., Principal, Sri Narayana College, Quilon.	each.		
Sri Meenakshi Sundareswarar Electric Power Corporation Limited, Karai-kudi.	199	8	0
Sri S. T. Moorthy, 12-A, Hicks Road, Kuala Lumpur.	156	10	9
The General Secretary, Union of Post and Telegraph Workers, Madras-1.	150	0	0
Sri V. Balakrishnan, Vice-President, North Madras National Youth Front, Madras-21.	131	0	0
Students of the College of Engineering, Madras-25.	126	8	0
The Secretary, Red Cross Society, Salem.	125	0	0
Sri S. S. Velayutham Pillai and others of Madurai Mill Company Limited, Ambasamudram.	120	0	0
Puttur Hussain Sahib, Mangalore ..	117	0	0
Sri SM. Venkatarama Chettiar, Pandamangalam.	105	0	0
Sri N. V. T. S. Syed Ibrahim Rowther, Veda-sundur.	101	0	0
Sri K. R. Narayana Iyer, Dindigul ..	each.		
The Bombay South Indian Adi-Dravida Mahajana Sangh, Dharavi, Bombay-17.	101	0	0
East India Distilleries and Sugar Factories (Limited) Employees' Co-operative Canteen, Limited, Nellikuppam.	each.		
Shree Krishna Tamil Vikas Sahakari Mandal Limited, Ahmedabad-8.	101	0	0
Saidapet Merchants' Association Canteen, Saidapet.	each.		
Sri R. Thirumalaisami, Kannivadi ..	100	0	0
Messrs. B. S. Sornam Pillai & Sons, Batlagundu.	each.		
Sri N. Perianna Pillai, Namakkal ..	100	0	0
Sri P. L. CT. PL. Palaniswami Chettiar.	each.		
Sri Meenakshi Electric Supply Corporation Limited, Devakottai.	100	0	0
Kumbakonam Electric Supply Corporation Limited, Madras.	each.		
Sri V. V. Dhanushkodi Nadar, C/o Vannia Nadar, Tuticorin.	100	0	0
Messrs. K. S. P. S. Natarajan & Co., Tuticorin.	each.		
Messrs. T. Sankara Moopanan Sons, Tuticorin.	100	0	0
Sri B. A. Cardoza, C/o Packiam Cardoza, Tuticorin.	each.		
The Headmistress, Government Training School for Women, Dindigul.	100	0	0
Sooseya Villavarayer, Tuticorin ..	each.		
South Kanara Central Co-operative Bank Limited, Mangalore.	100	0	0
Total miscellaneous contributions below Rs. 100.	1,19,068	2	7
Total ..	5,331	5	4
Total ..	1,24,399	7	11

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MADRAS INFORMATION

"TAMIL NESAN."

A further remittance of a sum of Rs. 15,000 collected by the Editor, *Tamil Nesan*, Kuala Lumpur, Malaya, has been received and credited to the Madras State Cyclone Relief Fund. This is in addition to the first instalment of a sum of Rs. 35,000 contributed by the ordinary labouring classes of Malaya through the Editor, *Tamil Nesan*.

Fortnight ended 10th February 1953

The following is a list of donations received towards the Madras State Famine Relief Fund during the fortnight ended 10th February 1953.

	RS.	A.	P.
The Commissioner, Trichur Municipality, Trichur.	101		
Total miscellaneous contributions below Rs. 100.	14		
Total ..	115		

Fortnight ended 10th March 1953

	RS.	A.	P.
The Collector, Medak District, Hyderabad State.	3,399	9	9
Total miscellaneous contributions below Rs. 100.	87	0	0
Total ..	3,486	9	9
Grand Total ..	11,34,246	12	8

Fortnight ended 24th March 1953

	RS.	A.	P.
Contributions collected by Sri R. Venkatarajulu, Editor, <i>Tamil Nesan</i> , Kuala Lumpur.	25,000	0	0
The Honorary Treasurer, Madras Provincial Welfare Fund, Madras.	5,000	0	0
The Vice-President, South Indian Association, Rastapet, Poona-2.	1,300	0	0
The Honorary Treasurer, North Arcot District Committee of Madras State Cyclone Relief Fund, Vellore.	1,070	11	7
Caltex (India) Limited through Madras Chamber of Commerce.	1,000	0	0
Sri V. V. Dhanushkodi Nadar, Tuticorin.	each.		
South India Cyclone Relief Committee, Jharia (Bihar).	761	0	0
Sri M. Shunmugam, Municipal Chairman, Villupuram.	646	0	0
All-India Spinners' Association, Tamil Nad Branch, Tirupur Circle.	621	14	6
The Southern Railway Institute, Podanur.	601	0	0
The President, District Board, Saidapet.	511	7	5

	RS.	A.	P.
The Honorary Treasurer, North Arcot District Committee of Madras State Cyclone Relief Fund, Vellore.	500	0	0
Associated Electrical Industries (India) Limited.	each.		
The Honorary Secretary, Indhu Mathar Ikya Sangham, Madurai.			
Sri P. Muthusamy Naidu, Madurai, on behalf of the Indians in Ceylon.	475	8	3
The Staff of the Government Printing Press, Singapore (\$287.50).	445	4	0
All-India Spinners' Association, Tamil Nad Branch, Tirunelveli Circle.	333	0	0
The Commander, S.S. <i>Rajula</i> , being the donations from cabin passengers, officers and crew.	306	0	0
The Honorary Secretary, Salem Rotary Club, Salem.	238	0	0
Plantation Workers and Staff of New Division, Sabrang Estate, Malaya.	201	0	0
Sri K. S. Sen, Treasurer, Technology Students Gymkhana, Indian Institute of Technology, Kharagpur.	185	0	0
The Treasury Deputy Collector, Cuddapah.	180	0	0
Nilgiri District Estate Workers' Union, Kotagiri Branch.	170	11	0
The Treasurer, Tamilian Festival Celebrations Committee, P.O. Box No. 30, Ipoh, Perak, F.M.S.	155	2	0
The Service Manager, U.P. Government, Roadways, Meerut.	153	5	0
The Secretary, Murpokku Valibar Sangam, Ahmedabad-8.	144	8	0
The Tahsildar, Karkal, South Kanara ..	125	6	9
The Secretary, Madras State Cyclone Relief Fund, Mangalore.	125	0	0
The President, Panchayat Board, Narsingapuram.	100	0	0
Government Secondary Training School for Women, Mangalore.	each.		
Total miscellaneous contributions below Rs. 100.	42,800	6	6
	2,030	1	11
Donations received and credited to the account up to 10th March 1953.	44,830	8	5
Donations (cheques) received and sent for collection and will be credited to the account on realisation.	2,402	0	0
Total ..	6,14,817	9	0
The Women's Indian Association, Madras, has collected a sum of Rs. 690 towards the State Cyclone Relief Fund and about 800 pieces of clothes.			
The Indian residents in Ceylon have sent a sum of Rs. 475-8-3 through Sri P. Muthuswami Naidu, as their contribution to the State Cyclone Relief Fund.			

NEWS AND NOTES

31

MADRAS INFORMATION

INDIANS IN CEYLON

Tamilnad Cyclone Relief Fund. The Indians in Ceylon have kindly contributed to the Tamilnad Cyclone Relief Fund through Sri P. Muthusamy Naidu.

	RS.	CTS.
N. S. V. Velayutham Pillai	21-00	
N. V. T. Shamsudeen Rowther & Co.	16-00	
P. Muthusamy Naidu	11-00	
S. Subramaniam Pillai	11-00	
S. P. Shahul Hameed & Bros.	11-00	
V. Manickam & Bros.	5-00	
Selvanayagam and Company	5-00	
Pana. Moona. and Company	5-00	
T. S. P. Subbiah Pillai & Co.	5-00	
S. V. Arunachalam Pillai	5-00	
S. Arumugam & Bros.	5-00	
M. S. P. S. Subbiah Mudaliar	5-00	
M. S. H. Mohudoom Mohamed	5-00	
Karuppukkattiappa Stores	5-00	
M. Mohamed Ibrahim	5-00	
T. Tiruvengadam Pillai	5-00	
Raja Stores	5-00	
A. R. Sittampalam & Co.	5-00	
J. K. K. Nadaraja & Co.	5-00	
S. Gomathia Pillai	5-00	
R. Narayanasamy Naidu	5-00	
S. Subramania Pillai	5-00	
A. M. S. Nair Chettiar & Bros.	5-00	
A. M. Sethuramalingam Pillai & Co.	7-00	
O. A. Paramasivam Pillai	5-00	
Ganesan and Company	7-00	
M. Aiyasamy Nadar	5-00	
A. S. P. Sivan Pillai	5-00	
N. M. Nagoor Mohideen	15-00	
A. K. P. Govindasamy Chettiar	5-00	
R. M. S. Subbiah Pillai & Co.	5-00	
K. S. M. Kurunegala	5-00	
S. Arumugam Pillai	5-00	
K. Alvarappa Pillai	5-00	
Chittirelega and Company	5-00	
M. S. T. K. M.	5-00	
A. K. N. Noohu Lebbai & Co.	5-00	
T. P. M. Mohamed Rowther	5-00	
V. S. K. Subbiah Pillai & Bros.	5-00	
V. T. V. Deivanayagam Pillai	5-00	
S. S. V. Peramanayagam Pillai	5-00	
O. K. S. Abdul Rahim Maricair & Co.	5-00	
M. S. M. Veerabahu Pillai	5-00	
M. E. A. & Sons	5-00	
Surian and Company	5-00	
N. S. Cooray & Sons	5-00	
A. R. K. R. Arunachalam	5-00	
M. R. A. R. B. L.	5-00	
A. Abdul Rahman	5-00	
K. T. M. S. Abdul Kader & Co.	5-00	
Lucky Stores, Kegale	5-00	
M. A. Kuthuocs & Co.	5-00	
Aladeen and Company	5-00	
A. R. N. R. M.	5-00	
R. Kesavan	5-00	
V. E. S. P. L., Ltd.	5-00	
R. M. F. R. Alagappan Konar	5-00	
S. S. Mudaliar	5-00	
A. K. M. Mohamed Abdul Kader Inkiriya ..	10-00	

	RS.	CTS.
V. Karuppiah	5-00	
M. Packeer Mohideen	3-00	
A. Samsudeen	3-00	
K. M. A. Meerasa	3-00	
M. C. Sikkander Maricair	3-00	
Subramaniam and Company	3-00	
A. Ganapathy	3-00	
A. M. K. Thirupathi	3-00	
A. M. N. M.	3-00	
K. Subramaniam & Co.	3-00	
M. S. Ramasamia Pillai	3-00	
R. M. K. & Sons	3-00	
K. Chockalingam Pillai & Co.	3-00	
Murugan Company	3-00	
M. R. A. R. S. P.	3-00	
R. Manickam Pillai	3-00	
M. A. A. M. Paniappan	3-00	
M. Muthirulappa Thevar	3-00	
V. Sundaram Achary	3-00	
S. Velayutham	2-00	
R. Subramaniam	2-00	
E. K. S.	2-00	
P. Mohamed Ali	2-00	
V. K. N.	2-00	
Anisa and Company	2-00	
P. I. S. S., Galle	2-00	
K. L. S. Subbiah Pillai	2-00	
K. A. S. Ayyam Perumal Chettiar	2-00	
K. S. R. M. & Co.	2-00	
P. M. Aliar	2-00	
S. Narayana Pillai	2-00	
T. K. Kandiah Pillai	2-00	
M. N. S. Madar Sahib	2-00	
Pandian Pillai	2-00	
Sorimuthu Pillai	2-00	
Meera Sahib	2-00	
S. N. Ganapathy	2-00	
P. Narayanan	2-51	
M. Mohideen Nattamai	3-00	
Ponnusamy	2-00	
Vickrapandian	2-00	
L. Vellasamy	1-00	
S. A. Chelliah	11-02	

Total .. 475-51

Rs. 475-8-3

DONATIONS FROM MALAYA

Name of Donor.	Amount.
	RS.
The Government of the Federation of Malaya, Kuala Lumpur.	38,781
Sri R. Venkatarajulu, Editor, <i>Tamil Nesan</i> , Kuala Lumpur.	35,000
Sri R. Venkatarajulu, Editor, <i>Tamil Nesan</i> , Kuala Lumpur.	25,000
Contributions collected by Sri R. Venkatarajulu, Editor, <i>Tamil Nesan</i> , Kuala Lumpur.	25,000
The Honorary Secretary, Madras State Cyclone Relief Committee, Penang and Province Wellesley, Penang.	15,000

NEWS AND NOTES

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MADRAS INFORMATION

Name of Donors.	Amount. RS.	Name of Donors.	Amount. RS.
Sri R. Venkatarajulu, Editor. <i>Tamil Nesan</i> , Kuala Lumpur.	15,000	Indian Community in Chamek Estate, Kualang, Malaya (sent through the Manager of the Estate).	550
All-Malaya Nattukkottai Chettiars' Chamber of Commerce, 37, Ampang Road, Kuala Lumpur.	6,500	Sri D. Fakir Chand, Chief Court Inspector, Malacca, through the Agent of the Government of India in Malaya.	500
The People of Malayan Collieries Limited, Batu Arang, Selangor, through the Agent of the Government of India in Malaya.	5,442	Workers of the Union Rice Mill, Bethaling, Kuala Lumpur.	500
Madras State Cyclone Relief Committee, Penang.	5,327	Quarry and Concrete Workers' Trade Union, Kenneison Brothers, Batu Caves, Kuala Lumpur.	479
The Diamond Jubilee Estate, Jasim P.O., Malacca (\$560-00).		The Staff of the Government Printing Press, Singapore (\$287-50).	445
Sri S. P. Murugappa Chettiar, 55, Market Street, Singapore (\$35-00).		Staff and Labour Force of Pedang, Gajah Estate, Kapar.	318
Sri P. Govindaswamy Pillai, Merchant, 50, Serangoon Road, Singapore (\$1,000-00).	3,337	The Manager, Patani Paja Estate, Sungei Patani.	293
Contributions received by the Managing Editor, <i>Indian Daily Mail</i> , and <i>Tamil Mursu</i> , Singapore (\$557-50).		Indian Detainees of the Transit Camps of Port Swettenham and Ipoh.	279
Chettiars (Nattukkottai) Chamber of Commerce, 45, Tank Road, Singapore.	3,214	Sri I. N. Menon, being contributions from the staff and workers of the Beradi Estate, Johore, Malaya.	248
Sri S. C. M. Murugappa Chettiar, Managing Trustee, Nattukkottai Chettiar's Temple, Alor Star, Malaya.	2,000	Staff and workers of Kundang Estate, Batu Arang, Selangor, Malaya.	222
Contributions by the Indians in Central Kedah.	2,000	Plantation workers and staff of New Division, Sabrang Estate, Malaya.	201
Sri K. M. Mohideen Pitchay—Donation from the Central K. M. Indian Association, South India Cyclone Relief Fund Committee, Sungei Patani.	1,200	Sri S. T. Moorthy, No. 12-A, Hicks Road, Kuala Lumpur.	156
Sri N. Murugian, Honorary Secretary, South Indian Cyclone Relief Committee, Sungei Patani, Malaya.	1,000	The Treasurer, Tamilian Festival Celebrations Committee, P.O. Box No. 30, Ipoh, Perak, F.M.S.	155
Sri Mohamed Thamby, Singapore	1,000	Members of the staff of the Bombay Life Assurance Company Limited, P.O. Box No. 1:8, Kuala Lumpur.	155
The Employees of the Hummock Estate, Kland, Malaya, through the Agent of the Government of India in Malaya.	925	Sri A. K. Agambaram, Second-hand Goods Dealer, Jalan Bendahara, Ipoh, Perak, Malaya.	126
Sri Jaswant Singh, R. 45, Singapore Posub. Honorary Secretary, Nattukkottai Chettiars' Chamber of Commerce, Chettiar's Hall, Jalan Meriam, Muar, Malaya.	870	Labourers of Ichamaram Estate, Kuala Selangor.	125
Sri Bhu Mitra, Station Manager, Bharat Airways, Limited, Singapore (\$100).	775	The Staff, Malayan Railway, Gwa Musang, Kelanton, Malaya.	120
Staff and workers of Harvard Estate, Bedong, Kedah (\$330).	682	Agent and staff of the Government of India in Malaya at Kuala Lumpur.	101
Mr. S. F. Lopez, Lohain Estate, Nilai, Negri Sembilan (\$10).		Dr. M. Dicum of 98, Ampang Street, Kuala Lumpur.	100
Indian Residents of Harpendon Rubber Estates, Kapar, Selangor, Malaya.	649	Sri M. R. S. Murugiah Pillai, F.M.S., through Sri N. S. Krishnan.	100
Staff and labourers of Riverside Estate, Kuala Selangor, Malaya.	581	President, Indian Association, Kotta Tinggi, Johore, Malaya.	93
		Staff and Labour Force of Ghim Khoon Estate, Serdang, Kedah.	66

Abolition of Zamindaris: Deposit of Interim Payments

On behalf of the Government, the Director of Settlements, Madras, has deposited certain amounts with the Estate Abolition Tribunal at Chittoor towards interim payments for fasli 1361, in respect of certain estates notified in Guntur District. The names of the estates concerned, the amounts deposited and the date of deposit are published at page 187 of Part II of the *Fort St. George Gazette*, dated January 21, 1953.

On behalf of the Government, the Director of Settlements, Madras, has deposited certain amounts with the Estates Abolition Tribunal at Chittoor towards interim payments for fasli 1361 in respect of certain estates notified in Salem District. The names of the estates concerned, the amounts deposited and the date of deposit are published at pages 88-89 of Part II of the *Fort St. George Gazette*, dated January 21, 1953.



TRANSPORT CRISIS TACKLED

Lorries of the Civil Supplies Department were converted to carry passengers, with seats and ap-hangers for standing passengers. These plied from al points to clear rush at ermediate points.

Pictures show: (above) Dr. Krishna Rao, Minister for nsport, travelling in a erted lorry, and (below) orry picking up vegetable dors at Kotwal Bazaar.



At midnight on April 11-12, 1953, the tramway service of the Madras Electric Tramway Company in Madras City ceased to operate. Over a lakh of passengers who used the tramcars had to resort to buses and other means of conveyances.

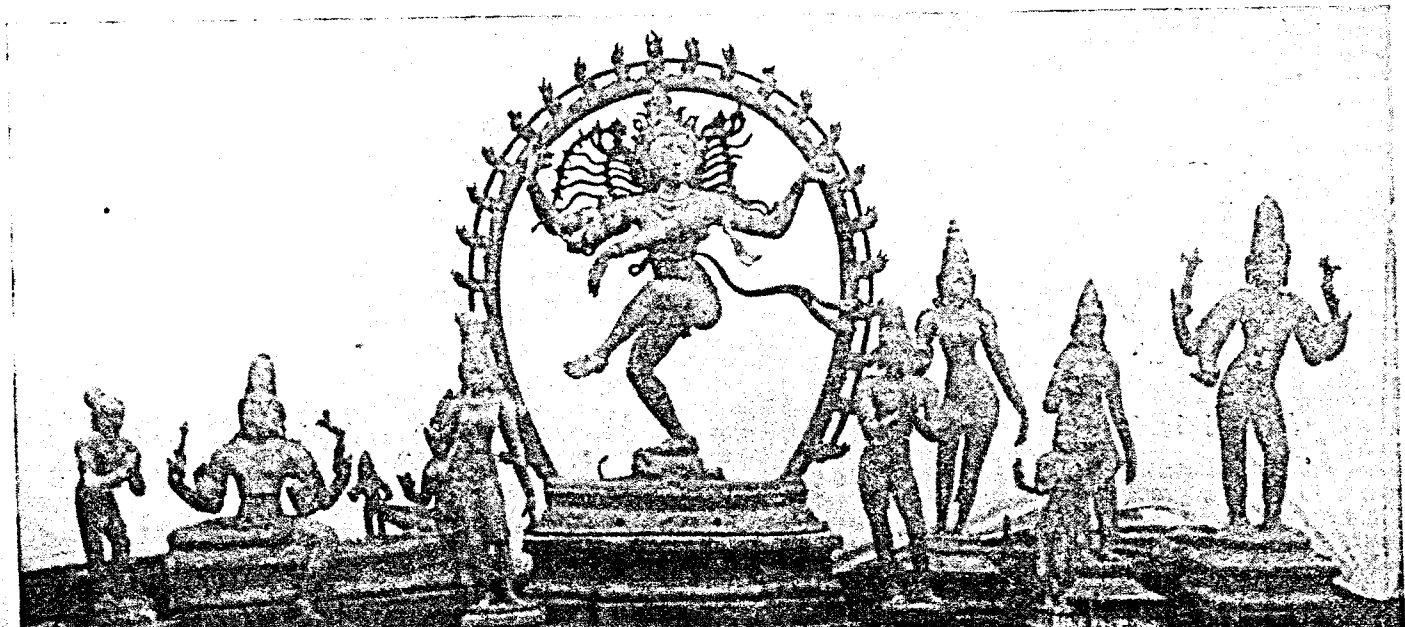
The Transport Department of the Madras Government ably tackled the crisis. More buses were put on the road, newer routes operated, and 'Red Ladies' rushed paint-fresh from the workshops to city service.



FIND OF CHOLA BRONZES

A remarkable group of Saivite icons, unearthed in a barren tract in Semangalam in Nagapattinam Taluk, Tanjore District, was on view recently at the Government Museum, Madras City. Experts have assigned the images to the beginning of the later Chola period, about the 12th Century A.D.

Pictures show Natesa in a vibrant dance pose, and a charming group of delicate figurines—(left to right) a sage, Somaskanda, Parvathi, Natesa, Chandikeswara, Sivakamasundari, Chandrasekhara, Parvathi and Vinadhara Dakshinamurthi.



Madras Information

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Fort St. George

Vol. VII, No. 6

"WE SEEK TO SERVE AND NOT TO COMPETE"

June 1953

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COVER PAGE: At the Bhoodan function at Arachalur, a village 12 miles from Erode, Sri C. Rajagopalachari, Chief Minister, distributed token transfer deeds to 55 landless labourers in the form of stamp papers with a picture of Acharya Vinobha Bhave and his own signature. Sri C. Subramaniam, Minister for Finance, distributed bulls and plough sets. This is the first Bhoodan function organised in Tamil Nad.

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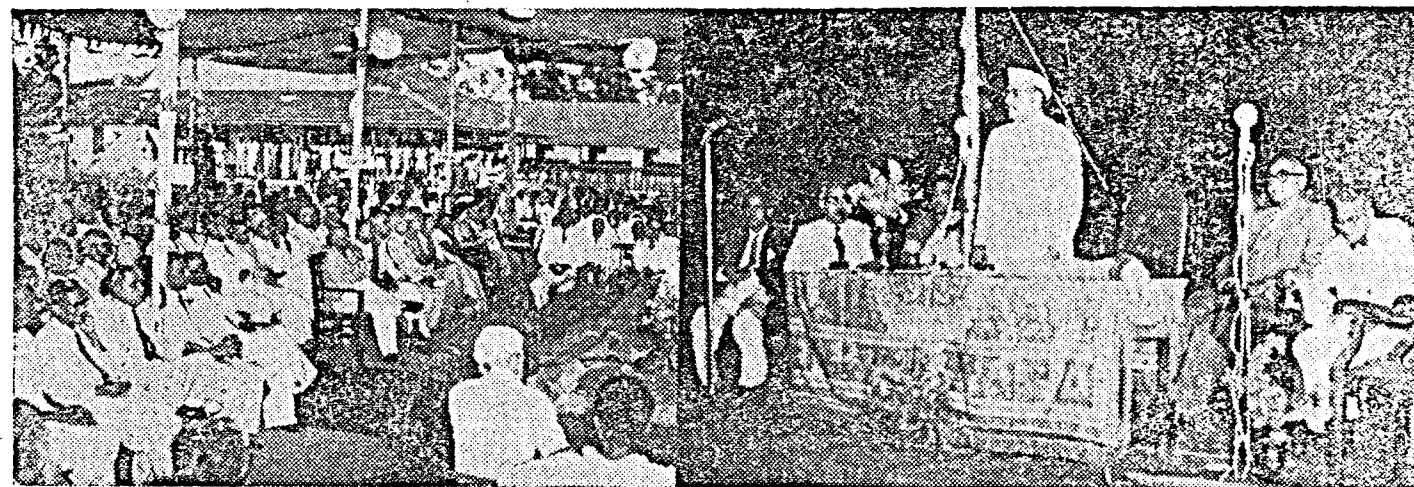
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HEALTH



NEW WING OPENED: Shri Sri Prakasa, Governor of Madras, recently declared open the new block of the Government Ophthalmic Hospital in Madras

Second Oldest Eye Hospital in the World

To the ordinary man in the street, the "Eye Hospital" is a well-known landmark in Madras; to the rickshaw-puller, it is a common destination or "stage", to which he often conveys fares; to the hundreds and thousands of patients, the Government Ophthalmic Hospital which is within a stone's throw of the Egmore Railway Station, has been a haven of refuge in visual distress and has proved to be the asylum for regaining their power of sight. It would however be a mistake to think that the Ophthalmic Hospital is a place where the afflicted get a dab of some solution in the eye or get a bandage fixed over the organ of sight, or sometimes have a delicate operation performed by expert hands.

The imposing red brick building, which almost resembles a medieval castle, contains much more than medicines, surgical instruments and beds; in it have been conducted successful experiments, which have contributed some invaluable material for very advanced and new methods of eye treatment. It contains a research laboratory which is constantly working for the alleviation of those suffering from eye troubles, through new methods and treatment.

Famous Institution

The Government Ophthalmic Hospital is the second oldest eye hospital in the world. With the years that have passed by this old institution has maintained itself as the oldest and

at the same time the most modern of Ophthalmic Hospitals in this country and a great centre for training and research for Ophthalmologists.

The continued popularity and fame that this institution has enjoyed is borne out by observations of visitors, recorded in the century-old, neatly preserved visitors' book. The testimony of Dr. R. Afflic Greaves, leader of the British team of Ophthalmologists, who visited this institution on October 20, 1950, during their tour in this country, would speak for itself: "I have heard much of this hospital in the past. But it has surpassed all my expectations. It is fortunate that South India should have the privilege of possessing such an institution, so excellent in its organisation and methods, and that the numerous students who attend practice should have the advantage of training which is second to none."

Early Beginnings

Founded in 1819 by Dr. R. Richardson on behalf of the Board of Directors of the East India Company, this hospital is housed in a building resembling closely a later Elizabethan castle with its towering roofs of red-tile. The other ophthalmic institutions that rank with this one in point of age are, the eye hospitals of Moorefield, London, founded in 1805; of New York built in 1820; and of Bombay and Calcutta both established in 1824.

Since its inception the "hospital" has been a leading centre for eye treatment. For over a century, it has almost become a habit with the citizens of this State to visit this institution for any eye trouble, be it a sore eye or a complicated glaucoma or a tumour. Naturally a wide range of cases come for treatment to this hospital. The early pioneers of this great institution instead of merely treating them, made a thorough study of cases and recorded their valuable conclusions for their successors to benefit. Thus the nucleus of a research section came into being.

But the real credit for putting the section on right lines goes to Lieut.-Col. Elliot, a former Superintendent of the Hospital—the reputed surgeon who defined the Sclero-Corneal Trephining operation for chronic glaucoma. Glaucoma is a very common disease, affected by which the eyeball becomes hard or, in the medical parlance, there is a rise in the intraocular pressure. The last word has not yet been said on this disease, but a relentless fight to unearth its intricacies and conquer it is going on here. Though planned by Lieut.-Col. Elliot, the Elliot School, named after him, for imparting instruction in Ophthalmology, became a reality only during the regime of Lieut.-Col. H. Kirkpatrick, in 1920.

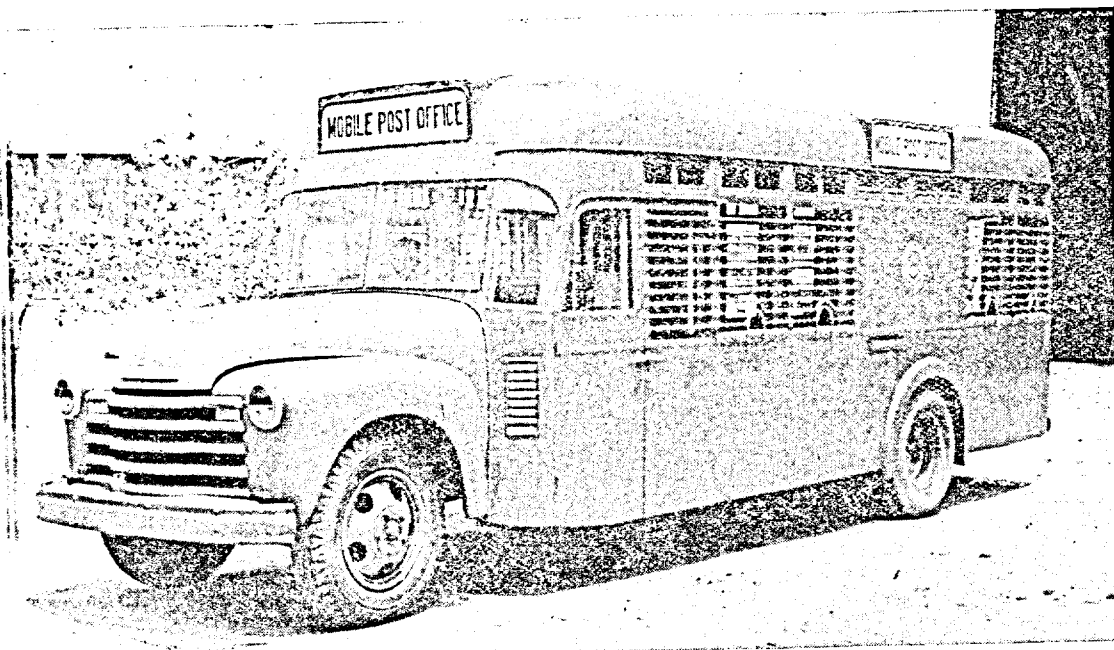
Post-Graduate Training

From its humble position it was upgraded in 1926 into an institution of post-graduate training, due to the

Registered No. M-4767.

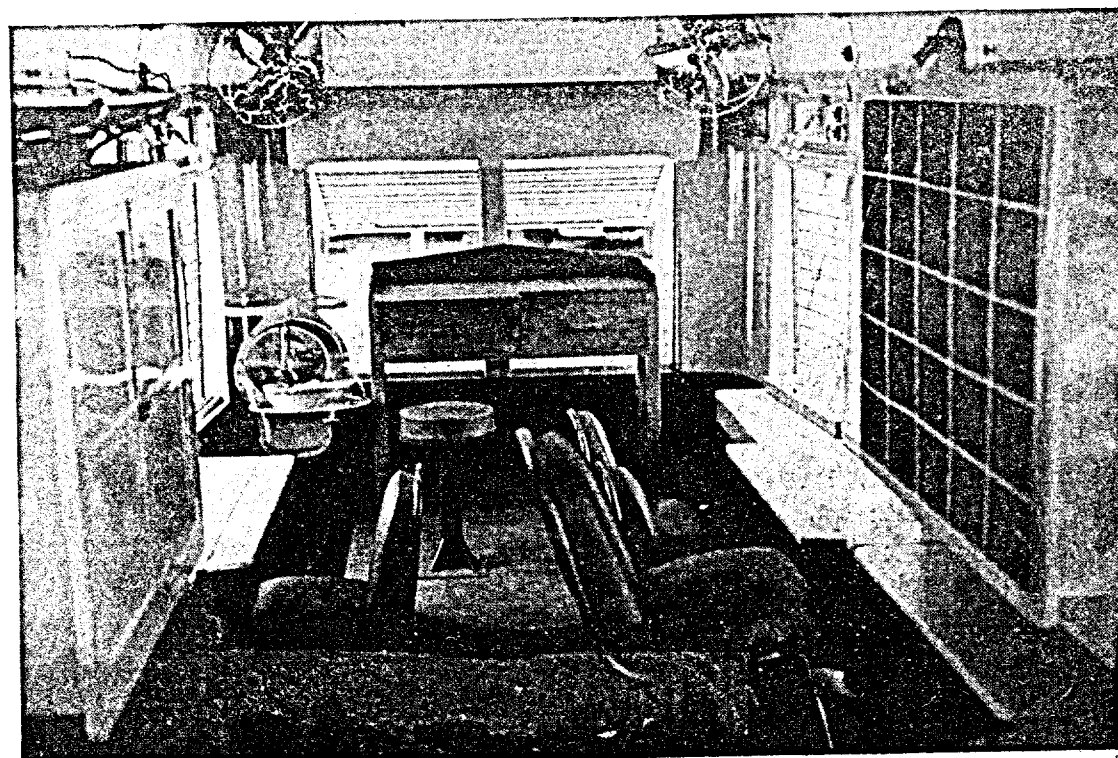
A mobile post office van of new design was recently constructed at the Government Coach-Building Factory, Chromepet. This vehicle will enable postal service in different centres outside regular post-office hours.

Left: The sleek exterior of the van.



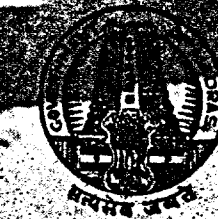
MOBILE POSTAL VAN

Right: Interior of the van. Note the neat layout, comfortable seats for the postal staff, and the fine ventilation and lighting systems.

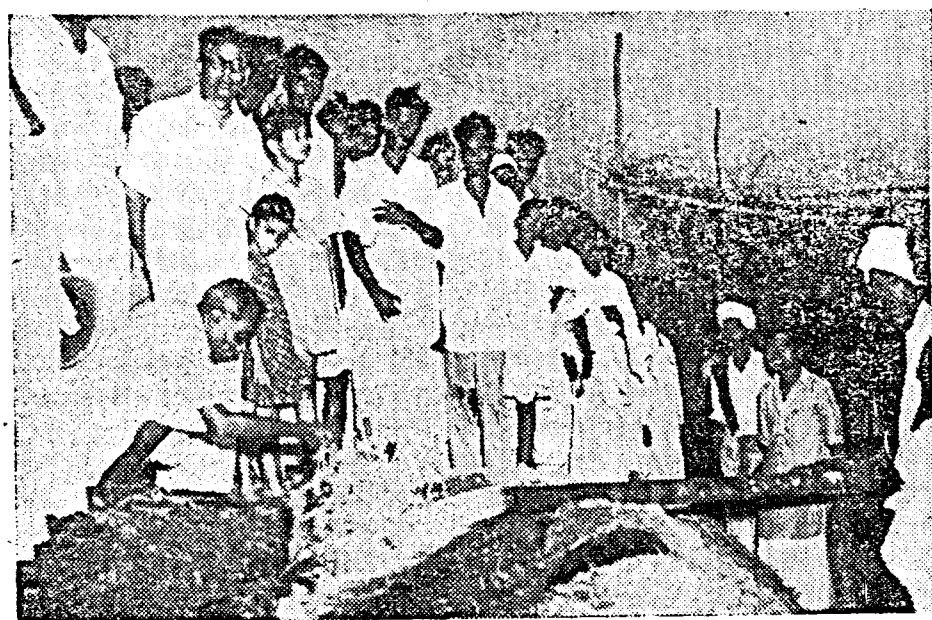


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M A D R A S Information



JUNE 1953
Price 3 annas



FILTER WELLS: Dr. R. Nagan Gowda, Minister for Agriculture, recently inspected filter wells at Tiruvallur and Ponneri. Picture shows the Minister studying the water-flow at a farm well.

to the subject. He had seen something of Asiatic farming conditions and had appraised the Japanese sentiment towards compulsion.

He therefore suggested that I had better visit Japan on my way back and study conditions there first hand. Mr. Rowe placed in my hands a copy of the Report on the Japanese Crop Insurance Scheme which he had prepared for the Natural Resources Section of the General Headquarters after a study on the spot, and loaded me with valuable introductions to Tokyo. I made the return voyage via the Pacific instead of the Atlantic, and made a brief halt in Japan to enable me to undertake a further study.

Mutual Assistance System

The Japanese Agricultural Insurance System is essentially a Mutual Assistance System and is known as such. It involves compulsory membership, Government subsidies and detailed Government supervision. It recognises the need for stabilising agricultural income and the need to reduce and regularise expenditure for distress relief in the Agricultural Sector. Over and above all these, it was conceived of as a welfare measure to prevent social unrest in rural areas, as also to encourage agricultural production in higher risk areas. Benefit payments are made on a sliding scale varying from 17.5

per cent of coverage from damage of 30—50 per cent to 100 per cent coverage for 90—100 per cent damage. In other words, the coverage theoretically averages 50 per cent of the real total yield expectations and this it guarantees in advance. Accounts are maintained separately for each scattered plot belonging to individual farmers.

More than five million farmers out of a total of six millions participate in insurance on paddy. And there is an equally elaborate system of livestock insurance at work. The principle of compulsory participation has taken such deep root in Japan and the Japanese are so convinced of its efficiency that they would entertain no thoughts of a change. The following extracts from the report on the Japanese Agricultural Insurance System by Miss Dorothy Goodwin and Mr. Saturo Kunimi may be relevant in this connection:

"The Japanese experiment with compulsory subsidised insurance designed both to stabilise farm income and add to it has a world-wide significance and is attracting increasing international interest."

Era of Plenty

My study of the subject and the brief experience I had gained of the working

of Crop Insurance abroad have, no doubt, resulted in modifications of my scheme in some details: basically, I remain more than ever an ardent advocate of the essential features of my Crop Insurance Scheme. Before a novel scheme like this can be introduced we should have the benefit of at least two normal years of monsoon.

Four years have passed since the scheme was drawn up and we are yet to see one normal year. But hope springs eternal in the human breast, and may be the coming monsoon season will be the harbinger of a swing back of the pendulum to an era of plenty.

Refining Cottonseed Oil

A simple process for refining crude cottonseed oil has been worked out at the National Chemical Laboratory, Poona.

India probably ranks next to U.S.A., Russia and China as regards cottonseed production. Little attention is, however, being paid to utilise fully cottonseed and its products, particularly the oil. At present only five per cent of the country's annual production of cottonseed is consumed for the production of the oil. One of the main reasons for the lack of interest in cottonseed processing in India is that unlike most other edible oils like groundnut, coconut, sesame, or mustard, crude cottonseed oil cannot be used for edible purposes without refining. The crude oil is too dark in colour and is not amenable to ordinary methods of refining.

The process developed at the National Chemical Laboratory consists in treating the crude oil with a 15 per cent solution of caustic soda sufficient to neutralise the free acidity of the oil, and provide half per cent excess alkali. After settling overnight the lower aqueous layer is removed and the oil washed with hot water. The oil is then decolourised with various decolourising agents. Activated carbon prepared at the National Chemical Laboratory was found very suitable for the purpose.

A detailed account of the process is published in the April issue of the *Journal of Scientific and Industrial Research*.

Deficit Financing

By SRI J. M. LOBO PRABHU, I.C.S., Secretary, Development Department

A character in a play of Moliere was gratified to know that he had been talking prose all his life. You may be surprised but also gratified that you have been practising 'deficit finance' all your life. The man who built the first house, business or factory from borrowed money was a deficit financier, matching his credit to the value of his investment. Government are in most matters, like an individual as far as economics are concerned.

They may possess more authority, they may possess the capacity to create money and credit, but the difference is one of degree. This may look like over-simplification but it should enable a better comprehension of economics and of the subject of "Deficit Finance" in particular. Budgets of most Governments are deficit to the extent they include capital expenditure not financed from revenue.

Change in Policy

Why then has the term deficit finance roused so much interest? In the first place, it represents a change in the policy which aimed at making money dear by currency and credit restriction and budgetary austerity. This policy of deflation, was considered necessary in the Draft Five-Year Plan, for reasons, first that inflation had gone too far, second that the Plan was based on current prices and could not be carried out if prices rose, and third that Government with their inelastic income cannot afford to have their ordinary expenditure increased by inflation. No doubt the policy reduced the prices of many raw materials, but it did not reduce the cost of living.

Some maintain the fall in purchasing power affected the expansion of production and might have induced unemployment. I had the opportunity to be the first to point out at the Chief Ministers' Conference in Delhi in November that reduction in prices should be brought about not so much by reduction in consumption but by increase in production, that this involved full-scale

From the address on 'Deficit Financing' to the Rotary Club, Madras, by Sri J.M. Lobo Prabhu, I.C.S., Secretary to Government, Development Department.

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expenditure by the State on projects which increase production and employment, that the money required for this expenditure can be created without danger of inflation, so long as it was productively spent.

Creating Money

Money for deficit financing can be created by various means. State loans are not strictly considered deficit financing because they are deemed to absorb the savings of the people. A second and obvious source of deficit financing, is a budget with expenditure in excess of revenue, on the assumption nearly always verified that the expenditure is generally less than its estimate, particularly on new projects, which do not proceed as fast as is anticipated.

Thirdly, money can be created through currency increase. Dr. Bernstein, Director of the International Monetary Fund, supported the idea of the Reserve Bank creating money for Government on the security of their total assets, which are as tangible, for instance as sterling assets which exist on the security of the British Government. Dr. Bernstein even suggested Government borrowing from ordinary banks. Neither of these ideas is new. To the extent the Reserve Bank prints currency for Government and Scheduled Banks are forced to maintain a proportion of Government securities, they are lending to Government. What is important in Dr. Bernstein's conclusion is that the conservative tradition in finance is inappropriate to a backward country.

Fourthly, money can be created by relaxation of the credit restrictions on banks. Fifthly, reduction of the Central Banks' rate of interest is likely to increase credit transactions of the Scheduled Banks. And lastly, the Ways and Means account of Government can be used to the maximum extent to meet current expenditure.

Problem of Prices

The question is if the use of these sources will not increase currency and credit to the point of inflation? There are two ways of looking at this question. First, if the volume of currency and money do really affect prices. In 1945, India reached the peak of 13.1 billion

rupees of currency and 7.4 billions of deposits. The cost of living index then was about 245. In 1948, the money and credit were nearly what they are today, but the cost of living index was about 70 points lower.

In the last one month, there was no remarkable change in the currency or credit, but the cost of living index has gone up in Madras by 24 points. The conclusion is that the cost of living is not related to currency in circulation but to food prices, which have been independently regulated. For various reasons, the hoarding habits of the people, the vast sector of consumers who produce for themselves, the high proportion of food costs, reduce the importance of money in determining price levels. Therefore the volume of currency and credit are not by themselves inflationary.

The International Context

The second way of looking at the question is in the international context. In India currency and deposits have increased about four times since 1938, in Japan they have increased 120 times, in Italy 65 times, in France 19 times, in Canada and Australia six times, in U.S.A. five times and in the United Kingdom three times.

In all these countries production has increased in much higher proportion than in India. Japan, Italy and France have practically reconstructed themselves on inflated money, without any disastrous consequences. No doubt in U.K. the increase is less, but this austerity is related to the national policy for restoring the convertibility of sterling, and the recapture of world markets.

The conclusion therefore is that our inflationary potential has been very low. In fact, by the Keith-Horsfield formula, in 1951-52 the national savings were to the tune of Rs. 95.63 crores, arising out of a trade surplus of 209 crores, personal saving of 231 crores against Government deficits of 50.5 and private investments of 290 crores. Inflation therefore from currency and credit expansion may be only a bogey.

Towards Full Employment

Why should money be created? One simple answer is we have just learnt

indefatigable efforts of Lieut.-Col. Wright who had a very long tenure of office as Superintendent. He was responsible for the institution of a Government Licentiate Examination in Ophthalmology. Sixteen years later, the university came forward to offer a Diploma.

The Degree of Master of Surgery is at present the highest qualification in Ophthalmology that the Madras University can offer. The Elliot School has a fine record and has so far turned out 288 licentiates, 49 University Diploma Holders and four Masters of Surgery, besides training about 200 under-graduates in Ophthalmology every year now.

The Museum attached to the school is stated to be one of the finest in the world, offering as it does in its various sections a fund of practical knowledge to an aspiring under-graduate or a progressive post-graduate, and, in fact, to any one interested in the science of ophthalmology. The drawing section, the painting section, the model section, the stereoscope section, the osteology section, the pathology section, the library section and the photographic section are the important sections in the Museum. This Mecca of the medical students has been the work of the creative genius, Lieut.-Col. Wright, ably assisted by Dr. K. Koman Nayar whose untimely death, soon after his retirement in 1945, has snatched away from us one of the ablest of eye surgeons.

Research and Achievements

Intensive research carried on by a prolonged study of a large number of cases that came up for treatment in this hospital has disclosed facts of far-reaching importance. The common cause for blindness has been found to be malnutrition and deficiency in Vitamin A. Irritant remedies and indiscriminate treatment by quacks have been found to have done a great deal of havoc to millions. Smallpox and venereal diseases have also played their part in affecting the eyes of thousands. Sore eyes in new-born babies is due to the presence of gonorrhoea in the mother. Western countries have overcome the blindness caused by smallpox and venereal diseases, but here also we are well on our way to their complete extermination.

This premier institution equipped with modern instruments has an eye bank, the first of its kind in India.



NALWA MEDAL: Dr. A. Lakshmanaswami Mudaliar, President of the Madras State Branch of the Indian Red Cross Society, presents the Nalwa Medal to Kumari Grace Amelia Issac.

Nalwa Medal for Devoted Nursing

Kumari Grace Amelia Issac was born on December 2, 1905. She was first appointed in Government service on a temporary basis in January 1933 in the King George Hospital, Visakhapatnam. She was absorbed on a permanent basis in October 1935 and worked in various Government hospitals in the State. In July 1944, she was promoted as Head Nurse, in which capacity she has been working in the Government Headquarters Hospital, Bellary, from November 1949.

Here eyes are stored for corneal transplantation, an operation which requires great dexterity and skill.

The popularity of the institution has put a heavy strain on its slender resources. The bed strength is only 170, but over 500 are admitted. Everyday the growing need is felt for increasing its bed strength. An extension with an additional bed strength of 90 has just now been completed at a cost of about Rs. 2 lakhs.

The opening of the new block on May 1, 1953, by the Governor of Madras will be a memorable page in the annals of the institution. This new addition will relieve considerably the great strain in accommodating patients in the hospitals.

When bubonic plague broke out in 1951 in the form of an epidemic in Bellary and patients were brought to the Epidemic Diseases Shed in the Government Headquarters Hospital, Kumari Grace Amelia Issac was entrusted with the nursing arrangements. When patients were admitted in a moribund state, she evinced particular interest and remained by their side, attending on one patient now, looking at another then and so on. She would not leave them until the crisis passed away; 295 cases were admitted in all, with about 90 in a moribund state, and only 23 succumbed to the fatal disease.

The utmost vigilance with which she handled the patients and the constant attention she devoted on them, remaining at their bed-side without any regard to her duty-timings, thus ensuring timely administration of injections and medicaments, were in a large measure responsible for reducing the mortality among the patients and for securing an unprecedented percentage of 91 successful results.

Kumari Grace Amelia Issac was awarded the Nalwa Medal. The presentation was made at the Annual General Body meeting of the Madras State Branch of the Indian Red Cross Society on April 21, 1953.

In Furtherance of Crop Insurance

By DR. B. NATARAJAN, M.A., D.LITT., Economic Adviser to the Government of Madras

I prepared a Scheme of Crop Insurance and published it as a brochure in 1949. The central objective of the scheme was to protect the individual cultivator against the hazards of nature like droughts, floods, plant diseases and insect pests. Participation in the scheme was to be compulsory. Every peasant, whether his crop was protected by irrigation or not, should contribute a certain amount as insurance premium. The scheme was to begin with insurance of the paddy crop, and after some experience of its working, was to be extended to other crops. The premium was to be paid in kind. Compulsory participation was to be made more acceptable and equitable by the devising of differential rates based on the extent of availability of water-supply. An autonomous corporation was to run the scheme on business lines.

Public reception to the scheme was, on the whole, warm. Conferences of co-operators and ryots' organisations at numerous places passed resolutions welcoming it, and I was called upon to explain it before large audiences of agriculturists. Indeed, there was unmistakable evidence of serious and constructive thinking on the subject.

Compulsory Participation

The main criticism was against the principle of compulsory participation. It was pointed out that in the United States, the Scheme of Federal Crop Insurance which has been in force for some years past, was based on the principle of voluntary participation. Crop Insurance in the conditions obtaining in India has to be more than a protective device against risks. It has to partake of the nature of a Social Security measure. In a country where the vast majority of farmers are impecunious, where protected water-supply even in advanced States is not more than about 15 per cent of the cultivated land, a scheme of Crop Insurance has to be not so much a proposition based on profit for the individual farmer, as a mutual assistance scheme, based on the principle of each for all and all for each. The principle of compulsion unavoidably followed from this.

Compulsion in this context really meant mutuality of assistance and nothing more, the strong coming to the aid of the weak in a co-operative endeavour of mutual benefit. It was no small comfort to me when I learnt that Japan which had tried agricultural insurance on a practical scale extensively, had adopted this principle of mutuality, and would stick to it despite heavy odds and the almost irresistible pressure of American ideology.

Little Information

There were indeed references to the Japanese Scheme of Agricultural Insurance in the Crop Insurance literature, but these were of the slightest kind. Not much detailed account was available. This was because Japan started the scheme during the early years of the last war and then when she plunged into war nothing more was heard about it by the world outside. Then came the Allied Occupation. The Natural Resources Section of the General Headquarters of the Supreme Command Allied Forces had a detailed investigation made into the subject by Mr. William H. Rowe. But this study was published only in February 1952. Until then there was little information on the Japanese system of Crop Insurance.

During my last visit to the United States in the winter of 1951, I had occasion to make a special study of the Federal Crop Insurance Scheme as it obtained in that country. I had the benefit of a series of discussions with Mr. William Rowe of the Federal Crop Insurance Corporation and his colleagues. The opportunity was availed of by me to get my scheme for the Madras State scrutinised by Mr. Rowe and his team of experts. Mr. Rowe, it may be mentioned, is a pioneer in the field and was connected with the Federal Crop Insurance Scheme from its start. And he now had the added experience of his Japanese study. I could not have wished for a better informed or a more sympathetic critic.

Need for Pilot Scheme

My scheme was to be introduced at one stroke throughout the entire

paddy crop in our State. The logic behind this was, the wider the coverage the smaller the risk in insurance. Any other course might result in initial losses which would discourage its eventual extension. This was uppermost in my thoughts and I had not adequately calculated administrative difficulties in launching a programme of State-wide dimensions. Mr. Rowe, however, brought home to me the need for public education and preparation of the public mind before a novel scheme like this could be introduced. I became a convert and accepted that a pilot scheme in one or more compact areas would be needed, provided its financial results are not taken as criterion of its execution.

I made valuable modifications in Rate Construction also on the advice of Mr. Rowe. I had thought of a differential rate in kind for the premium which worked out on an average to 19 Madras measures of paddy or nearly 3 per cent of the yield per acre of land. This was based on 30 years' average of normal and actual yields for the entire State, with allowances for administration and other charges. Mr. Rowe and his actuarial experts who went into my Rate Construction in some detail, were of opinion that it would be wiser to have a slightly higher rate to start with, and if necessary to revise it downwards later, rather than begin with a low rate and put it up later. Psychologically, the latter procedure would have a damping effect on the scheme in its initial stages. The result was that I loaded the original differential rates appreciably.

Conditions in Japan

The Office of the Federal Insurance Corporation enabled me to visit a number of farms and I could see for myself how the work of valuation of crops for the purpose of determining the premium amount was conducted in the States and how the schemes worked in practice. There was still the question of the compulsory aspect in my scheme to be settled. American democratic sentiment and American Crop Insurance practice would not admit of it. But Mr. Rowe had a sympathetic understanding of my approach



"STREESTHAN": The staff and inmates of the Stri Sadana and Vigilance Home recently conducted a "Streesthan" (Women's Raj—a mock conference). Picture shows lazim drill, one of the items of the variety entertainment organized on the occasion.

that dear money means less production and employment. Lord Keynes laid it down that the most important aim of monetary policy should be full employment. The country is like an estate; it cannot afford to feed people, who have no work and are idle. It is calculated that if the man-hours rendered by our population are totalled, only 33 per cent have full employment. At the same time, the remaining 67 per cent have to be fed, clothed, and provided with all national services.

Any money spent to employ this population—and the country is so deficient that there will be work for them for years to come—will add to the wealth of the country and of the workers themselves. That money will only be an instrument of capitalising labour which is idle, for production which is deficient. With full employment, there will be corresponding purchasing power to sustain industries, services now languishing for want of effective demand.

Inflation

If it is admitted that monetary policy should secure full employment, the money required for the purpose being created, the question will arise if the enormous expenditure will not be inflationary. In the first place, we need not fear the immediate realisation of a policy of full employment. Secondly,

to the extent the expenditure is productive and goods or services are available, the money introduced will be absorbed and will not be inflationary.

Inflation in the case of a country and indebtedness as in the case of an individual, can arise only if the expenditure is infructuous as when a man spends a loan on a wedding, instead of on a house. The test therefore for created money is that it is productive, and that, as soon as possible. The Five-Year Plan therefore emphasises constructional items of immediate productivity like irrigation, electricity, transport.

Pegging of Prices

Other measures will also be necessary to control the inflationary potential. Considering how food prices have in the past caused inflation, it seems necessary that in respect of the minimum quantity required, the prices should be pegged all over the country. In Madras, my proposal more than two years old is now enforced, making a minimum quantity available at a fixed price and further quantities available in the free market, at economic prices which stimulate production.

This combination of free and controlled markets if enforced throughout the country, will not only secure an equality of sacrifice, but also if free movement and sale of quantities surplus to minimum requirements are allowed,

introduce normal stimulus to trade and production. Secondly, if full employment is the aim and certain objectives are to be reached, some control over consumption, that is, the use of money, will be necessary.

Development Currency

In this connexion, at the Chief Ministers' Conference in Delhi, I proposed the introduction of "Development Currency"—ordinary currency overprinted "Development" which for a period of five years will be exchangeable only against articles which are not in short supply, and the production of which is in national interest. If the money is not used, it will be a form of national saving till the end of five years, when it will be convertible into ordinary currency.

My idea received support from various quarters, but was resisted in others on the ground chiefly that it will confuse the value of ordinary currency, and may sell at a discount. No one objects to securities because they sell at a discount, and the chances of this currency selling at a discount can be reduced by enlarging the items against which it can be exchanged. If a part of the money to be created is in this form of currency, its inflationary effect will undoubtedly be reduced.

Corrective Measure

I therefore still hope that as my idea of deficit finance was accepted, my idea of development currency, as necessary to correct the inflationary effect of deficit financing, will also be accepted. If Deficit Financing is to be combined with Zero inflation, according to Dr. Bernstein, some form of controlled currency is inevitable, and will be adopted, as soon as there is any sign of inflation.

The economics of the country depend on full-scale development and employment, and for this, deficit finance is inevitable. It is investment on the credit of the potential of the country, which cannot be doubted and must be developed.

Exemption from Sales Tax

The Government have directed that the dyeing and printing of Khadi done by approved private dyers be exempted from payment of sales tax for another year from 1st April 1953.

Remarkable Group of Later Chola Bronzes

A remarkable group of Saivite icons, unearthed in a barren tract of land in Semangalam in the Nagapattinam Taluk of the Tanjore District, was on view at a special exhibition in the New Extensions of the Government Museum, Egmore. (Pictures on second page of wrapper)

The treasure-trove discovered a decade ago in that place consists of eighteen pieces, including ten images and temple utensils and puja articles, like bell, etc. Since their discovery the images and utensils declared ownerless and consequently forfeited to Government, were subjected to study, and experts have, on grounds of style, assigned them to about the beginning of the later Chola period, that is about 12th Century A.D.

Buried for centuries beneath the earth, the images have a green patina—a green coating often found in antique bronzes. The excellent preservation and the good condition of the figures are largely ascribed to this green coating.

The group includes a comparatively small but beautiful Natesa, a slender and delicately modelled figure of Sivakamasundari, a similar figure of Parvathi, a fine Chandikesvara, a lovely group of Somaskanda, a beautifully poised figure of Vinadhara Dakshinamurthi who is shown in the attitude of complete absorption; a dancing Balasubramanya of great beauty and a charming Chandrasekhara.

Guild of Service

The Honorary Secretary and Treasurer, Guild of Service-Central (Seva Samajam), writes:

Dr. Rajendra Prasad, President of the Republic of India, has conveyed his gracious acceptance of the invitation to become the Patron-in-Chief of the Guild of Service-Central (Seva Samajam), Madras.

Anti-filarial Schemes

The Government have sanctioned the introduction of about sixty anti-filarial schemes by local bodies. Grants to the extent of about Re. 1 lakh per annum will be paid from the State funds to the local bodies towards the actual expenditure which will be incurred on the schemes.

Background to Madras State's Request for Financial Aid from Centre

The Finance Minister, Government of Madras, has issued the following statement:

The Government have reason to think that in certain sections of the public there has not been a full understanding of the position in respect of the request of the Madras Government for financial aid from the Centre, to meet the situation resulting from the succession of adverse seasons. The resources of the Madras Government have been strained, not only by the direct expenditure on famine relief, but also by the shrinkage of all the main sources of revenue. Distress relief alone has cost the Government over Rs. 8 crores on test-works, on agricultural loans and on gruel centres.

Adding to this, the cost of remission of land revenue and postponement of takkavi loans, the immediate depletion of resources, directly attributable to famine, exceeds Rs. 11 crores. The fall in the purchasing power of the drought-stricken people, has adversely affected the yield from the General Sales Tax by over Rs. 2 crores and there has been corresponding reduction in other major sources of revenues. The result has been a deficit of Rs. 5 crores in the Revenue account of 1951-52 and likely deficit of over Rs. 8 crores in 1952-53.

The State has under implementation a capital programme of irrigation and electricity works as a part of the National Five-Year Plan. The outlay on these and other capital schemes amounted to about Rs. 20 crores in 1952-53. This was met by the sale of all our securities held in the Reserve Fund and by the open-market loan and by advances from the Special Development Fund under the control of the Government of India. Even this was not enough to meet the entire demand.

The net result of the revenue deficits and the capital transactions,

was a short-fall by about Rs. 17 crores on 31st March 1953. The Government are, however, holding stocks of foodgrains and chemical manures which may be appraised at about Rs. 10 crores.

The assistance so far rendered by the Centre for famine relief is a special loan of Rs. 2 crores, besides sharing in half the cost of gruel centres. The Government of India have since granted a temporary accommodation of Rs. 17 crores to cover the overall deficit and the consequent overdraft on the Reserve Bank as it stood on 31st March, and the adjustment of this sum is now under correspondence with the Central Government. The Madras Government have been requesting the Centre for a grant instead of loan and temporary accommodation, because it is only by that way the State would be enabled to start the current financial year on a clean slate. The extraordinary situation now prevailing in the State has no comparable precedent elsewhere, because no other part of the country had been faced with failure of seasonal rains over six consecutive years as Madras had to. It is hoped that the request of the State for Central assistance, to the extent the State is in need of, will be favourably met.

In the meantime, distress continues in many parts of the State calling for relief. The capital works, which are now nearing completion, have also to be sustained as part of the National Five-Year Plan. We have exhausted all our reserves already and Central assistance is absolutely necessary unless these works are stopped or slowed down, which is unthinkable. In order to reduce the demand for assistance from the Central Government to the utmost extent, the Government are making strenuous efforts to tap all possible new sources of revenue.

Modified Scheme in Elementary Education

The details of the modified scheme of work and training of pupils as prepared by the Director of Public Instruction are given below :

It is proposed, with effect from the school-year 1953-54, to effect certain modifications in the school hours and training of Elementary School pupils in rural areas, to begin with, to enable them to keep up the habit of doing work which their parents have been doing. It is not desirable that because of their schooling the pupils should become physically and mentally incapable of productive activity which is needed for their individual advancement and that of the country.

The burden of long school hours which impair the health of young school children should be reduced and they should have opportunities for usefully engaging themselves in village activities so as to improve their general knowledge and their usefulness to the community. Young boys and girls should have allotted places in the social organisations that constitute the family and the village.

The modifications proposed will, for the present, be limited to Lower Elementary Schools excluding Basic Schools for the present in rural areas, i.e., those not included in Municipalities or Major Panchayats.

Reduction in hours of class-room work.—A school-day for the pupils will be reduced to three hours a day but the working week will extend, if necessary, to six days. Every school will be divided into two batches, one batch will have work for three hours alternately in the forenoon and the afternoon; the second batch will come to the school during the other part of the day. This arrangement is wholly different from the shift system which was hitherto permitted in over-crowded schools, though the same teacher will handle both the batches.

Avoidance of severance from the economic and cultural life of the village and the family.—The proposed scheme of work will leave the children free for one-half of the day; they are

expected, during this time, to join their families and do whatever work the family normally does. This will apply to all persons belonging to occupational families, i.e., those who work with their hands either as agricultural labourers or land-owning peasants or artisans such as potters, carpenters, ironsmiths, etc. All girls irrespective of the occupation of the parents will come under this category because they can usefully occupy themselves in the home.

Everyone to know the dignity of labour and learn to use his lands competently and fruitfully.—There will, however, be in every village a certain number of boys whose parents do not belong to the occupational groups. For them some provision will have to be made to keep them occupied in a craft. If there is a village craftsman, these boys may be sent to that craftsman for learning work during the half day that they do not go to school. They will, for all purposes, work like apprentices under this craftsman. There will be no other school teacher supervising this work; the craftsman will be the teacher. He will have to maintain an attendance register indicating that the boys are present during the allotted time.

It may be that he will sometimes fail to secure that the boys effectively do the work and learn the craft, but, nevertheless, so long as they are about the place, they are likely to pick up the work sooner or later. It is expected that there may not be more than five to ten children in each small village school who do not belong to occupational families and would require this special arrangement for craft education. There are, however, villages where there is no local craftsman. In such cases it will be necessary to induce one to come and settle in the vicinity of the school. This may be more difficult as he will have to be provided with a plot of land and some kind of a roof for working and living. Where a school has a adequate compound, this craft shed may be erected inside the compound and provision may gradually be made for more than one type of craft suitable to the locality.

Another kind of work which pupils must get acquainted with is cultivation; for this purpose, suitable arrangements may be made with farmers in the vicinity. The pupils will be attached to the farmer in the same manner as to the craftsman. It will perhaps be found most convenient to send the pupils to the farmer in certain seasons and to the craftsman at other times.

An allotted place of social utility and responsibility at every age.—In addition to the regular learning of a craft and cultivation in this manner, all the pupils may be organised to render service to the village in whatever manner it may be possible to do, building sheds, laying bricks, digging wells, making and improving village roads, etc. The status and importance of the teacher in the village is likely to improve in proportion to the extent to which he is able to organise these activities successfully.

The school to be an institution of the villagers for the villagers.—In order to make the local people of the village take an interest in the school and guide these extra activities, a village school council may be constituted consisting of persons really willing and capable of taking interest in these matters.

Plan for improved practical knowledge, health and skill without diminution of book knowledge.—Though the pupils will have work for 20 to 24 periods per week in the school under the proposed scheme, as against 35 periods provided in the Elementary Educational Manual, it can be stated with confidence that there will be no diminution of the standard in the Language, Elementary Mathematics, History and Geography, Hygiene and Civics and Moral Instruction. In these subjects, the same syllabus as before will be followed and the same number of periods can be provided for each of those subjects. Subjects such as Nature Study and Gardening, Physical Training, Music, Handicrafts and subjects like Drawing, coming under optional subjects, will not be attempted inadequately in the school, but done realistically in the normal setting.

Animal Welfare and Fodder Resources

It has been said that Animal Husbandry and Cottage Industries are the twin pillars supporting Indian Agriculture. The truth of this statement is undeniable. As a matter of fact, wherever agriculture has flourished it has been partly due to an efficient livestock. Denmark, Australia and New Zealand are typical examples. In India cattle serve agriculture and the agriculturist in a variety of ways. The cow gives milk while the bullock provides motive power, whether in lifting water or ploughing the lands or carting the manure to the fields or transporting the harvest to the market. Cattle also supply manure in India and the annual value of cattle labour, dairy products, manure, etc., has been estimated to amount to Rs. 1,300 crores. From time immemorial, cattle have played a vital role in the economy and wealth of this country.

Cattle welfare being of such paramount importance to our national economy, it has been a matter of great concern to both the people and the Government. There are a number of factors which contribute to animal welfare, and of these fodder is the most important. Its importance has been recognised even from the hoary past, for tradition has it that in ancient days under Hindu and Muslim rulers of this country the State insisted that every ryot should grow fodder on not less than one-tenth of his cultivated area. To add to this, there were grazing ground *poramboles* in every village intended solely to serve as common pasture for the village cattle.

Marked Decrease

But with the lapse of time, the State ceased to insist on any ratio between cultivated lands and those devoted to fodder, while other contributory causes brought about a marked decrease in the area for cattle grazing. These contributory causes include a tendency to open up pasture lands for cultivation and an increase in the extent of the area under fallows. Only a negligible portion, about 1.5 per cent of land sown, is now under fodder crops. This shortage has been accentuated by an increase of the cattle population. We have the largest cattle population in the world; all the same in sheer efficiency they rank far below those of many other countries.

In Madras State the position is by no means an exception to the general condition prevailing in other parts of the country. The inadequacy of fodder has been so marked here that the attention of the Government has been bestowed to a series of measures for combating the shortage effectively and thus assisting in the promotion of cattle welfare. The total livestock population in the State has been estimated to be over 51 millions while the total fodder production from cultivated crop

Improvement of Livestock

The Government have sanctioned an expenditure of Rs. 11,000 for the purchase of foreign breeds of rams and ewes for the Sheep Farm at Ootacamund.

and pasture was estimated at 32.9 million tons and concentrated feeds such as cakes, cottonseeds, etc., totalled 1.9 million tons.

Minimum Needs

Taking the minimum requirements of fodder and concentrates at 10 lb. and 1 lb. respectively per day for an average sized animal, the bovines alone numbering about 27.3 millions would require 44 million tons of fodder and 4.4 million tons of concentrates. The overall deficit is accentuated by the fact that fodder scarcity is mainly in deficit areas comprising more than half the State with half the cattle population. The surplus areas have only one-sixth of the total population and it is impossible to transport fodder in bulk quantities over long distances.

Apart from the quantity being thus inadequate, the quality is also poor. Fodder is mainly made up of straw left over after grains are threshed out. This straw accounts for 21 million tons out of 32.9 million tons. The nutritive value of straw with the exception of cholam straw is 1:40. The bulk of the paddy straw is definitely injurious on account of its oxalic acid

content. The position in respect of concentrates which in this State consist of oilcakes, rice bran, cottonseeds, etc., is by no means better. The available production of about two million tons gives less than half a pound per day per animal.

Sources of Pasture

At present the main source of the pasture in the State can be broadly classified under two heads, viz., (1) Government lands including wastes and *poramboles*, agricultural and other lands owned by private individuals and (2) the reserve forests. The total cultivable area in the State during 1946-47 was 52,383,100 acres. Out of these the net area sown was 38.0 million acres, while current fallows accounted for nearly 9.5 million acres. It is this large extent of current fallow lands which neither produce food crops regularly nor sufficient grass, that is responsible in no small measure for fodder scarcity. It is significant that the area of current fallows which was only 5.2 million acres in 1902-03 has been progressively increasing year by year. Further, of the 31 million acres of wet land sown in each year, the area under fodder crop is very negligible. It was something like 562,974 acres in 1946-47.

Unlike many other countries, we have no natural grasslands to make up the deficiency. The only grassland in the State is situated in the Nilgiris plateau. The physical features of this plateau include vast stretches of grasslands, broken up here and there by evergreen forests which are confined ordinarily to sheltered pockets or folds of hills known as 'Sholas.' In the nature of things this pasture cannot be availed of by cattle from distant parts of the State. It may at the most benefit only the cattle population in the vicinity.

Reserve Forests

Now about the pasture lands in reserve forests. There are no separate fodder reserves in the State. All the reserve forests measuring 18,827 square miles, except areas closed to grazing for silvicultural reasons, are open to grazing. The area closed to grazing throughout the year works out at 8.99 per cent of the total area. On an average 3,297,657 heads of cattle

Suratkal, Beltangady, Byndoor and Ullal. As already indicated, a telephone exchange will be opened shortly at Coondapur and another at Kanhan-gad. So much for telephones.

Telegraph Development

There are about 3,600 Telegraph offices operated by this Department in the whole of India, of which about 950 are located in the Madras Circle. The Plan is to provide Telegraph facilities to all stations with a population of 5,000 and over, provided the annual loss to the Department does not exceed Rs. 500 and the proposed Telegraph office is not within five miles of any existing Telegraph office. The question of liberalising these conditions is under consideration of Government.

Thirty-four new towns in the Madras Circle were brought into the general Telegraph network of the country during 1952-53, and schemes have been sanctioned for the opening of Telegraph branches at 54 new stations, out of which eight are in South Kanara District. Proposals for providing Telegraph facilities at 434 new places in the Madras Circle are under examination. As far as South Kanara District is concerned, 21 proposals are under examination. The pace of Telegraph expansion is being quickened as there are still many subdivisional

headquarters not connected to the Telegraph network of the country.

Speedy Service

The expeditious disposal of the substantial additional Telegraph and Telephone traffic has necessitated the provision of several additional circuits. The Department has also provided many technical devices like Carrier channels and V.F.T. equipment between many important stations all over India. It is also proposed to lay underground cables between all important cities in the country so that Trunk service may be free from interruption and theft of overhead copper wire may be eliminated.

When all the schemes are implemented, the number of circuits available between the main centres would be about ten times the present number, and the service will be trouble-free and the delays will be reduced to the absolute minimum. Improvements have also been effected to eliminate delays in the handling of telegrams when in circulation within and between Telegraph offices.

There already exists a direct wireless Telegraph link between Mangalore and Bombay. About 500 telegrams are handled daily with the aid of this link. Wireless link also exists between Madras on the one hand and Delhi, Calcutta, Bombay, Rangoon and Port Blair on the other.

Vanamahotsava Prize Scheme

The Government have sanctioned a separate prize scheme on a regional basis in connection with the Van mahotsava and have decided to institute a prize to each district whose achievement in tree planting is adjudged to be the best in each region. For this purpose, the State will be divided into five regions as follows:—

1. West Coast—Malabar, Nilgiris and South Kanara.
2. Northern Region—Guntur, Krishna, West Godavari, East Godavari, Visakhapatnam and Srikakulam.
3. Central Region—Nellore, Chingleput, Madras, North Arcot, South Arcot, and Chittoor.
4. Southern Region—Tanjore, Madurai, Tirunelveli, Ramanathapuram, Tiruchirappalli, Salem and Coimbatore.
5. Ceded Districts—Cuddapah, Bellary, Anantapur, and Kurnool.

The Government have sanctioned the institution of a prize in the form of a rolling cup worth Rs. 100, to be given to the best district in each of the five regions mentioned above.

Postal Facilities

Substantial progress has also been achieved in the expansion of postal facilities in rural areas. The policy of Government is to open a post office in each village with a population of 2,000 and over. Under this scheme, 590 new post offices were opened in this Circle during 1952-53, of which 15 relate to South Kanara. There is a further scheme under which post offices will be opened in "groups of villages" with a population of 2,000 in each group. No village in the group would be beyond two miles from the new post office.

Under this scheme, villages where polling booths were located during the last General Elections, villages included in the scheme for community projects, Panchayat villages and villages having railway stations will receive priority. We hope to open about 1,500 more post offices during the current year, of which about 50 would relate to South Kanara District.

In Rural Areas

Apart from stationary post offices, it is proposed to try out experiments with mobile post offices fitted on sturdy vehicles like Land Rovers so that one mobile post office may serve a wide area which is sparsely populated and which has not got adequate facilities in the shape of stationary post offices.

The delivery of mails in the State has been accelerated by the introduction of 71 additional motor mail services covering 1,580 miles. In about 250 more routes where motor services are available, mails are still being carried by runners. It is hoped that by and by these foot lines will also be converted into motor lines. A daily delivery service has been introduced in 1,038 villages; 2,511 new letter boxes were planted during 1952-53 in rural areas and 1,407 in urban areas, making a total of 3,918. Of these 225 rural and 96 urban letter boxes have been provided in South Kanara.

Three thousand delivery agents have already been appointed to increase the frequency in deliveries and it is proposed to appoint 1,500 more during the next one or two years.

Air Mail Service

It is well known that night air service has conferred a great advantage to the public. On 20th January 1953,

Mangalore was put on the air map of India, and, ever since, the mails are conveyed to and from Mangalore by air service. Letters posted in cities like Delhi the previous night are delivered here next evening. Mails posted at Mangalore up to noon are despatched by air to connect the night mail service at Madras. In the initial stages, about 60 lb. of mail matter was being received by air, and about 90 lb. was despatched by air. The weight has been steadily increasing, and now 115 lb. of mail matter is being received and 110 lb. despatched by air daily.

As for Mangalore Town proper, about 500 articles are received daily by air and about 4,000 articles are despatched daily by air. At present only Karkala and Udipi are getting accelerated delivery by mails being brought by air to Mangalore. The question of linking other interior parts of South Kanara with the air service is being examined. It has not been possible to utilise the plane to Bombay as the frequency is only four times a week.

Postal Facilities in Urban Areas

The needs of the urban public are also catered for by opening more post offices wherever possible. The main difficulty which stands in the way in urban areas is accommodation. During the past two years, however, 212 urban post offices have been opened in the Madras Circle, and proposals for providing an equal number of urban post offices are under examination. As far as South Kanara is concerned, seven post offices were opened in urban areas.

South Kanara

I have received complaints about lack of attention to expansion of postal facilities in rural areas in South Kanara. This criticism is not based on facts. In the data collected from the Revenue authorities, South Kanara District comprises 803 villages, of which 183 have a population of 2,000 and over each. All these 183 villages have been provided with post offices, except in five cases, which are under examination. Under the "village group" system which I have described earlier, nine "groups" would become entitled to post offices; and, under the community, irrigation and rural development programmes, 38 more villages are expected to justify new post offices.

Installation of Solvent Extraction Plants

Three types of machines are employed in Madras State to express oil from oil seeds, viz., the bullock-driven *ghani* or *chekku*, the power-driven rotary and the expeller. It is not possible to get all the oil out of the seed by these contrivances. It is estimated that from 5 to 10 per cent of oil is left in the cake. Since a great part of the oilcakes produced in the State is used for manuring crops, their oil contents are lost. Practically the whole of it can be recovered by the solvent process. Briefly, this method consists in grinding the ordinary oilcake into a meal and treating it with certain liquids to dissolve the residual oil, and then recovering the oil and the solvent from the solution. The de-oiled cake is used as manure.

At present there is no industrial undertaking in Madras State which uses the solvent process. In July last year the Government of India invited applications for licence to set up solvent extraction plants. After considering the applications, they have allotted two units with a total capacity of 55 tons of oilcake per day to Madras State, as against 335 tons allotted to India as a whole. The Union Government propose to permit the installation of some more plants with a capacity of 205 tons in the aggregate. Plants of less than 20 tons daily capacity are considered uneconomic.

Although Madras is one of the largest oil-seed-producing States in India, full use has not been made of the capacity allotted to this State. It is hoped that industrialists will come forward to take full advantage of the opportunity offered and apply at once for licences to put up solvent extraction plants. The applications should be in Form 'D' prescribed under Rule 7 of the Registration and Licensing of Industrial Undertakings Rules and should be submitted to the Ministry of Commerce and Industry, Government of India, New Delhi. The applicants should furnish the following additional particulars along with their applications:

(a) Full particulars and the capacity per shift in terms of the solvent extraction plant desired to be installed. (b) Number of shifts proposed to be worked per day. (c) Names of the oilcakes proposed to be used as the raw material and their local availability. (d) An original certificate from the Director of Industries and Commerce, Madras, approving the proposed project for the setting up of a solvent extraction plant for the extraction of oil out of oilcakes.

In many villages, the frequency of service has been increased or accelerated by appointing 67 additional delivery agents. There are proposals to appoint 45 more delivery agents. When this programme is fully gone through, I feel that we would have done all that is needed at present for the rural parts of South Kanara District. If even thereafter, members of the public or sectional interests wish to have post offices in a particular village, these will be opened if the anticipated loss is guaranteed by the parties concerned. It will interest you to know that each post office in the South Kanara District serves about 10 square miles as

against the average of 14 square miles in the other parts of the State.

Mangalore Exchange

The Mangalore Exchange was opened on 1st June 1929 as a 100 line Magneto system with a load of 44 connections. This rose to 65 in 1940, i.e., an increase of 21 connections in 11 years. Today the number of connections is 289 with an average Trunk call rate of 200 calls a day. The need for further expansion of the system is fully realised, and an all-out effort is being made to provide connections for all those still waiting to get them.



resort to the reserve forests for grazing. Only bovine stock and sheep are permitted to graze. The average incidence of grazing works out at 4.11 acres per cow unit. This figure is only approximate because rocks, inaccessible terrain and ungrazed areas like the interior of forests have not been included. The brunt of forest-grazing falls on the peripheral strips of forests. As a rule the village cattle resorting to reserved forests rarely stray beyond five miles on an average from their homes. Hence the cattle may not get adequate food.

The steady deterioration of forest pastures in the reserve forests is due to uncontrolled grazing in that the grazing is not limited to the carrying capacity of the area, as well as to the habit of the people to set fire to forests annually. In all over-grazed areas there is steady deterioration of pasture and the quality and stocking of grass are poor as the grass has necessarily to depend on seeding for regeneration, which is prevented by continuous over-grazing. Any pasture subjected to over-grazing will eventually deteriorate. Other indications of over-grazing could be seen from the lopping of bamboo leaves and fodder trees such as *Hardwickia Binata*, *Albizia Amara*, *Azadirachta Indica*, *Tamarindus Indica*, *Ficus spp.*, *Acacia Arabica*, *Pithecolobium Dulce*, etc.

Permit System

Permit system is in vogue in general throughout the State. Under this system, grazing permits are issued

departmentally at nominal rates to bovine and sheep and these permits are tenable from 1st April to 31st March or 1st July to 30th June which is the official grazing year. Such permits hold good in respect of a territorial forest division. All cattle entering the reserved forests should be covered by permits and in case of default penal action is taken under the Madras Forest Act of 1882. The grazing is uncontrolled and unrestricted under this system.

While the liberal concessions granted by the Government have been welcomed, signs are not wanting of a change in the attitude of the ryot himself to the grazing problem. He is beginning to realise the folly of uncontrolled grazing as at present practised over large areas, leading to progressive reduction of forest pastures. Forest officers on their part do their best to convince the ryot of the evil effects of uncontrolled grazing.

Kancha

Wherever ryots have responded to the measures suggested by forest officers regarding controlled grazing, steps have been taken to introduce various types of grassland management. The types that are most popular with the ryot are the Kancha System and the Rotational Grazing System.

Under Kancha System the grazing lands are parcelled out into small areas and delineated on the ground known as Kancha. The number of cattle admitted to each Kancha is limited to the

capacity of the Kancha. A period of closure for three months from July to September is effective as a measure of recuperation of the pasture.

Rotational Grazing

Under the Rotational Grazing System, the number of cattle admitted to graze is controlled and limited. A rotational grazing block is divided into paddocks and cattle are rotated from paddock to paddock. The number of cattle admitted is strictly limited to the carrying capacity of the block and while cattle are moved from paddock to paddock at short interval, the vacated paddock receives the benefit of recuperation. Usually a rotational grazing block is divided into three paddocks and the number of cattle admitted to graze is determined at the rate of 2 or 2½ acres per cow unit based on total area of the block. The period of rotation is not more than two months.

The grazing fees varies from division to division. The annual grazing fees for buffalo ranges from Re. 0-2-6 to Re. 1-8-0; cow from Re. 0-1-0 to Re. 0-12-0 and sheep from Re. 0-0-6 to Re. 0-6-0.

Value of Nutrition

Nutrition is the key to animal welfare and this in turn depends on the quantity and quality of fodder. If only each ryot makes it a point to grow fodder on one-tenth of the area he cultivates, it will go a great way to relieve fodder scarcity. A resolve not to encroach upon grazing ground *poramboles* for cultivation purposes will afford further relief. The proper use of reserved forests also will have a salutary effect on the whole position. The public have a more important role to play in cattle welfare than the State itself. In some countries, for example, Livestock Development Finance Corporations or Animal Health Trusts have been brought into being through the munificence of the general public.

In this country also there is ample scope for organised private enterprise to promote animal welfare. The farmers' animals constitute the focal point in the co-ordinated nation building programme of the Government, as outlined under the Five-Year Plan, and it is up to everybody to extend their co-operation in ensuring the growth of a healthy animal population.

Expansion of P. & T. Facilities

By MAJOR C. V. RAJAN, Postmaster-General, Madras Circle

A telephone has become a necessity for most of us living in the urban areas. The demand for it is growing everywhere. The Post and Telegraphs Department is endeavouring to meet the demand as best as possible. We had 115,000 telephones working on the dawn of Independence. Today, the number is 200,000, i.e., an increase of about 70 per cent. The capital investment of the Department, which stood at Rs. 32 crores, has now nearly doubled itself. Still we are nowhere near satisfying the needs of the public. The total number of telephones in India is even less than the number of telephones in the single city of Sydney in Australia. This shows how deficient we are in the matter of telephones.

Our present aim is to provide 30,000 additional telephones every year. It is estimated that, at the end of 1953-54, there would still be an unsatisfied demand of about 120,000 telephones.

More Trunk Calls

There is another aspect of this problem. In keeping with the signs of the times, the number of trunk calls even on the existing telephones has increased considerably—from 4.4 million calls in 1948-49 to over 11 million calls in 1952-53. Unless additional circuits are provided to cope with this increase, service will deteriorate, and the Department will be faced with criticism not only for not giving telephones but also for the bad delays in trunk service.

But our main difficulties are money and material. As mentioned by the Minister for Communications at Mysore in August last, Government have an ambitious Five-Year Plan for providing Postal, Telegraph and Telephone facilities in the country. The Plan provides for Rs. 50 crores of capital outlay, but our needs are much greater. We have to import some primary items like underground cables, automatic equipment, carrier equipment, etc. Government have established the

Telephone factory called the 'Indian Telephone Industries' in Bangalore, and have also embarked on an underground cable factory at Chittaranjan. We hope to accelerate our telephone expansion when these factories go into full production.

New Exchanges

It is the intention of the Government to provide telephone facilities at all district headquarters throughout India, as also at all stations with a population of over 30,000. Apart from towns of over 30,000 population, the possibility of opening exchanges in places of commercial importance or in localities where there is public demand is also being investigated. In the Madras Circle, 30 such places would be entitled for new Exchanges under this category. In fact, Kanhangad and Coondapur, where new exchanges are proposed to be installed shortly, would come *not* under the 30,000 population category, but under the category of commercial importance.

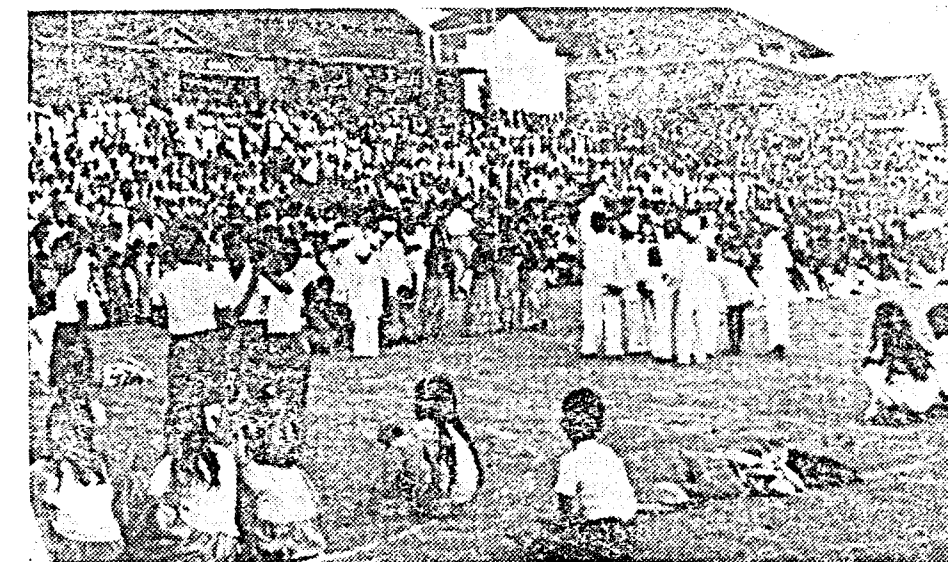
I am glad to say that, so far as the Madras State is concerned, all District Headquarters and towns with 30,000 population have already been provided with telephone facilities. Telephone Exchanges are also being opened

at centres where the members of the public may want them on a co-operative basis under the "Own Your Exchange" scheme when an initial advance of Rs. 50,000 is made to the Department.

Development Programme

On 1st April 1953, against a total of 604 Exchanges and 1,839 Public Call Offices in the whole of India, the Madras Circle had as many as 109 Exchanges and 441 Public Call Offices. Thus in the Madras Circle alone, 12 new Exchanges and 77 new Public Call Offices were opened during the year ending 31st March 1953. Schemes have also been sanctioned for the opening of 31 new Exchanges and 57 new Public Call Offices during the current year. The capacity of 21 of the Exchanges has been increased by a total of 1,340 lines, and there is a programme to increase the capacity of 36 more Exchanges by a total of about 8,400 lines.

In the South Kanara District, Public Call Offices have been opened recently at Mulky, Karkala, Manipal and Kaup. Ganguli, Puttur and Bantwal will have Public Call Offices shortly. Proposals are under examination to open Public Call Offices at Brahmawar,



PLAY FESTIVAL: Group activities at the School Children's Play Festival held at Victoria College, Palghat. Such festivals are a feature of recreational activities in the Community Project Programme.

Reclaiming Vagrant Children

The Mohite Playground started over a year ago, with the idea of reclaiming beggar and vagrant boys in the City of Madras, has completed one year of its existence. The Mohite Playground is managed by a committee under the auspices of the Guild of Service (Central) with Srimathi Lebbie Taylor, Srimathi Thambuswami, Sri Ramaswami Iyer, Srimathi Puri, Sri Thomas, Sri Arnold, Srimathi Sherbert and Srimathi Clubwala, taking an active part in this build-up. The playground is situated on a land kindly loaned by the Defence Department. The Mohite Playground takes care of 60 children.

These children were collected from Railway Station, bus-stops and other market and busy centres either begging and in some cases, picking pockets, for their livelihood. These children have had no parents at all, or parents who are themselves pavement-dwellers who have no time to look after their children, or unable to care for these children. The children vary between the ages of five and fourteen.

Generous Gifts

The playground owes its present build-up to the Guild of Service, who organised it, and to the various well-wishers. The Madras Provincial Welfare Fund gave a generous donation of Rs. 5,000. Though the good offices of Sri Thadany of the Cement Marketing Association of India, Madras, who has also donated some cement, a

little building for storage, kitchen and living shelter is nearing completion. The children are given rice and milk through the gifts of UNICEF and CARE and various members of the Committee have donated towards vegetables and other help for the children's food. Messrs. Binny & Co. donated cloth for garments for the children, and the Corporation of Madras donated games equipment and facilities for lavatory and water.

The Agricultural Department has extended its co-operation by giving seeds for a small vegetable garden. The College of Physical Education, Y.M.C.A., Saidapet, sends volunteers to conduct Physical Training classes for the children. Dr. Devasahayam attends to the medical check-up of these children each month, and they are attended to when necessary at the General Hospital.

Schooling and Housing

The older children cook for themselves and also take care of the younger ones, wash their clothes, clean their vessels and keep themselves tidy, etc. Right now the children are living in tents kindly loaned by Major-General Mohite, but a small building to house them is well under way.

From the 1st of April 1953, the Corporation of Madras has been pleased to start for the children school, and free mid-day meal is being provided to the children also. The children are

feeling proud of having the opportunity of going to a school and studying. This work was a pilot project in the reclamation of boys with a tendency to beg and steal, and they were being reclaimed in this playground. They come here of their own free will. The playground did not have any full-time supervisor so far, and there are no fences and no bars or doors. This experiment has proved itself in that the need for such a work is there, and these children, helpless, homeless and distressed, can be reclaimed with care and attention. The playground has now a full-time supervisor.

Donations Wanted

The Mohite Playground Committee had raised money for the upkeep of these children for the past year. But now it looks forward to the generous public, institutions, to individuals to help in this effort, by subscribing for its maintenance. It costs Rs. 10 per month to sponsor a boy, and it is hoped that those sponsoring would guarantee this help for at least a year. Or, any donation large or small would be greatly appreciated. Gifts in cash or kind may be sent to Sri J. P. Thomas, Honorary Treasurer, Mohite Playground (under the auspices of the Guild of Service), Y.M.C.A. College of Physical Education, Saidapet, Madras.

The Committee appeals to institutions and schools to encourage their children to contribute their annas and pies towards the upkeep of a boy without a home and care.

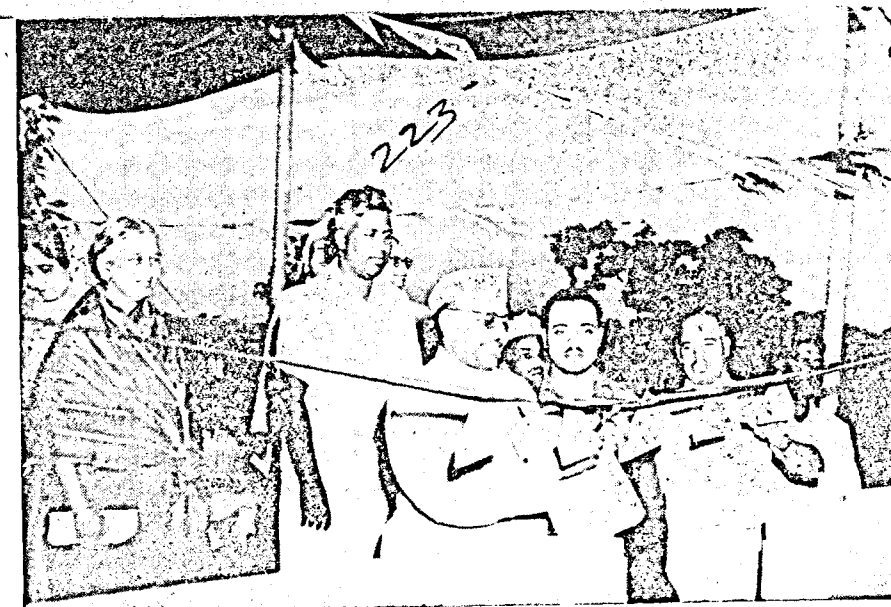
Standard for Druggets

The Indian Standards Institution which is preparing a standard for druggets for export has circulated its draft on the subject to over 300 interested parties in the country.

This draft standard prescribes constructional details and other particulars of hand-made woollen druggets intended for export. The draft standard which covers eight grades of druggets does not include reference to any style or design. This field has been left free for the play of the artistic sense of the manufacturer.

Comments on the draft standard may be sent to the Indian Standards Institution by June 30, 1953.

PAVILION AT MOHITE PLAYGROUND



The Pavilion at the Mohite Playground was recently declared open by Shri Sri Prakasa, Governor of Madras.

The Pavilion has been erected under the scheme undertaken by the Guild of Service to enable vagrant and beggar boys to spend their daytime there in study and play. The object is to reclaim the boys by providing education, clothing and food.

Pictures show the Governor opening the Pavilion, the children at dinner, and a happy group well on the way to reclamation.



Power Cut: Essential Services Exempted

The Government have directed that the following services be treated as "essential services" and exempted from power cut, which may from time to time be imposed in Madras City and its suburbs served by the Madras Thermal Station.

Agriculture, railways, hospitals, water supply, sanitary arrangements, domestic consumers with a consumption of 15 units and less per month in each case, printing of daily and weekly newspapers only, Post Offices (excluding residential portion), All-India Radio Broadcasting Stations, rural broadcasting services, recognised educational institutions, polytechnics and research institutions, street lighting, recognised educational residential hostels, fire service stations, petrol pumps, electric sirens, tramways, telephone exchanges, public parks, harbour and port installations, aerodromes, observatory, large refrigerating plant for cold storage purposes or for production of ice for supply to hospitals and the public.



NEW BLOCK FOR OPHTHALMIC HOSPITAL OPENED

Shri Sri Prakasa, Governor of Madras, declared open on May 1, 1953, the new block of buildings to house ninety more beds and necessary adjuncts of the Government Ophthalmic Hospital at Egmore, Madras City.

The Government Ophthalmic Hospital is the second oldest eye hospital in the world. At the same time it is also the most modern of ophthalmic hospitals in this country, and a great centre for training and research. This premier institution has an eye bank, the first of its kind in India, where eyes are stored for corneal transplantation.

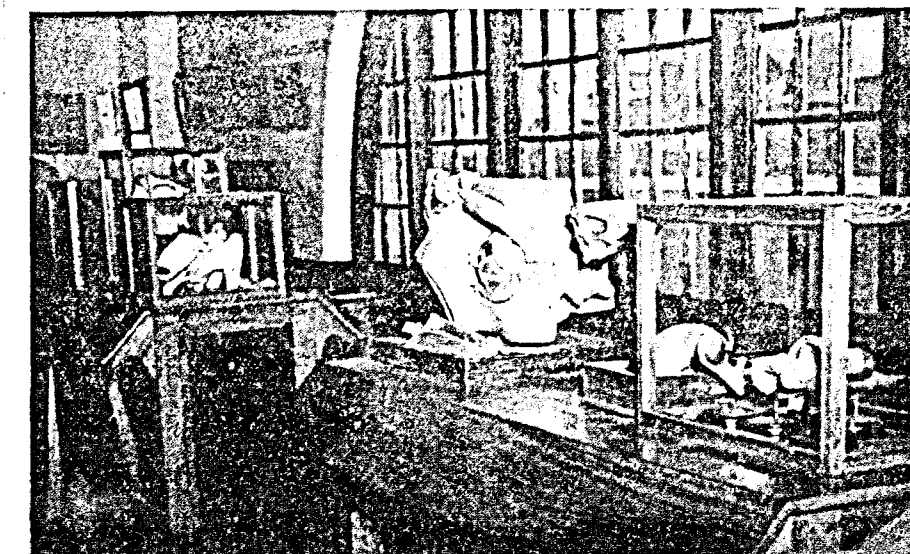
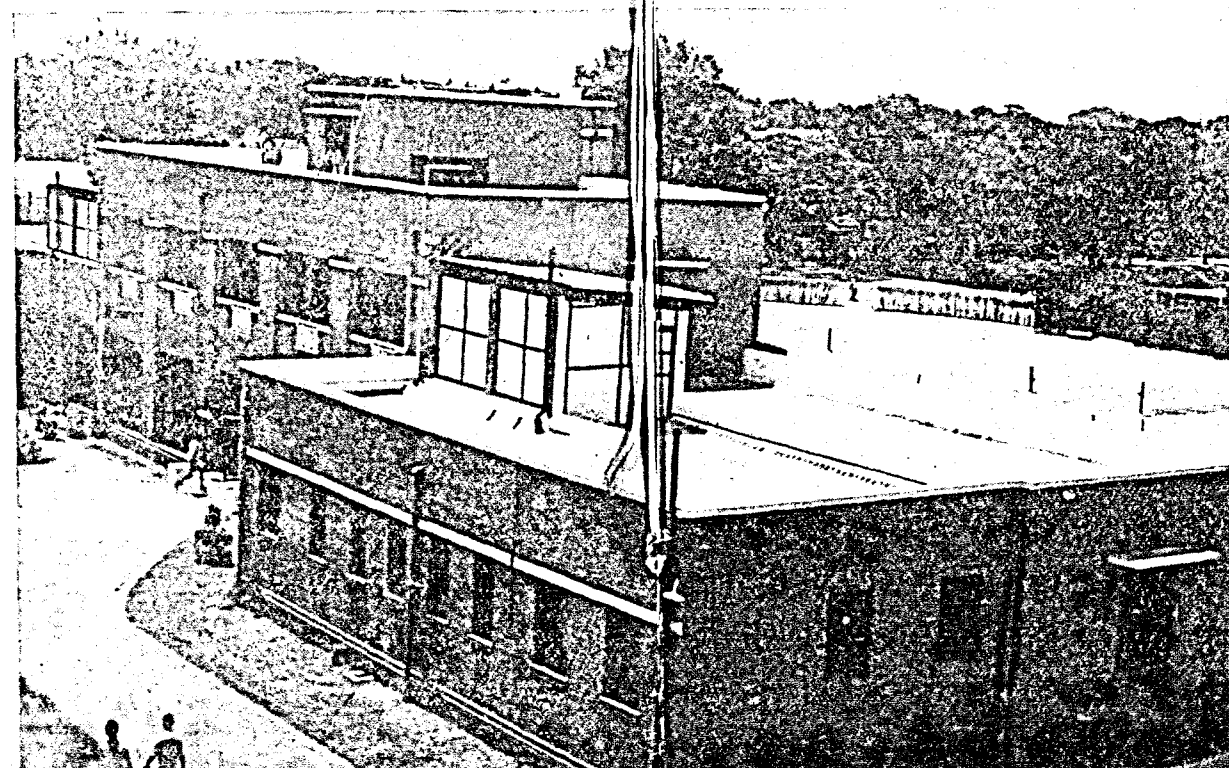
The popularity of the institution has put a heavy strain on its slender resources. The bed strength is only 170, but over 500 are admitted. The extension with an additional bed strength of 90 has been completed at a cost of about two lakhs of rupees.

Pictures show :

- Left (top to bottom) :*
1. The queue at the out-patient counter.
 2. An ophthalmologist examines a patient at the out-patient clinic.
 3. Preliminaries in progress before an eye operation.

Centre (below) : A house-top view of the new block.

- Right (top to bottom) :*
1. Cataract operation in progress.
 2. At the Laboratory attached to the Hospital.
 3. A corner of the museum at the Elliot School. Note the plaster model of a human eye in the foreground.



Work of Partition Committee Explained

The Government desire to point out that the criticisms that are being made by Andhra leaders against the Cabinet arrangement by which six Ministers (three Andhra and three non-Andhra) scrutinise the recommendations of the Partition Committee of officials, are based upon a complete misapprehension as to the work that has to be done by this Government in connection with the formation of the Andhra State. The Partition Committee of 1949-50 has been sometimes cited by the critics in this connection.

This is misleading. That Committee was not constituted as a Committee of the Madras Government. It was constituted as an *ad hoc* body, at the instance of the Government of India, for getting the materials for the provisions to be included in the Andhra Province Order and for an assessment of the financial position of the new Province, and it consisted, at the suggestions of the Government of India, of Andhra and Non-Andhra representatives, chosen from among the members of the State Legislature and the Madras Members of the then Constituent Assembly. The Committee had to start from scratch and take the initiative in considering all matters relevant to the proposed partition.

The position at present is entirely different. The materials for effecting a division have already been collected and furnished in Sri Justice Wanchoo's report. All the relevant factors are thus before the Government of India. The Government of India have already announced their decisions in respect of certain matters, and in respect of other matters also, the Government of India will give their decisions. What really has to be done by the Government of Madras is the implementation of the decisions of the Government of India. Thus there is no analogy between the Partition Committee of 1949-50 and the present arrangements.

Action to be taken.—The action that has to be taken to bring the Andhra State into existence can conveniently be divided thus :—

- (1) Division of the Public Services ;
- (2) Arrangements for the temporary capital of the Andhra State ;

- (3) Financial matters, including the apportionment of assets and liabilities ;
- (4) Legislation under Article 3 of the Constitution.

Item (1).—The administrative set-up necessary in the two States, and the division of the Public Services to man the posts required, are purely administrative matters, which ought not to be decided with reference to any political considerations. This has been emphasised by the arrangement which has already been ordered, viz., the constitution of a Partition Committee consisting of certain senior officials of this Government, who will, in consultation with Sri Sukthankar, the officer appointed by the Government of India in this behalf, formulate proposals for the allocation of the available personnel. The final decisions on the set-up as well as on the actual allocation of personnel will be given by the Government of India.

In connection with the allocation of the Services, the Personal Files of Officers and other confidential records have to be, and are being examined. It will be easily appreciated that such files cannot properly be the subject-matter of scrutiny except by the official hierarchy or sworn Ministers. The Partition Committee of 1949-50 did not deal with the actual allocation of Officers at all, and the question of their having to see any confidential personal records did not therefore arise.

Location of Capital

Item (2).—The decision about the location of the temporary capital will shortly be taken by the Andhra Members of the Madras Legislative Assembly, and the implementation of the necessary preliminaries for setting up Government at such place must be left to our senior Civilian and Engineers.

Item (3).—The question of the apportionment of assets and liabilities is entirely for the consideration of the Government of India, and there is nothing to be done here. The decisions of the Government of India will be duly incorporated in the Parliamentary Law under Article 3 of the Constitution and will be matter for debate and conclusion in Parliament. The implementation of the decision will be a

matter of administrative routine, and it will be mostly in the hands of the Accountant-General, Madras, who is an officer of the Government of India.

Opportunity for Expression

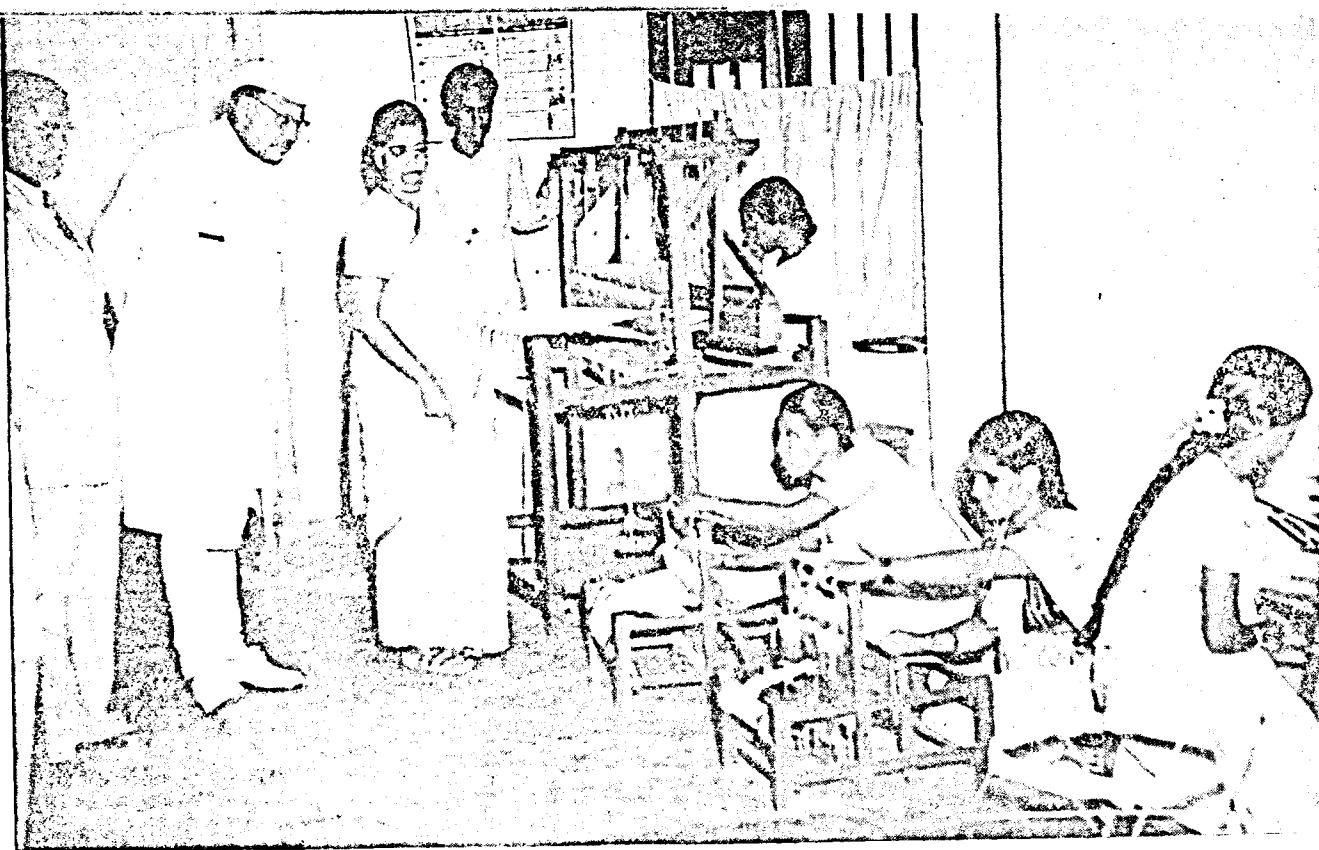
Item (4).—All the important decisions will be incorporated in the Bill which will be prepared by the Government of India and which will first be discussed in the State Legislature here before it is debated in Parliament. All shades of opinion, Andhra as well as non-Andhra, will have full opportunity for expression during these debates.

The task that has to be done is thus administrative in nature, which must be done mainly at official level, the final decisions resting with the Central Government in regard to every one of these matters. When the Central Government feel that consultation with political leaders would be helpful, they will no doubt arrange for it before they take their final decisions.

It is hoped that this statement of the real position will remove the misconceptions and suspicions prevailing in certain quarters.

Relaxation of Cut in Power Supply

Due to the recent thunder showers in the southern districts, there has been some improvement in the storage position in the hydro-electric reservoirs particularly in the Mettur Reservoir, where the level has risen by nine feet. The Government have, therefore, issued instructions to reduce the cut on power supplies in the hydro-electric areas served by the Pykara, Mettur and Papanasam Systems from the existing 75 per cent to 60 per cent and in Madras City and its suburbs served by the Madras Thermal Station from 33-1/3 per cent to 20 per cent with effect from 1st May 1953. The staggering and other restrictions will continue to be in force.



VOCATIONAL TRAINING FOR WOMEN

Shri Sri Prakasa, Governor of Madras, recently visited the Industrial Training Centre (Central Government) at Nungambakkam, Madras City. This institution is managed by the Department of Women's Welfare, as part of its preventive and rehabilitation programme.

At the Centre poor women anxious to learn a trade are taught cutting and tailoring, hand-knitting and hand-weaving. Utility articles are produced at the Centre.

Pictures show the Governor at the Weaving Section (top) and the Tailoring Section (bottom).



Building Cheaper Houses

At the instance of the Government of India, the Madras Government constituted a Study Group in December 1952 to go into the question of utilisation of local materials with a view to cheapening the cost of construction of houses, particularly for the low-income groups.

The personnel of the Committee consisted of the following:—

1. Sri J. C. Ryan, M.A., I.A.S., Registrar of Co-operative Societies, Leader of the Study Group.

2. Sri J. G. Abraham, B.E., M.I.E. (Ind.), M.A.M., soc. C.E., Deputy Chief Engineer (General), Public Works Department.

3. Sri S. Ramachandran, B.E. (Hons.) A.M.I.E. (Ind.), A.M. soc. C.E., Assistant Engineer, Public Works Department, Chief Engineer's Office, Technical Section.

4. Sri S. Panchanathan, B.E. (C), B.E. (H), M.S. (Colombia), JUN. AM.SOC. C.E., A.M.I.E. (Ind.), Assistant Engineer, Public Works Department, Building Research, Central Designs Office.

The terms of reference were "to immediately go into the question of reducing costs of construction from the point of view of building cheap houses, particularly for the middle classes and the lower-income groups, and to prepare a brief memorandum on the subject within a period of three weeks and send it to the Government of India under intimation to the Madras Government".

Who come under the Lower Income Group?

At the first meeting of the Study Group it was agreed that all persons with an average income of Rs. 300 and below could be considered to come under the lower-income group, as the Madras Government had exempted them from the recent salary-cut of ten per cent on the ground that their incomes were low. It was further

considered that persons with an average income of over Rs. 300 per mensem could be taken as forming the middle class.

A study of cheap housing involves several questions. Firstly, who is going to build the house? Secondly, is it with his own capital or with borrowed capital? Thirdly, is it so that he may own the house ultimately or is it so that he may live in it only as a tenant? Fourthly, what is the standard of comfort he will require? Having these in mind, we classed the low-income groups as below:—

Average income of Rs. 300 p.m.	..	Class I.
Do. Rs. 200 p.m.	..	" II.
Do. Rs. 100 p.m.	..	" III.
Do. Rs. 50 p.m.	..	" IV.
Working classes below Rs. 50 p.m.	..	" V.

Approaching the Problem

We then proceeded to examine first how much these five classes could afford to invest on a house and what comfort they could command at that price adopting normal methods of construction. Next, we examined what it would cost to build a house for each of these five classes according to recognised standards of comfort adopting normal methods of construction. Lastly, we investigated how far the costs of construction could be reduced by adopting cheap devices on houses built according to recognised standards of comfort.

First approach.—We took up the case of those who build houses for ownership and occupation either with their own capital or with borrowed capital. In both cases it would be desired that the outlay on the house should be recovered in a period of 20 years at four per cent interest per annum. The annual maintenance cost and rates and taxes would work out at two per cent per annum on the capital outlay. We found that rental values could not go beyond the following values:—

Class.	Ceiling cost of house.	Floor area in square feet.	Average monthly rent now paid.	Amount that should be paid per mensem to own the house on the expiry of 20 years, calculating interest at four per cent per annum and providing for rates, taxes, etc. at two per cent per annum on the capital value.	Amount that should be paid per mensem to own the house on the expiry of 40 years, calculating interest at four per cent per annum and providing for rates, taxes, etc. at two per cent per annum on the capital value.
(1)	(2)	(3)	(4)	(5)	(6)
	RS.			RS.	RS.
I ..	7,000	534	45	54 12 0	41 0 0
II ..	5,000	398	30	39 0 0	29 8 0
III ..	3,000	306	20	23 8 0	17 12 0
IV ..	2,000	264	12	15 12 0	11 12 0
V ..	1,000	172	5	7 14 0	6 0 0

No credit is available for 40 years. Hence, the ceiling cost of the houses have been determined with reference to column (5) which gives the monthly instalments which are within the capacity of each of the five classes. At these ceiling costs no member of each class can command

in the house built for him the standard of comfort he is accustomed to; but he will have the satisfaction of living in his own house. If he requires a better standard of comfort he should give up ambitions of ownership and choose to be a tenant.

Second approach.—After examining several designs we accepted the standards given below, following generally the recommendations of the Committee of Experts for building works of the Government of India:—

Class.	Floor area.
I ..	692 sq. feet.
II ..	534 "
III ..	483 "
IV ..	368 "
V ..	230 "

Class.	Cost of a house.	Floor area in square feet.	Amount that should be paid per mensem to recover the cost of the house in 40 years, calculating interest at four per cent per annum and providing for rates, taxes, etc., at two per cent per annum on the capital value.	Amount that should be paid per mensem to recover the cost of the house in 20 years, calculating interest at four per cent per annum and providing for rates, taxes, etc., at two per cent per annum on the capital value.
(1)	(2)	(3)	(4)	(5)
	RS.		RS.	RS.
I ..	8,400	692	49 4 0	65 8 0
II ..	6,250	534	36 12 0	48 12 0
III ..	5,900	483	34 12 0	46 0 0
IV ..	4,300	368	25 4 0	33 8 0
V ..	2,200	230	13 0 0	17 4 0

The monthly instalment payable by each class to amortise the owner's capital cost in 40 years may be within the reach of the first two classes, but will be beyond the capacity of the last three classes who would require help in the form of subsidies. Amortisation within 20 years would be impossible for all the five classes.

Third approach.—We recognised that the standards of accommodation fixed taking the financial capacity of the occupants above were too poor and that the standards fixed with reference to comfort involved a larger capital outlay besides necessitating some subsidy for the last three classes. Our third approach therefore aimed at cheapening the cost of construction in such a manner that the minimum standards of accommodation could be made available to the different classes of low-income groups, at the cost which they could afford, no matter whether the objective was ownership or only tenancy. Whereas the first and second approaches should yield designs as per standard specifications ensuring long life and durability for the houses, the third approach should aim at producing designs utilising local materials and adopting not very rigorous specifications but incorporating cheapening devices in the method of construction, so as to bring down the cost as far as possible. The essential condition for evolving cheap designs should, however, be that economy should not be achieved at the cost of structural efficiency even though adoption of sub-standard specifications to some extent is inevitable.

Fifteen Designs Evolved

The above considerations led us to evolve 15 designs each of different cost. They provide a wide field for selection so as to suit every taste and purse.

As a result of the study made on the lines indicated above, the following designs have been prepared:—

Designs evolved according to financial approach: To satisfy the requirements of the first approach five designs—

Houses of this variety will be built by Government or Housing Boards or Tenancy Co-operative Societies or private bodies or individual owners. All of them would desire to get back their capital outlay from their tenants in at least 40 years with interest at four per cent per annum after meeting the maintenance cost and rates and taxes at two per cent per annum on the outlay. The monthly rent that would have to be collected to yield this result would be as follows:—

Nos. A-1 to A-5 were evolved. The details of plinth and floor areas and estimated costs for these are as follows:—

Class.	Design number.	Floor area. SQ.FT.	Plinth area. SQ.FT.	Estimated cost. RS.
I ..	A-1 ..	534	675	7,000
II ..	A-2 ..	398	540	5,000
III ..	A-3 ..	306	455	3,000
IV ..	A-4 ..	264	332	2,250
V ..	A-5 ..	172	231	1,100

Designs evolved according to minimum standard approach: These conform generally to standard specifications. The details are as under:—

Class.	Design number.	Floor area. SQ.FT.	Plinth area. SQ.FT.	Estimated cost. RS.
I ..	B-1 ..	692	918	3,400
II ..	B-2 ..	534	686	6,250
III ..	B-3 ..	483	640	5,900
IV ..	B-4 ..	368	484	4,300
V ..	B-5 ..	230	313	2,200

Designs evolved according to cheap design: The designs evolved to satisfy the requirements of the third approach are essentially the same as designs B-1 to B-5 in respect of the accommodation provided for the different classes of the lower-income groups. The details of cost worked for these designs C-1 to C-5 are as follows:—

Class.	Design number.	Floor area. SQ.FT.	Plinth area. SQ.FT.	Estimated cost. RS.
I ..	C-1 ..	692	918	6,200
II ..	C-2 ..	534	686	4,800
III ..	C-3 ..	483	640	4,500
IV ..	C-4 ..	368	484	3,500
V ..	C-5 ..	230	313	1,800

The following statement will show that houses of recognised accommodation standards built according to our cheap designs are within the reach of the first two classes of lower income groups whether they want to occupy them as tenants or as owners. Some members of the

third class may also be able to occupy them as tenants. But they are beyond the capacity of the last two income groups. These two classes require subsidy from Government even in respect of our cheap design houses. The statement is given below :

Class.	Cost of a cheap house conforming to the recognised standards.	Floor area.	Amount that should be paid per men to own the houses on the expiry of 20 years, calculating interest at four per cent per annum and providing for rates and taxes at two per cent per annum on the capital value.	Amount of rent that should be charged by the owner to amortise the capital outlay in 40 years, calculating interest at four per cent per annum and providing for rates, taxes, etc., at two per cent per annum on the capital value.
(1)	(2)	(3)	(4)	(5)
	RS.	SQ. FT.	RS. A. P.	RS. A. P.
I ..	6,200	692	48 4 0	36 8 0
II ..	4,800	534	37 8 0	28 4 0
III ..	4,500	483	35 0 0	26 8 0
IV ..	3,500	368	27 4 0	20 8 0
V ..	1,800	230	14 4 0	10 12 0

General observation.—Brief specifications in respect of the various designs A-1 to A-5, B-1 to B-5 and C-1 to C-5 are incorporated in the respective designs themselves. With regard to the designs suggested for the third approach, it is likely that houses built as per the sub-standard specifications may in some cases develop some minor cracks on the surface here and there; but this seems inevitable and we should be prepared to take some risk in going in for cheap housing. Structural efficiency is however kept up.

Rural Housing

In regard to rural housing, as the earning capacity of the rural population varies more than that of the urban population, we have made no attempt either to fix the minimum cost or minimum standards of accommodation. We considered that the same plans could be utilised for the different classes of rural houses also, altering only the specifications for construction more widely so as to cheapen the cost. But in doing so it may be necessary to incur expenditure on periodical renewal of some materials used for cheaper construction.

The rural people are already used to the construction of mud walls and gravel floors for their residences. There is ample scope for improving their present methods by (i) the use of sun-dried bricks or clay blocks of regular shapes for walls, (ii) the use of soil cement (proportion of cement to soil as 1 to 12) plaster for the walls and flooring, (iii) the use of palmyra, casuarina or bamboo beams, joists and rafters which will be available cheaply in rural areas, and (iv) the use of soil cement or cement-mortar partitions reinforced with inter-woven bamboo chicks. Most villagers can help in the construction of houses themselves and thus reduce considerably labour costs involved in construction. Moreover, potters, carpenters, blacksmiths, bricklayers, etc., may advantageously adopt the barter system and build cheap houses.

How to Reduce the Cost of Construction

The "break-up" of the cost of construction of houses, excluding the value of site, cost of amenities like water

supply, drainage, electrical and sanitary installations, is roughly as follows:—

Foundation and basement ..	25 per cent of the total cost.
Superstructure	35 do.
Doors and windows	20 do.
Roofing	20 do.

We indicate below ways and means of effecting economies in the cost of construction. But our recommendations are confined to single-floor structures alone. They are so framed as to enable savings particularly in respect of that part of a structure which constitutes the bulk of the total cost.

Foundations.—(i) In most cases it would be safe to limit the depth of foundation to a maximum of 2' 6" unless exceptionally poor soil conditions warrant an increase of this depth.

(ii) The thickness of concrete in foundations need not be more than 9", and where gravelly or rocky soil is available, the provision of concrete in foundations may be dispensed with.

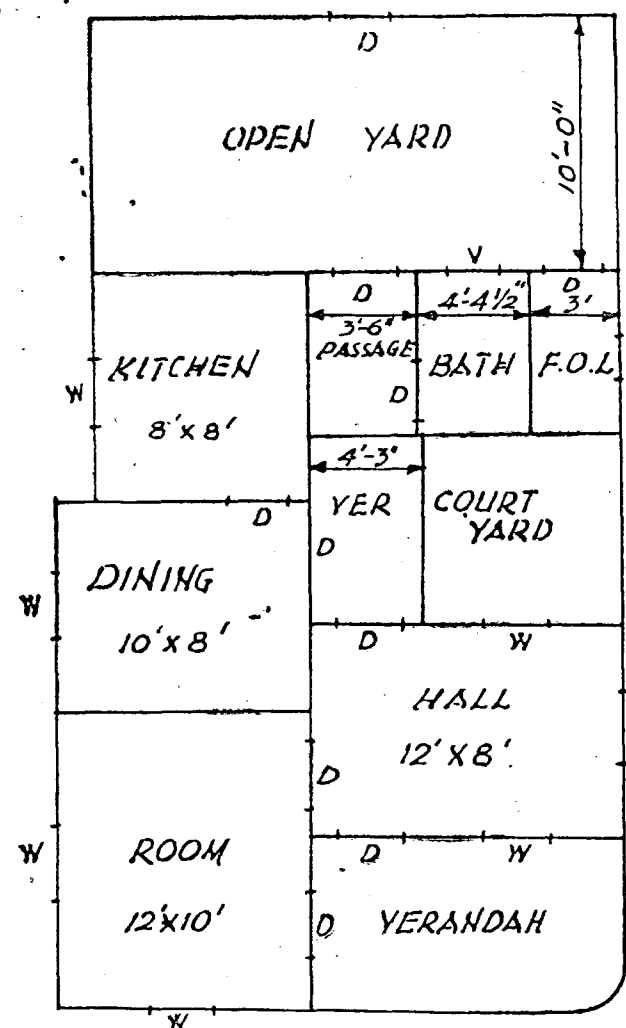
(iii) The width of foundations need not be more than 2' 3" except in the case of soils of very poor bearing capacity.

Basement.—(i) The thickness of basement wall need not exceed 1' 1½" in the case of brick masonry and 1' 3" in the case of stone masonry.

(ii) The height of basement need not be more than 1' 6" above ground level and even 1' would suffice if the ground is sufficiently elevated free from dampness.

Superstructure.—(i) The thickness of main wall all round need not be more than 9" (brick work) or 1' (for stone masonry). The masonry may be of burnt brick in clay, or stone in clay, whichever is cheaper in the locality. Care should be taken that clay is replaced by cement or lime mortar around wood-work, as otherwise white-ants, etc., will harm the wood-work.

the flooring concrete laid over well consolidated basement filling. Alternatively, these walls may be built over the natural ground, after stripping the loose top-soil, thus omitting altogether any foundation structure below ground level for these walls.



A-1. CLASS I.

Average income per mensem ..	Rs. 300.
Accommodation	534 square feet.
Plinth area	675 square feet.
Approximate cost	Rs. 7,000.

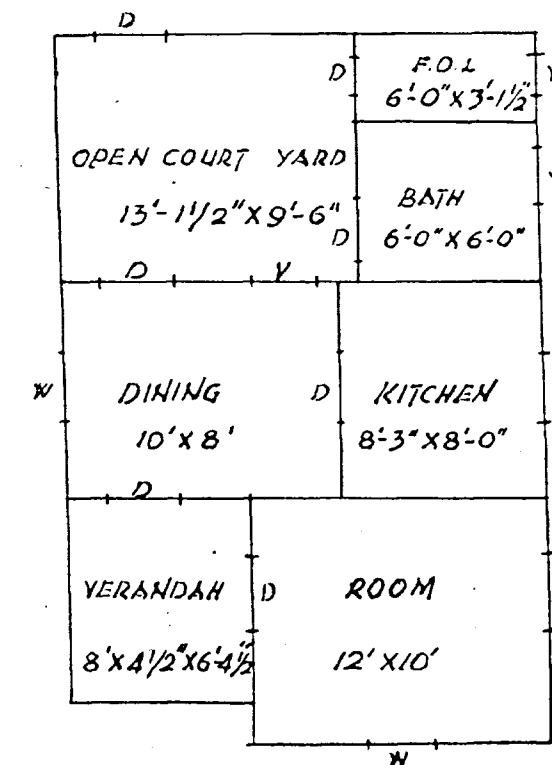
(ii) In order to prevent the transmission of moisture to the superstructure and white-ant trouble, the brick-in-clay may be built over a layer of cement mortar 1:3, ½" thickness laid on top of basement wall.

(iii) All interior non-load bearing walls and partition walls may be of 4½" thickness in cement mortar (1:5) or even of 3" thickness (if of first-class brick on edges).

(iv) These non-load bearing interior walls may also be built of sun-dried bricks with soil-cement mortar (12:1) as these being located in the interior of the house will not be subject to weather action. Through vertical joints should be left at either end of these walls without bonding them with main walls, so that these walls can easily be replaced later on if found necessary.

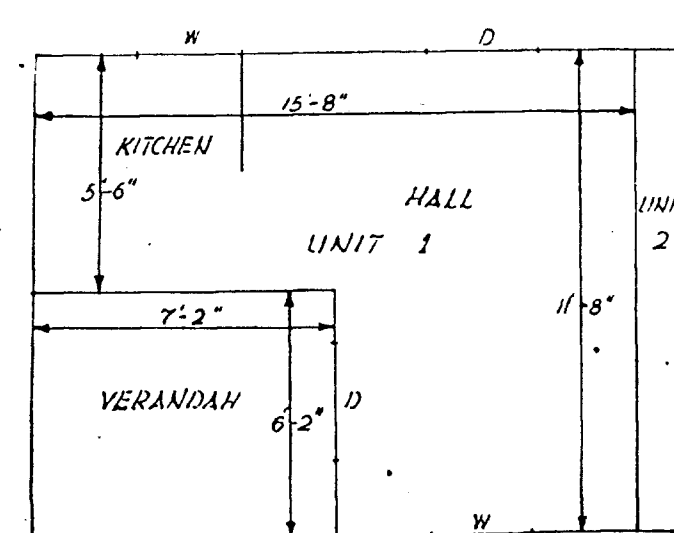
(v) The main brick-in-clay walls can be plastered both sides with cement mortar 1 to 6 to prevent penetration of dampness.

(vi) No elaborate foundation is necessary for interior non-load bearing walls and partition walls. Considerable savings could be effected if these walls are built right over



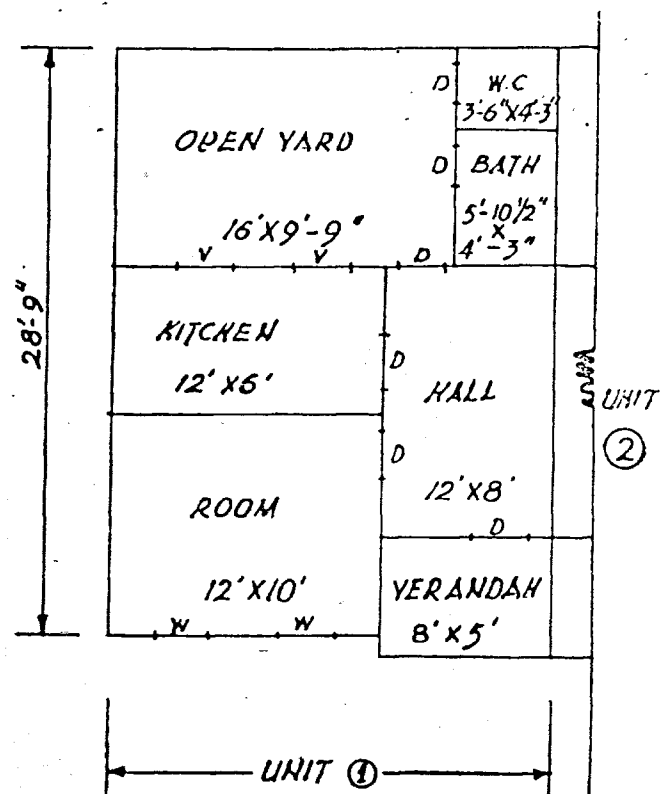
A2. CLASS II.

Average income per mensem ..	Rs. 200.
Accommodation	393 square feet.
Plinth area	540 square feet.
Approximate cost	Rs. 5,000.



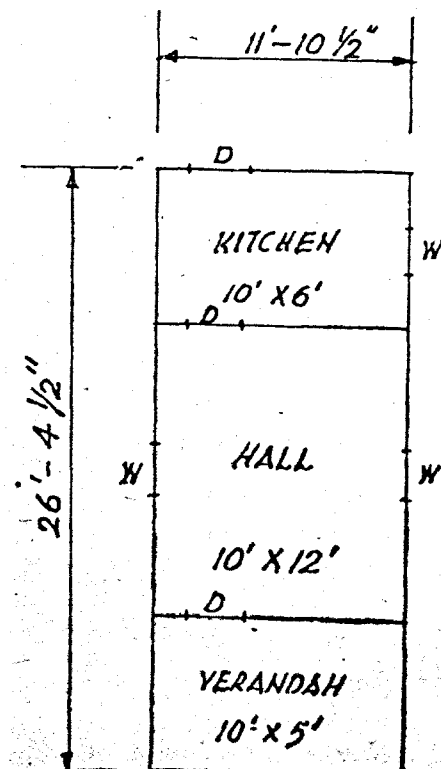
A-5. CLASS V.

Average income	Below Rs. 50.
Accommodation	172 square feet.
Plinth area	231 square feet.
Approximate cost	Rs. 1,000.



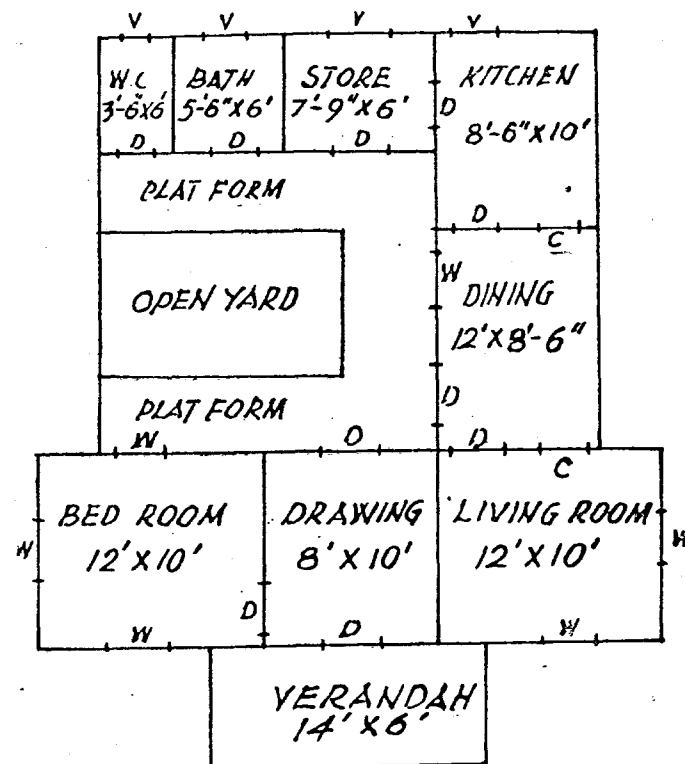
B-4. CLASS IV.

Average income per mensem	Rs. 50.
Accommodation	368 square feet.
Plinth area	484 square feet.
Approximate cost	Rs. 4,300.



B-5. CLASS V. (Opposite)

Average income per mensem	Below Rs. 50.
Accommodation	230 square feet.
Plinth area	313 square feet.
Approximate cost	Rs. 2,200.



C-1. CLASS I.

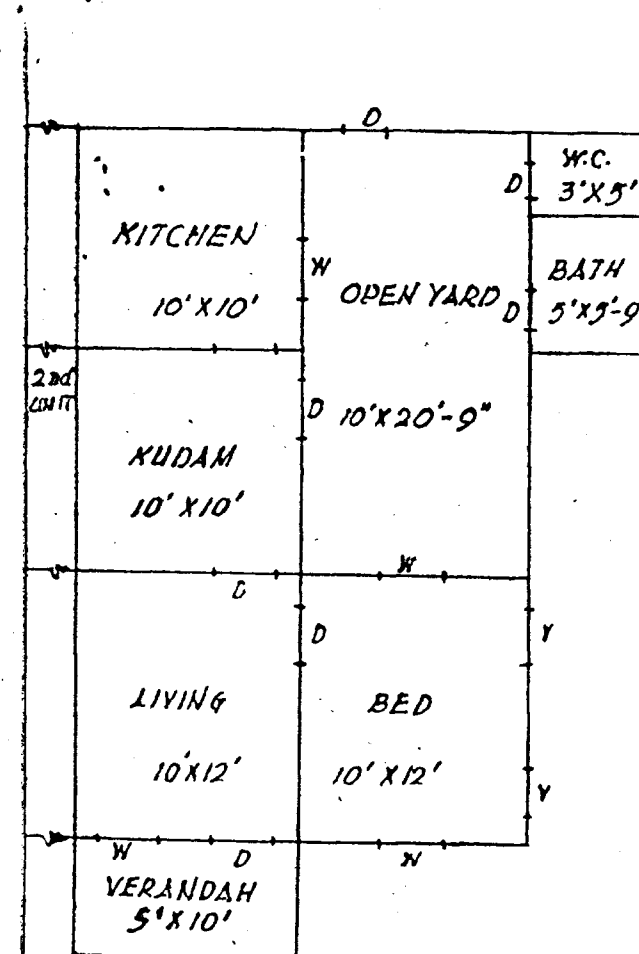
Average income per mensem	Rs. 300.
Accommodation	692 square feet.
Plinth area	918 square feet.
Approximate cost	Rs. 6,200.

palmyra, casuarina or even bamboo can be used with advantage. In the case of rural housing, palmyra rafters and joists will be cheaper and will still further reduce the roofing cost.

(iii) Use of pre-cast R.C. joists will result in a saving of 30 per cent of the cost of roofing when compared to the use of teakwood sections for flat roofs like Madras terracing.

(iv) In the case of reinforced cement concrete roofing use of higher working stresses, viz., 750 lb. per square inch in concrete and 18,000 lb. per square inch on steel, will result in greater economy.

Gradation list of unit costs.—We have worked out the unit costs of different kinds of masonry, different kinds of flooring, different kinds of doors and windows and different kinds of roofing, as applicable to a central place in the Madras City and have arranged them in the descending order of cost per unit. Depending upon the financial capacity of the owner, a type of specification could be chosen from these gradation lists to suit his own purse.



C-2. CLASS II.

Average income per mensem	Rs. 200.
Accommodation	534 square feet.
Plinth area	686 square feet.
Approximate cost	Rs. 4,800.

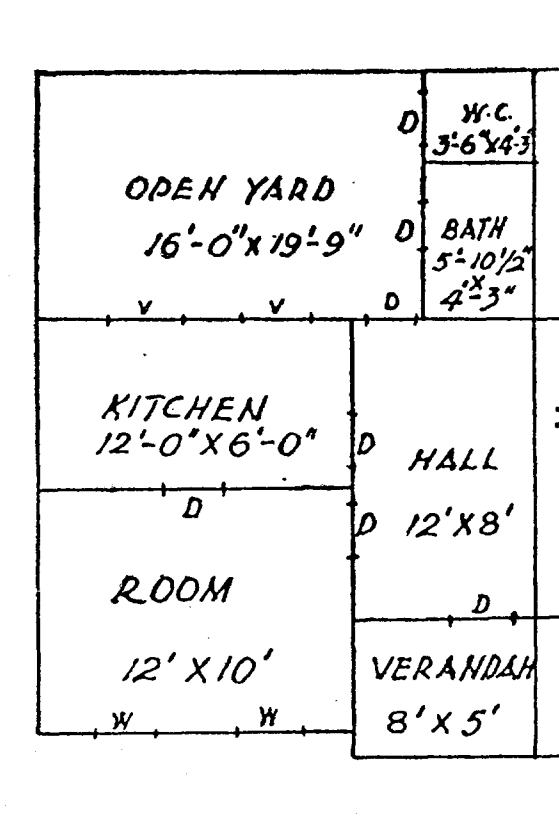
Layout.—About ten per cent of building costs can be saved if small buildings are constructed in blocks of six units. This is commendable especially in the case of residences for Classes IV and V of the lower income group.

Effect of Our Suggestions

We have incorporated the above suggestions for reducing the cost of construction in our designs C-1 to C-5 with the result that the cost of houses built according to these designs will be cheaper than those built as per designs B-1 to B-5 by about 25 to 26 per cent in the case of Classes I to III and 19 and 18 per cent respectively in the case of Classes IV and V.

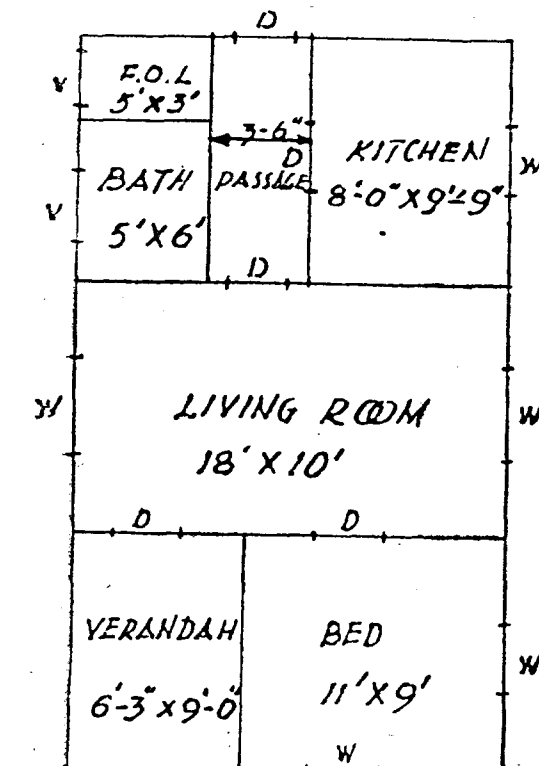
C-3. CLASS III. (Opposite)

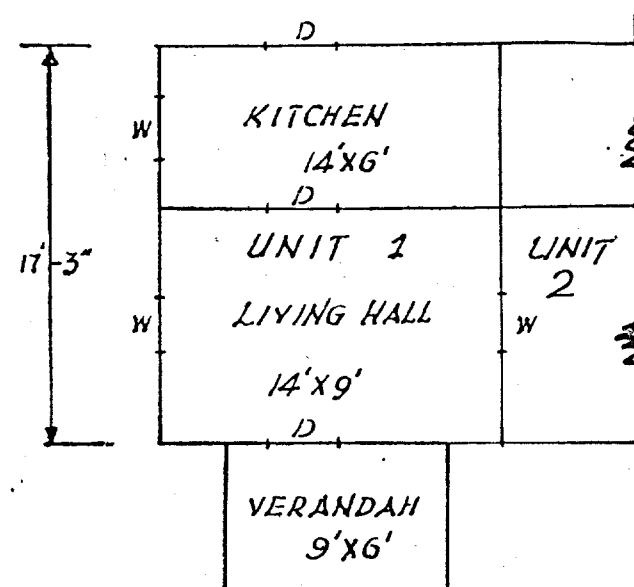
Average income per mensem	Rs. 100.
Accommodation	483 square feet.
Plinth area	640 square feet.
Approximate cost	Rs. 4,500.



C-4. CLASS IV.

Average income per mensem	Rs. 50
Accommodation	368 square feet.
Plinth area	484 square feet.
Approximate cost	Rs. 3,500.



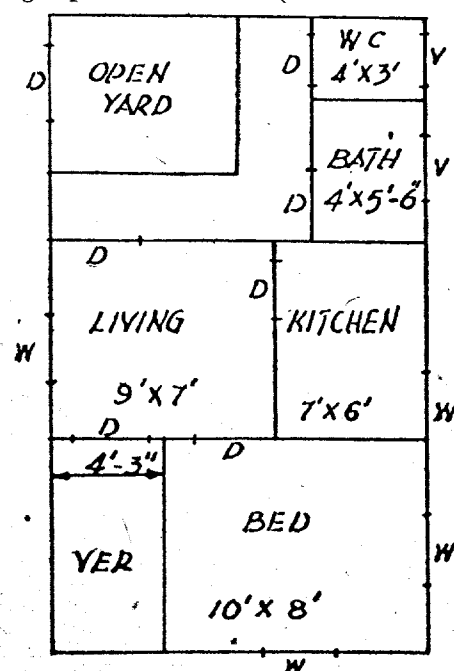


A-5. CLASS IV.

Average income per mensem	Rs. 50.
Accommodation	204 square feet.
Plinth area	332 square feet.
Approximate cost	Rs. 2,250.

(vii) The minimum height of a floor may be 9' for main rooms and 7' 6" for verandahs, bathroom, etc. The parapets need not be more than 9" high and 4 1/2" thick but should have 9" wide pilasters projecting inside at intervals.

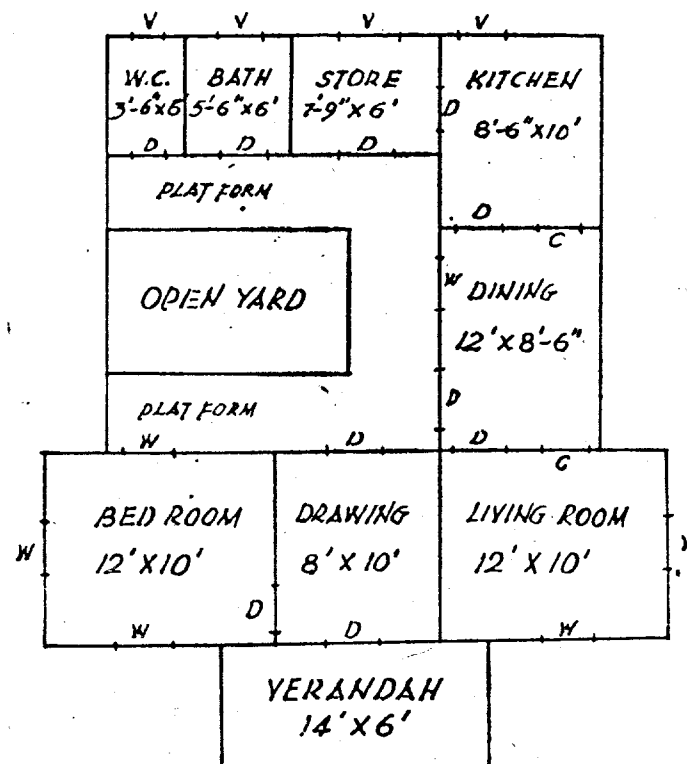
(viii) It is possible to use soil-cement (12 to 1) blocks for building superstructure walls for single floor buildings.



A-3. CLASS III.

Average income per mensem	Rs. 100.
Accommodation	306 square feet.
Plinth area	455 square feet.
Approximate cost	Rs. 3,000.

It should, however, be borne in mind that the cost of both soil-cement and brick masonry is nearly the same if the cartage for brick is ignored. If a lead of eight miles is allowed for bricks, the brick masonry will cost about 25 per cent more than soil-cement block masonry, but technical skill will be required to determine whether a particular soil will be suitable for making soil-cement blocks. It is clear, therefore, that these blocks will be economical only at locations where bricks are very costly owing to long conveyance and the soil is found to be suitable for making these blocks.



B-1. CLASS I.

Average income per mensem	Rs. 300.
Accommodation	692 square feet.
Plinth area	918 square feet.
Approximate cost	Rs. 8,400.

(ix) Hollow cement (1 cement and 6 sand) blocks having a minimum of 60 per cent solid area, a shell thickness of 1 1/2" and with an average crushing strength of not less than 400 lb. per square inch of gross area can also be used safely for non-load bearing walls such as partitions, cross-walls, etc., in place of soil-cement or brick work. It is claimed that these blocks can also be used for main walls and that with the adoption of pre-cast R.C. T-Section units for roofing, building costs will get reduced by about 20 to 25 per cent. But the use of these hollow cement blocks involves extraordinary and very careful techniques in the mixing, manufacture and curing of blocks, so that these factors limit the extensive use of these blocks at present.

Flooring—(i) The conventional practice of having 4" thickness for the concrete base for the flooring is not quite essential. The concrete thickness may be reduced to 2" if it is laid over well-rammed earth or a well

consolidated sand-fill in the basement in smaller panels, with vertical butt-joints for the depth of the concrete. This may develop slight cracks along the joints which will not be structurally objectionable.

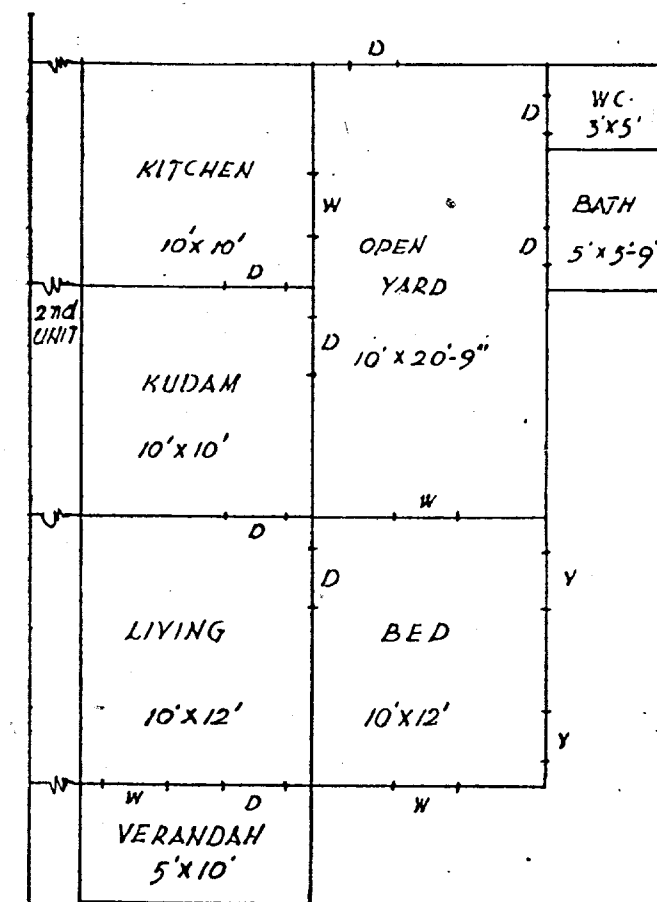
(ii) The floor surface may be plastered with soil-cement plaster (12 to 1 proportion) 1/2" thick, if the base concrete is of brick-jelly, or with cement mortar (1:4) if the base concrete is of broken stone.

(iii) In the case of working class houses, simple type of gravel floor of about 4" thickness rubbed over with cow-dung may be adequate.

Doors and windows.—(i) Although doors and windows should be provided in the external walls they are not absolutely essential for interior openings.

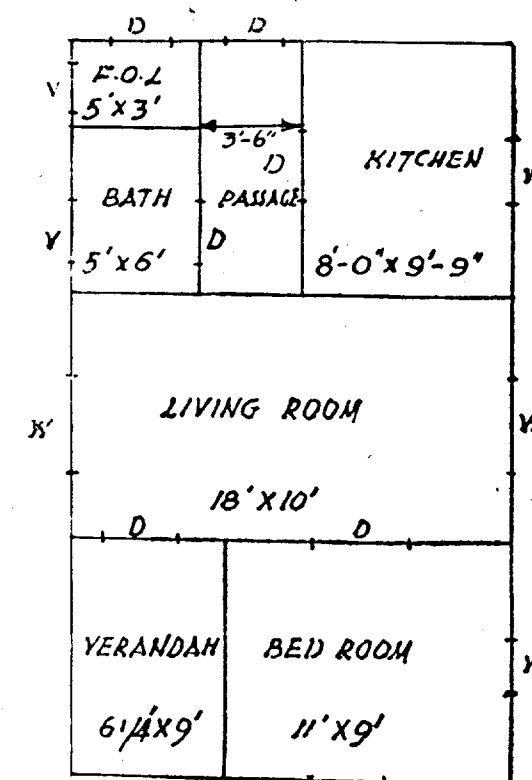
(ii) If for consideration of privacy doors are necessary for interior openings, it is unnecessary to have the conventional type of doors with heavy sections of teakwood for the door frames. The shutters may be of cheap panelled type on light frame work which may be hinged on to wedge-shaped wooden blocks embedded in the walls or to a vertical wooden rail piece fixed firmly to the wall by means of wedge blocks.

(iii) Wooden panelling of shutters may be replaced by G.I. sheets or asbestos cement sheets, plywood panels



B-2. CLASS II.

Average income per mensem	Rs. 200.
Accommodation	534 square feet.
Plinth area	636 square feet.
Approximate cost	Rs. 6,250.



B-3. CLASS III.

Average income per mensem	Rs. 100.
Accommodation	483 square feet.
Plinth area	640 square feet.
Approximate cost	Rs. 5,900.

or even bamboo thatties painted on both sides, according to the degree of cheapness aimed at.

(iv) The door and window frames need not be of section 4" x 3". This could be reduced to 3" x 2 1/2" for door frames and 2" x 2 1/2" for window frames. Thickness of the door shutters may be 1 1/2" and window and ventilator shutters may be 1".

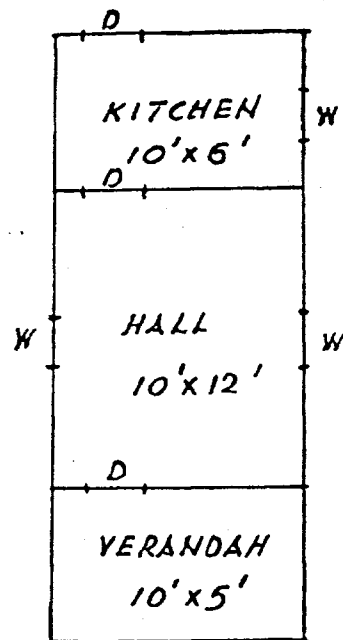
(v) As the cost of doors and windows is nearly five times the cost of masonry work, the number of doors and windows in a building should be kept to an absolute minimum but not sacrificing the minimum requirements for thorough ventilation and efficient lighting.

(vi) R.C. pre-cast frames for doors and windows are economical and their use may, therefore, be encouraged. While pre-cast R.C. lintels over doors and windows will be economical, in rural parts brick-on-edge course over the doors and windows will be cheaper.

(vii) In less important rooms, instead of the conventional windows, honeycombed brick-work or reinforced cement concrete *jali* work may be provided.

Roofing.—(i) As compared to the cost of conventional type, roofing with pre-cast R.C. Tee-beams overlaid with brick jelly concrete for an average thickness of 3" will be cheaper.

(ii) In preference to teakwood joists, rafters and reapers, best country wood, like Pilla Marudu, Kari Marudu,



C-5. CLASS V.

Average income per month	Below Rs. 50.
Accommodation	230 square feet.
Plinth area	313 square feet.
Approximate cost	Rs. 1,800.

The terms of Government reference emphasise the utilisation of local materials in evolving cheap houses. But it is scarcely possible to eliminate entirely the use of cement and steel. A few important building materials like furniture for doors and windows which are not necessarily local products will have to be obtained from outside. Similarly, cement and structural steel are commodities which will also have to be procured from outside the locality. But the use of these materials for house construction could be kept at a minimum, consistent with the requirements of structural soundness.

Subsidised Housing Scheme

The Government of India have sanctioned grants totalling Rs. 20,86,937 under the Subsidised Industrial Housing Scheme 1952-53.

A sum of Rs. 18,65,250 divided equally as a subsidy and loan, has been granted to the Madhya Pradesh Housing Board for the construction of 750 tenements in Nagpur and three other places, Rs. 1,56,937 to Messrs. K.C.P. Limited, Vuyyuru (Krishna) for 100 single-storey one-room tenements near their factory at Vuyyuru, and Rs. 64,750 to Messrs. S. P. Virmani and Sons Ltd., lessees of Jwala Flour Mills, Amritsar, for 40 single-storey one-room tenements near their factory at Amritsar.

The cost of construction, including the price of land, accepted for the purposes of loan and subsidy in the case of Messrs. K.C.P. Ltd., is Rs. 2,51,100 and of Messrs. S. P. Virmani and Sons, Ltd., Rs. 1,03,600. The subsidy and loan have been calculated at 25 per cent and 37½ per cent of the cost respectively. The grant is subject to the execution of the agreement by the firms.

Research in Tanning Materials

The use of vegetable tanning materials to convert hides and skins into leather has been known in India from prehistoric times. But the information available on the subject has never been properly collated so far. In the past, extensive investigations of over 300 tanning materials had been made at the Forest Research Institute by the Board of Munitions and by the Madras and Bengal Tanning Research Institutes. The Forest Research Institute, Dehra Dun, has now collected all available information on tanning materials and brought out a monograph, *The Vegetable Tanning Materials of India and Burma*.

During the Second World War, large quantities of wattle bark and extracts were imported into the country for producing large quantities of leather for the armed forces. However, despite these imports, the demand for indigenous tanning materials remained great and their prices rose very high. With the stoppage of imports of wattle bark from South Africa the demand for indigenous materials has increased, but the necessary supplies are not available. Attempts are, therefore, being made to import the requisite tanning materials from abroad as well as to organise supplies within the country. The monograph is of the view that attempts should be made to raise large-scale commercial plantations of wattle in the country.

The present problem, in short, is how to organise the production of Indian tanning materials on modern commercial lines so that they can compete with foreign materials. Suggestions in this regard have been made in the monograph. The publication contains an introduction and chapters dealing with the usual tanning methods in India, various factors which influence the use of tanning materials in the tanneries; occurrence of tannins in various parts of the plant, proper methods of collection of tanning materials, tannin extracts and factors influencing the supply of tanning materials from forests. It also contains detailed accounts of over 20 of the more important Indian tanning materials as well as summaries of information on several hundred other Indian tanning materials, which are not likely to be of commercial importance.

Electronics Industry to be Started

India will have by 1956, a large-scale industry for the manufacture of a wide range of wireless equipment capable of meeting major requirements of the three Armed Services as well as of other Ministries of the Central Government and States.

Following the signing of the agreement in December last between the Government of India and a French firm, the Compagnie Generale De Telegraphie Sans fil, a technical team headed by Dr. Ponte, Director-General of the firm, visited India towards the end of January.

The proposed industry will be mainly concerned with the manufacture of specialised equipment for Government use, such as transmitters of all types, communications receivers, trans-receivers for fixed and mobile operations, and other equipment. There is no proposal at present to manufacture broadcast receivers and amplifiers. The Government at the same time will also aim at co-ordinating the present resources in the country so as to utilise them to the fullest advantage. The project is estimated to cost approximately seven crores of rupees.

Chlorophyll Industry in India

Researches are at present being conducted at the Forest Research Institute, Dehra Dun, to help the establishment of a chlorophyll industry in India.

The Institute has published several papers on the subject, which have suggested the chlorophyll pigment for the coloration of vanaspati to prevent its use as an adulterant of ghee. The yellowish-green colour of vanaspati thus obtained can be recognised even after great dilution by brilliant red-dish fluorescence under ultra-violet light or bright sunlight.

During the past few years, the Institute has been engaged in the preparation of chlorophyll concentrates and products from the leafy sources of both forest and agricultural origin as well as in the development of their quality and number. The Indian stinging nettle, *palak* and *bhant* have, among others, been found to be good sources of chlorophyll.

Curative Value

The chlorophyll pigment has no deleterious effect on human beings. On the other hand, it is said to cure certain cases of anaemia and to have vitamin-like activity. It is, in fact, hailed as a life-giving substance beneficial for human metabolism.

The total pigment used for colouring vanaspati also contains carotenes already recommended for its 'fortification' as a pro-vitamin 'A'. A rapid, simple and economic method has been evolved for the coloration of vanaspati with chlorophyll by direct extraction from the leafy source with the fat itself.

Copper Chlorophyll

A process has also been developed at the Institute for the preparation of copper chlorophyll. Copper chlorophyll of 120-140 per cent tinctorial value is obtained in a yield of 60-70 grams per kilogram of dry leaves of the Indian stinging nettle. Besides being used as a colorant for soaps and oils, it forms a base for preparing water-soluble copper chlorophyll, widely employed in America in a variety of preparations, such as deodorant tablets, breath candies, air fresheners, mouth washes, tooth pastes and chewing gums; and even in facial creams and other ointments.

Water-soluble chlorophyll without copper has also been prepared from the edible leaves of both forest and agricultural origin. This product is intended only for edible purposes and serves as a tonic and a deodorant.

Copper chlorophyll extract has been prepared from a herb reputed to be an insecticide, and is potentially of great value in tissue-stimulating and wound-healing ointments.

Potatoes Suitable for Canning

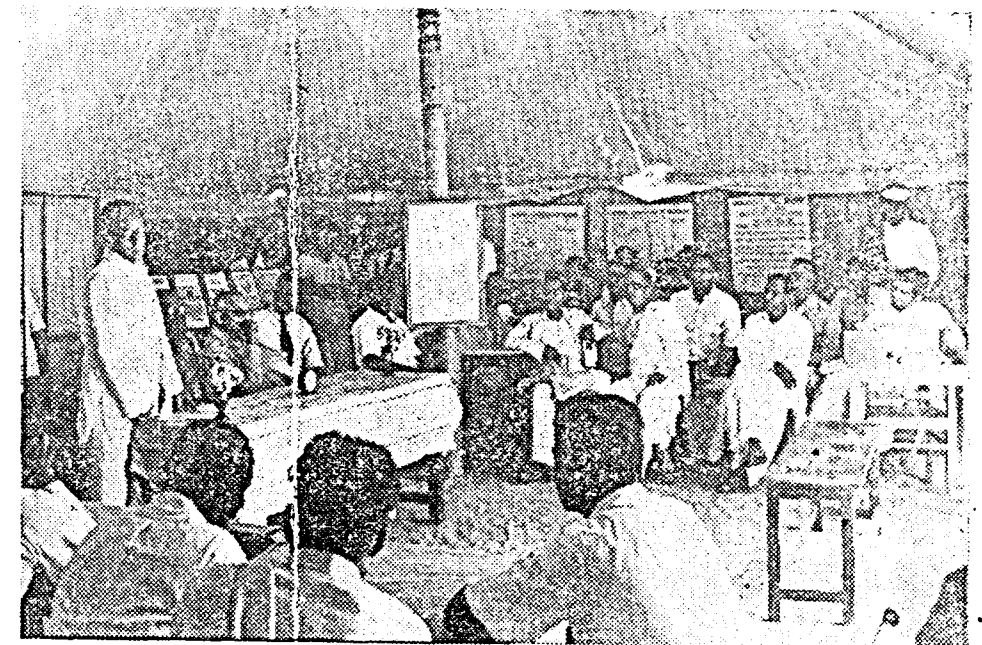
Researches at the Central Food Technological Research Institute, Mysore, have indicated which varieties of potatoes are suitable for canning.

Some potatoes crack and become mashy giving a lot of starchy grains at the bottom of the can, while others do not crack and give any such starch. The former, classified as the 'mealy' type are not suitable for canning; it is the latter 'waxy' type which are generally preferred for processing. Even within the 'waxy' type such factors as the freshness of crop, the number and character of the eyes and the effect of cold storage, greatly influence the quality of the canned

potatoes and so far only specific varieties have been actually utilised for canning. Usually the unsuitable or less suitable varieties are processed with calcium chloride to improve their canning qualities.

The Central Food Technological Research Institute investigation has extended over a storage period of 16 months on the canning qualities of different varieties of potatoes, in collaboration with the Potato Research Station, Patna. Trials have been made on five different varieties received from various sources and the suitability of calcium chloride treatment in processing and its effect on the taste, flavour, texture and other qualities has been investigated.

These researches have shown that the O.N. 208 variety is good for canning purposes even without calcium chloride treatment. The Mysore Ricket and Phulwa varieties also stand processing as such, although processing losses are comparatively more. Kerr's Pink is unfit for canning without calcium chloride treatment, while the Darjeeling Red variety is totally unsuitable. Cold stored potatoes can stand processing after calcium chloride treatment.



NEERA PARLOUR: Sri V. C. Palaniswami Goundar, Minister for Prohibition, addressing the gathering at the inauguration of the Neera Parlour near the Assembly Hall in Madras City.

Market for Indian Handicrafts in America

The following extract from a letter written by Sri Arthur S. Lall, Consul-General for India, New York, U.S.A. to Sri D. G. Mulherkar, Office of the Director of Industries, Bombay, will prove of interest to all exporters of Indian handicrafts seeking American markets:

I am very glad to hear of the interest of the Bombay State Government in the development of a market for Indian Handicrafts. I am enclosing a list of Indian and American Importers here who might be interested in your products. I am also attaching the names of the Office-bearers of the Indian Chamber of Commerce, and its address.

So far, our handicrafts have been known in this country largely in the field of curios. The only exceptions have been some of our floor coverings and bedspreads. So long as our handicrafts remain in the field of curios, the market for them here will be a very limited one and any expenditure we might incur on publicity will not yield results. I have myself shown several lots of Indian goods from various parts of our country to buyers and other trade representatives here and, in no case have I succeeded in placing immediate orders except for some of the standard types of goods which I have mentioned above. At the same time, there has been a great interest in many of our goods and the view has been expressed repeatedly that if only these goods could be restyled and re-designed to meet the requirements of the American markets, good business would certainly result. I have accordingly made suggestions to the Government of India, and specific supplies will now perhaps receive attention of this kind in the light of my suggestions.

So far as your goods are concerned, may I make the following suggestions to you. We have just opened a Tourist Office in New York which is equipped partially as a showroom. We are also opening, in the next month or so, an adequate showroom for Indian handicrafts, in New India House. If you would send me samples of the goods which you think will have a market here, I will show them to buyers in this country and to importers, and they will directly send you any orders which they might wish to place. If, on the other hand, they do not think that the goods

are saleable and should be restyled, I will obtain from them the specific suggestions for restyling, etc., in each case and send you those suggestions and then ask you to send me the restyled samples. These will be shown again to the trade here. As these samples will have been restyled according to their wishes, it is then legitimate to expect that quite considerable business should result.

Of course, once orders are placed it will be important that supplies should be sent from India to the importers here strictly in accordance with the approved sample. I stress this point because, in the past, sometimes the prospects of a market being opened to Indian goods have been disappointed by sub-standard supplies following the first lot of approved supplies.

I will very much look forward to receiving from you some of the samples which you think will do well here. With regards.

(Signed) ARTHUR S. LALL,
Consul-General.

Indian Chamber of Commerce of America,
148 East 47th St., New York, NY.

PRESIDENT: MR. C. R. SUNDARAM.

VICE-PRESIDENT: MR. NONI G. BOSE.

SECRETARY: MR. R. WADIA.
TREASURER: MR. V. P. PUNJ.

Indian Importers—

SOGANI & Co., Inc., 30, Rockefeller Plaza, New York, NY.

SINGH, SINGH & Co., Inc., 14, East 56th Street, New York, NY.

INDIA JEWEL SHOP, 59, West 8th Street, New York, NY.

INDO-PERSIAN FINE ARTS, 290, 5th Avenue, New York, NY.

S. S. SARNA, 225, 5th Avenue, New York, NY.

American Importers:

GUNN & LATCHFOLD Inc., 323 5th Avenue, New York, NY.

"HAKIM", 18, West 58th Street, New York, NY.

EDGAR C. HUMAN, 485, 5th Avenue New York, NY.

Messrs. JING HONG & Co., 52, Wall Street, New York, NY.

Enhanced Batta for Transport Personnel

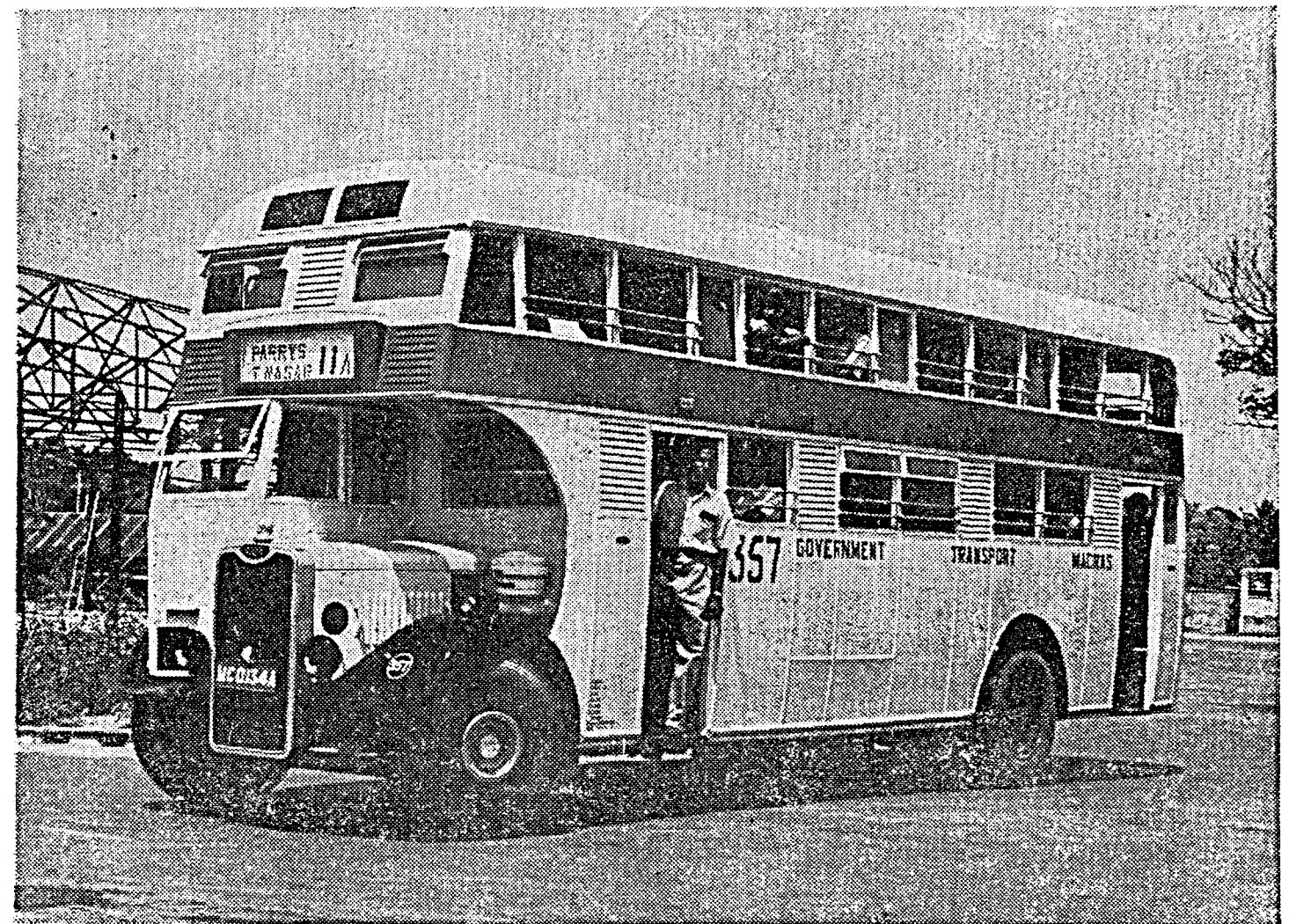
The Government have sanctioned the payment of enhanced batta to the drivers, conductors and Checking Inspectors of the Government Bus Service, so long as additional trips and additional buses are run by the State Transport Department to cope with the situation created by the stoppage of tram services. The drivers and conductors of the Government Bus Service will be paid batta at Rs. 1-2-0 per day for each spell of duty, in lieu of the batta of annas 14 per head per day ordinarily admissible. The Checking Inspectors will be paid enhanced batta of Rs. 1-4-0 per head for each spell of duty, against the usual rate of Re. 1 per head per day.

Controller of Stationery and Printing

The Government have sanctioned the post of a Controller of Stationery and Printing and an Assistant Controller of Stationery and Printing on a permanent basis. The Controller will be in charge of the Stationery Department and the Government Press and Branches including the Branch Press at Pudukkottai. He will function as the Head of the Department. The Superintendent, Government Press, will continue to be Head of the Office so far as the Government Press is concerned.

Recognition of Certificates

The Government have directed that for purposes of employment to posts under the Government of Madras, the All-India Certificate in Civil Engineering of the All-India Council for Technical Education be deemed as equivalent to the L.C.E. Diploma of the College of Engineering, Guindy, or of the Technological Diploma Examination Board, and that the All-India Certificates in Mechanical and Electrical Engineering issued by the All-India Council referred to be deemed as equivalent to the L.M.E. and L.E.E. Diplomas respectively of the Technological Diploma Examination Board.



"VIJAY": This half-decker bus, the first of its kind in India, was built at the Government Coach-Building Factory, Chromepet. Christened "Vijay" by the Chief Minister, this bus carries 60 passengers as against 56 in a double-decker bus. The seats are ingeniously arranged, on upper and lower tiers, on either side of a central aisle. There is also a separate ladies' coupe. Vijay is now running on the City roads. It costs about Rs. 65,000 to build; a double-decker costs Rs. 95,000.

Term Extended for Members of Panchayats

The Government have ordered that the term of office of members of panchayats, constituted under the former Madras Local Boards Act, 1920, as well as of the members of the panchayats in the merged territories of Pudukkottai and Banganapalle, be extended up to July 2, 1953, or until the date of election of members or president of these panchayats, whichever election is held earlier.

This action has been taken, as elections to some panchayats still remain to be completed.

1950 Partition Committee Report Ready

The Report of the 1950 Partition Committee on the formation of Andhra State has now been made available to the public. Copies of the Report may be had from the Government Press Branch, Mount Road, Madras. The price per copy is Rs. 2.

Restrictions on Possession of Arms in Malabar District

The Government have directed the extension of the provisions of section 15 of the Indian Arms Act, 1878, to the Malabar District and have notified that within the limits of the Malabar District no person, who is not specified or described either in Schedule I or under entry 9 to Schedule II to the Indian Arms Rules, 1951, as exempted, shall, from the date of this notification, have in his possession, any arms of any description, except under a licence and in the manner and to the extent permitted by it.

TRANSPORT

Civil Supplies Department

Hiring of Civil Supplies lorries by the other Departments of Government in Madras City

In connection with the transport of foodgrains from the Harbour and rail heads, etc., to the various Government godowns in the City, the Government are maintaining a fleet of 56 lorries under the control of the Transport Officer, City Civil Supplies Transport Unit, Madras. These lorries are stationed at No. 38, Mount Road, Madras-6, Phone No. 86095. (Opposite to Messrs. V. S. T. Motors, Limited.) When these lorries are not used for Civil Supplies work, the Government have permitted their use by the other Departments of Government or private agencies on payment of hire charges.

2. In G.O. Ms. No. 1397 Food and Agriculture dated 10th July 1951 as subsequently modified, the Government have directed that all Government Departments in the Madras City when they have to hire lorries to run for departmental transport, should engage only Civil Supplies lorries and that they can engage private lorries only when the Civil Supplies lorries are not available. Whenever Civil Supplies lorries are required for departmental transport, the Heads of Departments in the City should send written intimation to the Transport Officer, City Civil Supplies Transport Unit, Madras-6, at least a day in advance of the date on which they are required. If requirements are intimated by telephone, the telephonic messages should immediately be confirmed by post copies of the message and post copies of such messages should reach the Office of the Transport Officer, City Civil Supplies Transport Unit, Madras-6, by the next post. Arrangements for loading and unloading at both the ends should be made by the Departments engaging the Civil Supplies lorries for hire. The hire charges and the detention charges fixed for the Civil Supplies lorries are given in the Schedule below. In view of the fact that charges for detention are separately levied, Heads of Departments engaging the Civil Supplies lorries should see that loading and unloading of the lorries are made as expeditiously as possible and that there is no avoidable delay in this regard.

3. Hire charges for utilising the Civil Supplies lorries by a Government Department will be collected by book adjustments. The adjustment bills sent to the Government Departments should be returned to the Transport Officer, City Civil Supplies Transport Unit, Madras-6, within a week of their receipt.

Schedule

Hire charges for three-ton lorries (Government Departments):

- (i) For journeys involving less than five hours: Re. 1 per mile from shed to shed plus Rs. 2 per hour as detention charges excluding the first hour.
- (ii) For journeys exceeding five hours (i.e., on daily basis): Rs. 40 up to 50 miles plus Re. 0-12-0 a mile thereafter.
- (iii) Idling charges: Rs. 16 per day when a lorry is booked for hire but is not taken out of the shed. However, full rates of hire charges will be levied, if a Civil Supplies lorry is taken to an out-station, or out of the shed, irrespective of the fact whether the lorry is utilised by the hirer or not.

Hire charges for five-ton lorries (Government Departments):

- (i) Trip basis: five hours and under: Rs. 1-8-0 per mile from shed to shed plus Rs. 3 detention charges per hour after the first hour.
- (ii) Daily basis: over five hours: Rs. 60 up to 50 miles plus Re. 1 a mile thereafter.
- (iii) Idling charges: Rs. 24 per day when a lorry is booked for hire but is not taken out of the shed. However, full rates of hire charges will be levied, if a Civil Supplies lorry is taken to an out-station or out of the shed, irrespective of the fact whether the lorry is utilised by the hirer or not.

R. M. SUNDARAM,
Secretary to Government.

NEWS AND NOTES

31

MADRAS INFORMATION

Supply of Iron and Steel

The following procedure should be adopted for acquiring iron and steel materials consequent on the relaxation of distribution control over certain categories of iron and steel materials. Distribution control over the following materials has been removed:

- (1) Mild steel rounds. (2) Mild steel squares. (3) Mild steel angles. (4) Mild steel flats. (5) Hexagon and Octagon bars. (6) R.S. Beams, channels, joints, tees and light rails of 30 lb. and under, (7) Heavy rails of 50 lb. and above. (8) Wire nails.

No permit is, therefore, necessary for acquiring the above materials. The consumers can get their requirements from any of the Registered Stockholders. Price control is, however, still in force, and consumers should take care to see that they do not pay more than the controlled rates for the materials. These rates can be ascertained on application to the Office of the Director of Controlled Commodities.

There is control over distribution as well as over price with regard to galvanised corrugated sheets, galvanised plain sheets, black sheets, mild steel plates, barbed wire and galvanised and black wires. All persons, who require these materials should apply in writing to the Director of Controlled Commodities, Madras, and furnish along with their applications, detailed plans covering the proposed construction or extensions or repairs to existing buildings, as the case may be, approved by the Corporation, Municipality or Panchayat Board and detailed estimates certified by qualified Engineers where necessary. Where the demand is for 10 cwts. and less, plans and estimates will not be insisted upon and it will be enough if the applicants themselves furnish details to show how the quantity has been arrived at. All applications should be submitted through the officers specified below:—

- (a) Private buildings everywhere except Madras City—Tahsildars; (b) Industrial purposes—Assistant Directors of Industries and Commerce or Factory Inspectors; (c) Bus body building—Regional Transport Officers or Assistant Directors of Industries and Commerce; (d) Boat Repairing—Port Officer; (e) Educational Institution—District Educational Officers; (f) Hospitals—District Medical Officers;

Study Abroad

VOLUME V

International Handbook of Fellowships, Scholarships and Educational Exchange.

This volume lists international scholarships and training opportunities reported by 64 States and by a number of non-self-governing and trust territories. The information on annual and regular scholarships has been brought up to date and there are also reports on the programme of several Governments which have not previously been published in *Study Abroad*.

This volume is divided into two parts. Part I gives a summary of the main developments in international scholarship and training programmes during the first year and also includes the result of Unesco's first enquiry into the number of foreign students enrolled at Universities and institutions of higher learning throughout the world. Part II deals with the facilities that exist for higher studies in various countries.

Study Abroad is intended as a reference handbook not only for the individual student seeking study opportunities abroad, but also for

Planners and Administrators of Exchange of Persons programmes who can benefit from a handbook of current information within their fields of interest.

Donors of Fellowships who can ascertain some of the most promising yet neglected fields which deserve attention.

Government Departments and International Organisations which need a system of reference for national and international educational activities of interest to them.

Teachers, Instructors and Career Advisers in Universities and other institutions, as a source for the guidance of their students.

Historical and Sociological Research workers, as a source book for much information on cross-cultural education.

Study Abroad may be purchased from any of the following Sale Agents in India:

1. Messrs. Orient Longmans Ltd., Indian Mercantile Chamber, Nicol Road, Bombay.
2. Messrs. Orient Longmans Ltd., 17, Chittaranjan Avenue, Calcutta.
3. Messrs. Orient Longmans Ltd., 36-A Mount Road, Madras.
4. Messrs. Oxford Book and Stationary Co., Scindia House, New Delhi.
5. Rajkamal Publications Ltd., Himalaya House, Bombay Road, Bombay-1.

(g) others not included in any of the above categories—through the concerned Government Departments.

As regards defectives and scrap the materials can be acquired by consumers from the approved scrap dealer without permits up to a maximum of two tons at a time at controlled rates. The defectives are usually the rejections or cuttings of standards materials

and are cheaper in cost than standard materials. In the case of galvanised corrugated sheets and galvanised plain sheet, the difference in price is Rs. 49 per ton. The consumers are warned against making any undue payments for the defective materials in excess of the controlled price and against making payment as for standard materials.

A Handbook for Socrates

GAON KI ABC

By F. L. BRAYNE

Translated by R. L. Mullick, Oxford
University Press, Bharat Buildings,
Mount Road, Madras.

Pages viii + 142.] [Price Rs. 4.

F. L. Brayne, of the Indian Civil Service, is one of the pioneers of the Indian rural reconstruction movement. While on duty as Collector in the Punjab districts, he made a careful study of the problems of the village-side, and came to the conclusion that badly needed reforms like approved techniques in health, sanitation, agriculture, education, co-operation and so on, could be introduced only when the villagers understand the necessity for

the change. To the highly conservative Indian ryot, new-fangled notions have no appeal by virtue of their novelty; he is apt to be hidebound in his love for the traditional and fights shy of newer practices until he is thoroughly convinced that the need for the change-over is paramount.

Brayne knew that he would have to fight this diehard resistance before reforms could be introduced, and he also realised that ordinary propaganda would avail little against rural illiteracy and ignorance. He, therefore pitched upon the Socrates method of teaching, by which the teacher explains the truth and points out a moral, not by answering the questions of his students, but by questioning his audience. This catechism serves to focus the mind of the questioned on to the problem, and

once concentration is achieved, the solution is laid bare open.

Brayne's book *Socrates in an Indian Village* is one of the first—and one of the best—text books for the social service worker in rural areas. The book under review *Gaon Ki ABC*, may be considered a work of a supplemental nature, being a condensed encyclopædia and *vade mecum* on rural development topics. Expert information and instructions are given in the simplest terms on, almost all, the aspects of village life the social worker is likely to encounter.

Major Mullick has rendered the book into lucid Roman Hindustani, so that it is easy now for the welfare worker to be *en rapport* with the villagers, using the very phrases favoured by the masses. —P.V.S.

MADRAS BANANAS

A MONOGRAPH

BY

K. CHERIAN JACOB, L.Ag., F.L.S.
(formerly of the Madras Agricultural Service), Coimbatore

Pages xii + 228]

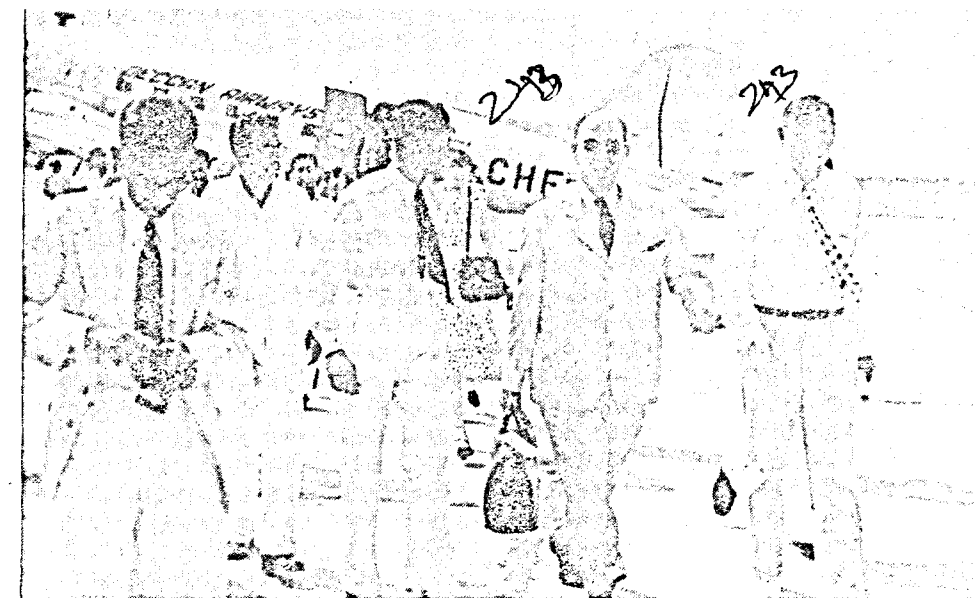
[Price Rs. 7-6-0

84 illustrations

Contents

History and area; nomenclature; description; origin of varieties; names of varieties; commercial varieties in Madras State; cultural practices; banana products and dietetics; analysis of the fruits, and six appendices, bibliography and index

PRINTED BY THE SUPERINTENDENT, GOVERNMENT PRESS, MADRAS.



ADLAI STEVENSON VISITS MADRAS

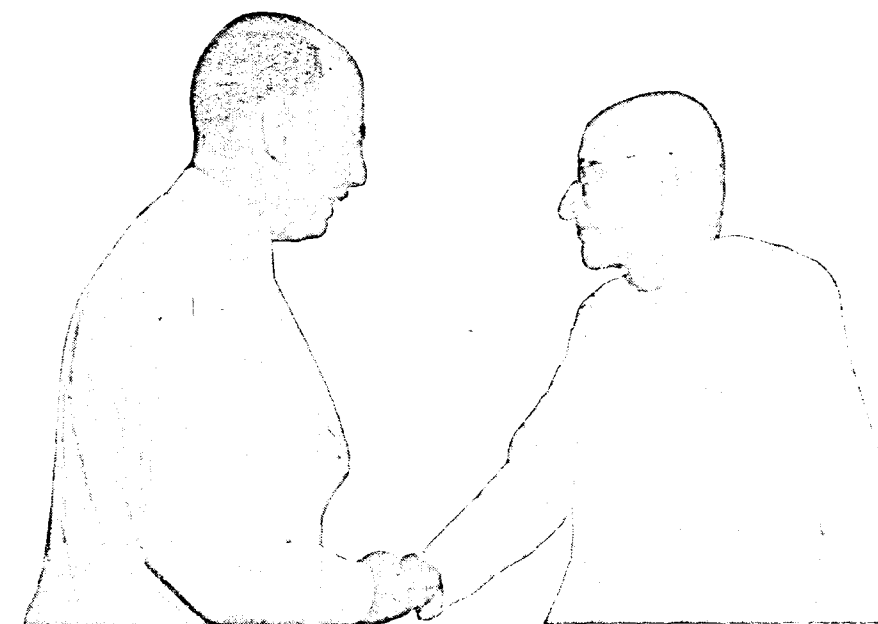
Mr. Adlai Stevenson, U.S. Democrat leader and Presidential candidate in the November elections, recently toured the world to study at first-hand problems of Asia, the Middle East and Europe. During a fortnight's stay in India, Mr. Stevenson made a brief visit to Madras.

Pictures show:

Mr. Stevenson alighting from the aircraft at Meenambakkam Airport.

Meeting the Chief Minister, Sri C. Rajagopalachari, at the Secretariat, Fort St. George.

With the Governor, Shri Sri Prakasa, at Raj Bhavan.



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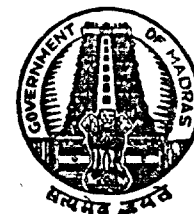
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A Division of the Department of Industries and Commerce, Madras

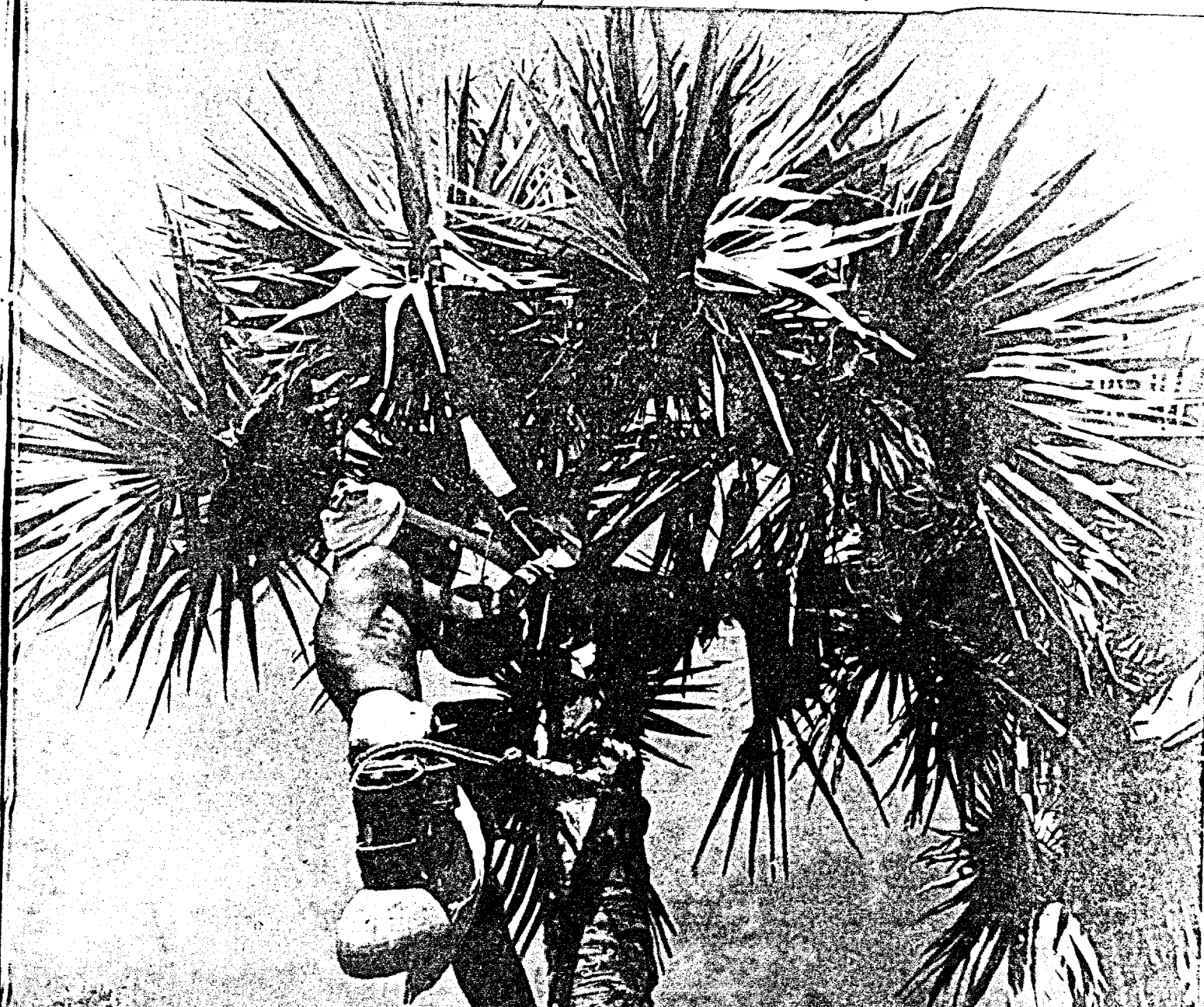
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SUPPLEMENT



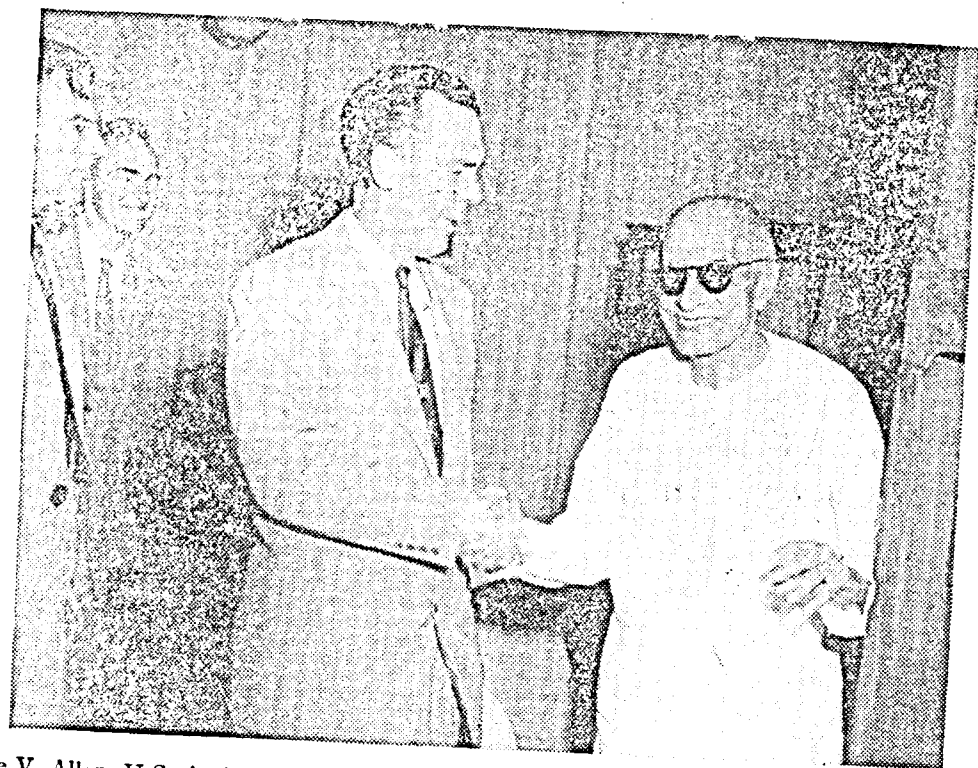
MADRAS *Information*

JULY 1953

Price 3 annas



DISTINGUISHED VISITORS



Mr. George V. Allen, U.S. Ambassador to India, recently visited Madras. Here Mr. Allen is seen with the Chief Minister of Madras.



Sri C. Rajagopalachari, Chief Minister, greets Sri Chintaman Deshmukh, Union Minister of Finance, at the Madras Secretariat.

Madras Information

Published every month by the Director of Information and Publicity
Fort St. George

Vol. VII, No. 7

"WE SEEK TO SERVE AND NOT TO COMPETE"

July 1953

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COVER PAGE: A familiar sight in South India. But to-day there is a vital difference. In olden days this first step led to disasters—toddy shops, brawls and even murders! Now he is extracting the sweet juice—the first step in sweetening life through economic self-sufficiency and co-operative living.

Television and Education in the United States

By Charles A. Siepmann

UNESCO has published the first edition of this book, as part of its programme to assist in the improvement of the use of the mass communications media.

To prepare these studies, UNESCO has called upon specialists throughout the world, in response to which the present publication has come out in the shape of a report on experiments in the use of television for education. It begins with a general discussion of the place of TV among the mass communications of the modern age and briefly reviews experiments in educational television in France and Great Britain. It gives a detailed review of educational broadcast methods. Factual statistical data are included on the cost of television operation and programming, training for television and the organization of broadcasts.

A publication designed for radio and TV broadcasters, film producers, museums and adult education ORGANISATIONS.

Can be purchased from any one of the following UNESCO's sales agents in India:

Messrs. ORIENT LONGMANS, LTD., Indian Mercantile Chamber, Nicol Road, Bombay.

Messrs. ORIENT LONGMANS, LTD., 36-A, Mount Road, Madras.

Messrs. ORIENT LONGMANS, LTD., 17 Chittaranjan Avenue, Calcutta.

Messrs. RAJKAMAL PUBLICATIONS, LTD., Himalaya House, Hornby Road, Bombay.

Messrs. OXFORD BOOK & STATIONERY Co., LTD., Scindia House, New Delhi.

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Grant of Full Fee Concessions

Under the Madras Educational Rules, pupils belonging to Backward Communities are allowed fee concessions at half the rates in educational institutions. The Government have had under consideration for some time the question of allowing greater facilities for the education of the children and dependants of persons belonging to certain occupational communities, viz., the barber, fishermen, dhoby, and potter communities, who reside and practise their hereditary occupations in the rural areas of this State.

To this end, the Government have decided that children and dependants of persons, who belong to these four communities and who carry on their respective profession in areas other than those of Municipalities and major Panchayats, should be exempt from the payment of fees, in full, in Elementary Schools and in Secondary Schools up to and inclusive of III Form.

Under the orders issued by the Government in accordance with this decision, a parent or guardian satisfying the conditions referred to, will, on an application submitted in the form prescribed for the purpose to the headmaster of the school in which his child or dependant is to be admitted or is studying, be entitled to the education of his own children or his dependent children, without the payment of any school fee. A certificate from the village munsif, testifying to the facts mentioned in the application of the parent or guardian, should be submitted with the application.

The concessions will be withdrawn from the pupil, if he is detained in any class, but it will be revived as soon as the pupil secures promotion to next higher class or form.

No condition as to the religion of the pupil will be raised in granting the concessions referred to above.

All-India Palm Gur Workers' Conference

The Fifth Session of the All-India Palm Gur Workers' Conference was held at Tuticorin from June 10, 1953. Sri C. Rajagopalachari, Chief Minister, Madras, inaugurated the Conference. Sri J. L. P. Roche Victoria, M.L.A., presided. Sri A. P. C. Veerabahu Pillai was the Chairman of the Reception Committee. The Conference lasted for four days till the 13th June. The State Palm Gur Organiser along with a demonstrator and a tapper from each State in the Indian Union, besides representatives of palm jaggery co-operatives in Madras State attended the Conference.

An exhibition was also held as an annexe to the conference. Samples of different varieties of palm gur and palm products, tapping tools, gur making equipment, etc., sent by the participating States were displayed in the exhibition so as to give an idea of palm gur development activities carried on in the States and the technical improvements effected.

Practical demonstrations on the improved method of gur manufacture, conversion of palm juice into white sugar, manufacture of palatable products, etc., were also conducted. The Central Palm Gur Training School of the Government of India at Cuddalore participated in the exhibition. The new process evolved for making palm gur by utilising solar heat was demonstrated for the first time. Sri C. Rajagopalachari, Chief Minister, Madras, declared the exhibition open.

The object of the conference is to co-ordinate the activities of the palm gur workers all over India and to devise ways and means for speedy and sound development of the palm gur industry. Last year, the conference was held at Madhuwa in the Saurashtra State and at the invitation of the Madras State, the present session of the conference was held at Tuticorin. It is hoped that as a result of the decisions that will be reached at the conference, the palm gur industry in India will go a further step forward.

Place in National Economy.

India is rich in palm wealth. It is estimated that there are about nine crores of palm trees in the Indian Union and many more can be easily grown. Palm trees flourish on waste

lands, hillocks and bunds of fields and they require neither irrigation nor manure. In the States of Madras, Bengal and Travancore-Cochin, the manufacture of gur and sugar from palm trees is an ancient industry nearly four thousand years old. Before the advent of mill sugar from cane, the entire sugar and gur requirements of these States were met from the palms and the surplus exported to other States also. It is a cent per cent village industry which has provided employment to thousands of tappers. Not only does the palm gur industry relieve the sugar shortage in the country but it also helps to grow more food. It is said that 50 palms can release one acre of fertile land from sugarcane cultivation.

Important Cottage Industry

I am glad to know that the Fifth Session of the All-India Palm Gur Workers' Conference will be held in Madras State in May 1953 and that the conference will be inaugurated by the Chief Minister of Madras. The Palm Gur industry is an important cottage industry in India, which provides employment to a very large number of poor families. I hope the Conference will be able to suggest ways and means for the improvement of the industry. I wish the Conference every success.

S. RADHAKRISHNAN,
Vice-President.

While the palm juice is used for the manufacture of jaggery, every part of the palm trees is useful for various household purposes and building materials. The numerous good uses to which the leaves and fibres of palm trees can be put are well known. Old palmyrah trees are very good timber. Roots and tender fruits of palmyrah palms are consumed as food by the villagers. Palm leaves are used for making mats, baskets, fans, water-lifters and for thatching purposes. The palm trees therefore constitute an important source of national wealth.

Gandhi's Advice

Mahatma Gandhi advocated the use of palm gur in the place of cane gur. The following extracts from his writings emphasize the importance he attached to the industry and the utility of palm gur as an article of food: "Neera can be converted into jaggery sweet as honey its lf. This jaggery is superior to cane jaggery but palm jaggery is sweet and delicious; it can be produced worth crores of rupees. Palm gur gives mineral salts too. Doctors have told me to eat jaggery and I always eat palm gur. Nature has made this product in such a way that it cannot be manufactured in the mills; it is produced in the cottages. Where there are palm trees, there this jaggery can be easily produced. This is the way to banish poverty from the land. This also is an antidote to poverty."

If the palms that are used for making toddy are used for making jaggery, India will never lack sugar and the poor will be able to get good jaggery for very little money.

In Madras and in several other States the industry is organised on a Co-operative basis and it is the endeavour of these co-operatives to secure for the people engaged in it a better return for their labour. Palm gur development has received considerable assistance at the hands of the Central and State Governments. In view of the importance that the industry occupies in the national economy, it is included among the schemes drawn up by the Madras State under the Five-year plan. In 1948, the Government of India undertook to develop the industry and introduced schemes for its development in almost all the States where palm trees are available. They have a Special Officer designated as the Palm Gur Adviser to the Government of India to look after the Development of the industry throughout the Indian Union.

Economics of the Industry.—Palm Gur industry is a decentralised cottage industry. It requires very little capital. "The source of raw material is perennial and does not involve periodical replanting as in the case of sugarcane. The economic unit of palm trees is conveniently limited so that even a

simple family can conduct independently all the necessary operations from the collection of juice to the final conversion of it into gur." Ordinarily a tapper can tap about 25 trees a day and the average quantity of juice collected by him per day is about 200 lb. The quantity of jaggery that can be produced out of this juice is about 25 lb. or 1 maund. This is when the tapping season is in full swing. The following is the approximate cost of production of one maund of jaggery of 25 lb.

RS. A. P.			
Tree rent per day (As. 12 per tree for a season of 120 days)	0	2	6
Pots	0	2	0
Lime	0	1	6
Fuel	1	0	0
Depreciation of implements	0	4	0
Wage of the tapper per day	1	8	0
Boiling charge for a female	0	12	0
Wage of a boy per day	0	8	0
Rent for the shed	0	6	0
Commission for selling	0	8	0
The cost of a maund of 25 lb.	5	4	0

It will be seen that a tapper family will get approximately an income of Rs. 2-12-0 per day which will represent the wages of the tapper and his family.

In Madras State.—Palm gur industry is one of the major cottage industries in Madras State pursued from times immemorial in the rural areas. The State is rich in palm wealth. All the four important varieties in palms, viz., palmyrah, coconut, date and sago which yield sweet sap are available in abundance in the State. It is estimated that there are nearly 158.32 lakhs palmyrah trees, 469.71 lakhs coconut trees, 33.70 lakhs date trees and 2.03 lakhs sago trees. Out of an estimated annual production of 55,000 tons of palm gur in the Indian Union, Madras alone produces about 40,000 tons of palm gur. The Madras State leads the rest of India in the development of the industry.

In recent years the industry has received great stimulus as part of the ameliorative programme connected with Prohibition. While it is recognised that the industry should be developed, it is done at the same time without endangering the policy of Prohibition. The ex-toddy tappers who used to draw toddy in the pre-Prohibition

days now draw sweet juice for jaggery manufacture and for sale as beverage. Co-operative Societies are organized for the benefit of the ex-toddy tappers who are permitted to tap palm trees for sweet juice for jaggery manufacture.

Under the Madras Sweet Toddy Rules only members of co-operative societies are permitted to tap sweet juice for jaggery manufacture. The panchayatdars of the co-operative societies recommend the issue of licences for tapping sweet juice for jaggery manufacture to the members and supervise their activities. The societies issue small loans to their members to carry on the industry. In some places they undertake the sale of jaggery as agents to the members or arrange

	1947-48.
1. Number of Jaggery Manufacturing Co-operative Societies	479
2. Number of members (in lakhs)	0.37
3. Number of licences issued (in lakhs)	0.31
4. Quantity of jaggery produced (in tons)	8,453

Potentialities.—In view of the potentialities of the palm gur industry both as a source of providing employment to the ex-toddy tappers and supplying a nutritive article of food, a scheme for giving Statewide training to the ex-tapper members of jaggery co-operatives in the improved methods of jaggery manufacture was launched about the end of 1949. A special staff of Palm Gur Instructors trained in the Central Palm Gur Training School, Cuddalore, are imparting training to the ex-tappers and conducting demonstrations in suitable centres under the supervision of the State Palm Gur Organiser. The Government of India are meeting half the recurring expenditure on the scheme.

The industry has not only been revived but it is also extended to other areas and developed on up-to-date and scientific lines. The tappers are taught to construct improved furnaces which will result in saving of fuel. The womenfolk who are mainly engaged in boiling the juice are not exposed to smoke and dust. The tappers are trained in the use of improved gur-making equipment such as iron pans, wooden moulds, etc., to improve the quality of jaggery produced.

for its sale through the local or nearby co-operative marketing society. In districts where the production of jaggery is large, separate marketing societies are formed which arrange for the marketing of jaggery produced by the members of the affiliated societies.

Such marketing societies have been formed one in each of the Tirunelveli, Coimbatore, West Godavari, and South Kanara districts. At the end of June 1952, there were 2,115 palm jaggery co-operatives of which 2,034 were for palmyrah, 48 for coconut, 32 for date and 1 for sago jaggery manufacture. The following table shows the progress made by these societies from 1947-1952:—

	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
1. Number of Jaggery Manufacturing Co-operative Societies	479	1,488	1,881	2,017	2,115
2. Number of members (in lakhs)	0.37	1.00	1.49	1.65	1.63
3. Number of licences issued (in lakhs)	0.31	0.76	1.13	1.15	1.25
4. Quantity of jaggery produced (in tons)	8,453	27,813	30,636	40,246	28,364

Training is imparted to them in the several processes involved in the manufacture of jaggery such as application of lime to the pots attached to the trees for collection of sweet juice without getting fermented, washing and cleaning of the pots, various processes of deliming the sweet juice before boiling, etc. The progress made in the training of ex-tappers from 1949-50 is indicated below:—

Year.	Number of training centres.	Number of tappers trained.
1949-50	96	628
1950-51	395	2,703
1951-52	610	4,611
1952-53	247	1,341

(up to 31st December 1952).

Incentives.—In order to create an incentive among the tappers to use improved gur-making equipments and to bring home to them the advantages in the use of such equipment one thousand sets of improved gur-making equipment were supplied free of cost to them during the first year of the scheme. Three hundred and fifteen sets of gur-making equipment were

(Continued on the next page.)

Ameliorative Role of Gur Industry

By SRI A. PALANIAPPA MUDALIAR, M.A., Deputy Commissioner of Prohibition (Amelioration) and Joint Registrar of Co-operative Societies.

In Madras, State the Palm Gur Industry has been in existence from times immemorial. So far as the development of this industry in this State is concerned, it is closely connected with the Prohibition policy of the Government of Madras.

In 1946 one third of the State became dry and in October 1948 the entire Madras State became dry. Consequent on the introduction of Prohibition, one of the problems the Government had to face was to find employment to the ex-toddy tappers. There were 1½ lakhs of persons who were engaged in toddy tapping. It was a human problem of finding work for the ex-toddy tappers. Some had to look up to some line or other to provide them with employment. To me the industry is not so important as the condition of the tappers. We must know whether the industry is really serving a useful purpose from the point of view of the tappers. The easiest method of giving the ex-toddy tappers employment was to allow them to tap palm trees, wherever they were tapping toddy before. There are four types of palm trees in Madras State, i.e., palmyrah, coconut, date

(Continued from the previous page)

supplied to the tapper members of jaggery societies at half cost during the last year.

The manufacture of palatable products from palm jaggery is also encouraged in societies situated near urban areas. The tappers are given training in the manufacture of toffee, sweetmeats, etc., from palm gur. With a view to develop the industry intensively in compact areas, one taluk in each district is allotted to a Palm Gur Instructor and he is required to concentrate attention on the manufacture of improved gur in a few select societies in the taluk and for the maximum production of gur in the other societies. It is also proposed to introduce the manufacture of white sugar from sweet juice of palm trees with the aid of a centrifugal machine.

and sago palms. Government permitted these trees to be tapped. The concessions, however, should not affect the Prohibition Policy of Government and it was therefore necessary to secure local support and enthusiasm for the Prohibition reform. For the successful enforcement of Prohibition, we wanted some assurances from the tappers that they would not misuse the neera. The best thing was to form a committee elected by the members after organising jaggery manufacturing co-operative societies for ex-tappers. A co-operative society is formed consisting of ex-toddy tappers generally about 25 in number. On the recommendation of the panchayat, licences are issued to the members. These societies are generally formed in areas where there is abundance of palm trees. Licences are issued to the tappers by the officers of the Co-operative Department on the recommendation of the panchayat. The ex-toddy tappers are required to pay a small share capital, either Rs. 5 or Re. 1 each. The tappers make their own arrangements to purchase the necessary tools and equipment and tap about 25 trees a day. The members produce jaggery on their own account either in the topes or cottages. The whole family is at work during the tapping season. The men tap the trees and the womenfolk are engaged in the conversion of the juice into jaggery. The jaggery produced is sold by the member himself or through the nearest marketing society. The society maintains necessary registers to show the production of jaggery and the members are also supplied with pass books in which are recorded the quantities of jaggery delivered to the society for sale. The members are also encouraged to contribute towards thrift deposit. The management of the societies vests in the hands of elected panchayatdars who recommend the issue of licences to tappers to tap sweet juice for jaggery manufacture and who generally supervise the activities of the tappers. In Madras State there are about 2,200 Jaggery Manufacturing Co-operative Societies, with a

membership of nearly 1½ lakhs, and their share capital is about 8½ lakhs. They sold nearly a crore of rupees worth of jaggery in 1951-52. What is the advantage to the tappers in forming these societies? Is it only to issue licence? That is not their entire work.

They assist the members in several other ways. Small loans are given to the members for purchase of equipment for production of jaggery. During 1951-52 a sum of Rs. 2.92 lakhs was given as loans to members in this way. The societies also undertake extra credit activities such as supply of food grains, dairying, etc., for the benefit of their members, besides arranging for the marketing of the members' jaggery either independently or through the nearest co-operative sale society. The members are taught improved methods of production and given technical assistance for effecting economy in the cost of production of jaggery and for improving the quality of the jaggery produced. The jaggery societies consist of only poor persons, with very limited means. They get in normal days Rs. 2 for the entire family per day. Generally, the societies cannot therefore be expected to embark on new activities. The tappers themselves require assistance in various ways like the provision of equipment, loans for production purposes, etc. With the help of the subsidy provided by the Government of India, gur-making equipments were supplied to about 1,000 tappers free of cost two years back. Last year, the equipment was supplied at half cost to an extent of about Rs. 9,000. If the tappers find it difficult to go in for equipment such as iron pans, iron gratings, juice containers, etc., it is necessary that they should be given a subsidy to purchase them. They cannot undertake new enterprises such as conversion of palm juice into sugar and manufacture of palatable products without financial help. An attempt is being made in the State to introduce the manufacture of white sugar from palm juice in select areas. But everywhere the societies are confronted with

To Bring Prosperity to the Countryside

The manufacture of gur and sugar from palm is a very old industry in our country, going back perhaps to thousands of years. It was, however, fast decaying for want of proper realization of the utility of the products, when in 1936 Mahatma Gandhi emphasized the economic potentialities of these and showed how the exploitation of palm trees for the production of gur and sugar not only helps in producing nutritious food but also serves as a source of livelihood for our village-folk.

I am happy that this industry gets very necessary stimulus by being made a part of the ameliorative programme connected with Prohibition in our State. The impetus given by the Government to toddy tappers on the introduction of prohibition, to tap sweet juice from palm trees for the manufacture of jaggery with which toddy tappers have always been very familiar, is of practical value to persons concerned. It is my earnest hope that our jaggery manufacturing co-operative societies will be able to expand their activities, and bring prosperity to the countryside.

It behoves us all to help in the good work of enhancing the scope of this village industry and bringing prosperity to the countryside.

SRI PRAKASA,
Governor of Madras.

the difficulty for finding funds both for capital expenses and for recurring expenses. Co-operative Central Banks are hesitating to give loans to the societies as ex-toddy tappers cannot offer sufficient security for the loans. The only alternative is for Government to step in either by giving loans to the tappers or by guaranteeing the funds that may be lent by the Co-operative Central Banks to these palm jaggery societies.

The Central palm Gur Training School, Cuddalore, I understand, is conducting experiments for the preservation of jaggery and also studying methods which would lessen the cost of production of jaggery. Whatever improvements are suggested to the tappers, they should be inexpensive and within the reach of the tappers who are engaged in this industry. If as a result of deliberations at the palm gur workers conference, technical improvements are suggested which would reduce the cost of production, they will be quite welcome. The tapper should be assured of a better return for the jaggery. Co-operative Societies market the jaggery produced by the tappers. During 1951-52, nearly 1/4 of the jaggery produced was marketed by the Co-operative organisations. But there is the problem of storage. In the Rural Agricultural credit societies, godowns are constructed for food-grains to be stored. Similarly there are godowns to store cane jaggery in

East Godavari District. Suitable godowns should be put up for storing palm gur in necessary places for selling them at a favourable time. Co-operative Societies thus provide a most suitable medium for improving the economic condition of the tappers who are engaged in the industry.

While palm gur is an important article of food and the encouragement of palm gur will release large areas at present under sugarcane cultivation, the elevation of the economic condition of the tappers is as important if not more, than the development of the industry itself.

Discovery of the Age

Palm Gur in its refined form is a discovery of the age. In our boyhood, we used to see basketfuls of Palm Gur, tending to be liquid and being the resort of flies in the markets. But the refined Palm Gur today invites consumption more as a variety of sweets than as gur and the flavour that it has of the Palm leaf adds to its attractiveness. Even the sugarcane gur is not always inviting except when it is highly refined and gets the real sugarcane flavour. In the West Coast, they prepare coconut gur which has the coconut aroma.

In fact, it is not generally known that all sweets are the same except for the individualisation of each by the aroma with which it is associated. This can be experimented by closing your nose and eating sugar, gur of different kinds, mango juice or any other sweet. You can distinguish one from the other only by your eyes and not by the taste because the taste is all one-sweet, the basic taste, there being only four basic tastes, sweet, bitter, salt and sour.

A regular study of the Palm Gur Magazine published under the auspices of the Government of India makes most interesting reading. I wish it would be more widely read than it perhaps is. I am unable to say which I like better,—the gur or the magazine. I hope the gur will become widely popular.

B. PATTABHI SITARAMAYYA,
Governor of Madhya Pradesh.

Perennial Fountain of Wealth

By SRI GAJANAN NAIK, Palm Gur Adviser to the Government of India.

The Palm Gur Industry had to pass through various critical phases. The die-hard orthodox would condemn the use of palm gur on religious grounds while the die-hard prohibitionists would insist for tabooing palm gur for ensuring the thorough observation of the prohibition laws. Before the introduction of prohibition the propagation of palm gur was subjected to rigorous control only for safeguarding excise revenue. When the prohibition campaign was started the die-hard prohibitionists being unaware of the great economic potentialities of the palms launched a campaign for destroying the palm trees. Had this policy prevailed, the country would have suffered a great irreparable loss.

Ameliorative Measure

The foundation of the continuity and the recent development of the palm gur industry in areas under prohibition was laid down by Sri Rajagopalachari when he introduced prohibition for the first time in India in 1937 in Salem District. As the first Premier of Madras he had incorporated the propagation of palm gur as an important ameliorative measure in rehabilitating the ex-toddy tappers rendered unemployed as a result of the introduction of prohibition. The immense and important value of this bold step taken by Sri Rajaji while introducing prohibition in Madras

State had not, unfortunately, been fully realised.

Rust into Gold

Palm Gur is like rust converted into gold. By changing the form of what is normally an injurious beverage, the Palm Gur Workers of India had, under Mahatma Gandhi's inspiration, launched a great scheme which has its economic, social and health aspects. One feels happy to see that the devotion of the Palm Gur Workers is being rewarded with increasing success.

JAIRAMDAS DOULATRAM,
Governor of Assam.

The Palm Gur Industry would have ceased to exist and no further development would have been attempted had Rajaji not given to the industry the rightful place in the prohibition drive. A new avenue of development of the industry was thrown open by him. The other sister States drew inspiration from Madras and adopted the palm gur industry as an important ameliorative activity for the benefit of the tappers in the prohibition areas even in places where it was quite unknown before. Taking an average

annual production of 40,000 tons of gur in the Madras State since the introduction of complete prohibition and its value at a flat rate of Rs. 500 per ton, the circulation of money as wages to the tappers would be about Rs. 160 lakhs per annum.

Earning of Tappers

At this rate the wages earned by the tappers till the end of 1953 would be Rs. 6 crore and 40 lakhs. About one and a half lakhs tapper families have earned this amount. He was not merely satisfied with permitting the tapping of palms for the production of gur. He insisted on the formation of Co-operative Societies by the tappers. The result is that Madras is leading not only in palm gur production but has built up a splendid co-operative organisation with enviable records.

We the younger palm gur development protagonists and all the palm gur producers especially in the prohibition areas throughout the country owe a great debt to Rajaji for the Great Good Turn he has done to the palm gur industry by incorporating it in the prohibition programme in Salem in 1937. He has ensured a perennial fountain of wealth and avenue of employment to our poverty-stricken brothers and sisters in the villages. Rajaji will be ever remembered as a great patron of palm gur.

God's Gifts to Man

The Government of India have commended at various conferences the progress made in the Madras State in the development of the industry. They have decided to set up a Palm Gur Research Laboratory in the Madras State and steps are being taken to locate it at Cuddalore.

Everything in the world can be used well or misused and prostituted. The date and the palmyra trees are gifts of God to man. We can use them well even as we misused them and made intoxicating toddy out of them. The numerous good uses to which we can put the leaves of all the palm trees are well-known. Old palmyra trees are very good timber. The jaggery made from the date and palmyra trees is an excellent energy-giving article of diet, in many respects preferred by doctors and others who know to, white sugar.

The value of fermented toddy in the shape of income is not a reality but the mere product of a taxation measure. In itself it is worthless. Jaggery is all food and if we increase the production and the use of palm jaggery, we can get all the sugar that we require from these trees which look after themselves, and then we can use more of food irrigated land for producing rice without putting it as we now do under sugarcane cultivation to the detriment of rice production.

C. RAJAGOPALACHARI,
Chief Minister.

equipment purchased by the ex-tappers. Arrangements were made with the Strathie Co-operative Engineering Workshop to manufacture the equipment and three hundred and fifteen sets of gur making equipment were supplied to the members of jaggery societies on a subsidised basis.

Training in the manufacture of white sugar from palm juice.—With a view to impart training to the ex-tappers in the manufacture of white sugar from palm juice and palatable products from palm jaggery and thereby augment their income, the Palm Gur Instructors were given training in the Central Palm Gur Training School, Cuddalore in November last in the manufacture of white sugar from the sweet juice of palm trees with the aid of a centrifugal machine and manufacture palatable products like toffees, sweetmeats, confectionery, etc., from palm sugar. The possibilities of starting the industry in select societies is being examined with reference to the financial resources, etc.

Experimental centres for intensive production of gur.—In 1951 two centres were run for the intensive production of palm jaggery and for the collection of precise data about the economics of the industry, one at Doddaghatta in the Anantapur district for date jaggery and the other at Rochemanagaram in the Tirunelveli district for palmyrah jaggery. Government sanctioned the necessary staff and funds. The scheme was undertaken at the instance of the Government of India who subsidised 50 per cent of the cost. The tappers employed in the centres were given interest-free Government loans at Rs. 100 each to meet initial expenses in connection with the manufacture of

Should Receive Every Encouragement

Palm Gur Industry is a very valuable industry and it should receive every encouragement by all Pradesh Governments in our country.

I wish every success to the 5th Session of the All-India Palm Gur Workers' Conference to be held in Madras State.

SHAMBU NATH SHUKLA,
Chief Minister of
Vindhya Pradesh.

Need to put life into New Movement

The country ide of India virtually in all the States abound in the palmyra species of trees. With the chronic under-employment to which our rural people are subjected today, the development of Palm Gur Industry will not only tap the wealth of nature now going completely waste, but will add vital nutrients to our diet which the children and the old alike need for life. It will also serve to ease under-employment to a measure much more than we can foresee now.

I wish that the Conference proposed for this vital rural industry does succeed in putting life into the new movement. More than any other agency, the Community Projects Administration both at the Centre as also in the States will look forward to a revitalisation of this sector in our economy.

S. K. DEY,
Community Projects Administrator.

jaggery such as tree rent, purchase of pots, tapping tools, etc.

The entire loan was recovered from the sale proceeds of jaggery supplied by them. The tappers were supplied with gur making equipment free of cost and improved furnaces were constructed with Government subsidy. The chemicals required were purchased by the centres and supplied to the tappers at cost price.

Production.

The tappers manufactured jaggery on their own account with these aids and facilities and the jaggery was purchased by the centres and sold on Government account. At the two centres 772 imperial maunds of palmyrah jaggery and 365 maunds of date jaggery were produced during the period (February 1951 to October 1951). The working of the two centres revealed that the cost of production of palmyrah jaggery worked out at Rs. 420-8-0 per ton at the beginning of the season, Rs. 325 per ton during the middle of the season and Rs. 379-8-0 per ton at the end of the season. In the case of date jaggery the cost of production worked out to Rs. 385-7-0 per ton.

The State Palm Gur Organiser or the Deputy Palm Gur Organiser accompanied by a tapper have been attending the annual Refresher training courses for the Palm Gur workers conducted by the Government of India and the All-India Palm Gur Workers' Conferences. The results of the experiments conducted and improvements effected in the technique of the industry are being recommended to the jaggery

producers in the State for implementation. Samples of palm gur products, tapping tools, gur making equipments, charts, etc., were displayed in the exhibitions held along with the conference.

Do You Know?

The production of kharif foodgrains in India has increased by a little over 4 million tons in 1952-53 over the previous year. Of this the increase in the States of Orissa, Bihar, Punjab and Rajasthan totals 3.15 million tons.

Out of Rs. 800 crores worth of monetary transactions handled by the Indian Posts and Telegraphs in 1951-52, the loss through theft, negligence, etc., was Rs. 4,31,000 only.

Indian production of soap by organised units of the industry rose from 83,500 tons in 1951 to 85,000 tons in 1952.

During 1953-54 India will spend a little over Rs. 42 lakhs on locust control.

As against 400,000 acres under poppy cultivation in India during 1922-23, there were only 81,600 acres under this crop last year.

The Government of India sold or leased to private agencies in Delhi, 4,451 house sites during 1952-53.

The Indian co-operative movement includes 173,000 societies with a membership of 12 million people and a working capital of Rs. 235 crores.

The Indian Dead Letter Office received 12,890 parcels during 1952.

Background to the Scheme

Our principal object in this new effort is to prevent pupils from becoming physically and mentally incapable of productive activity because of their schooling. For this purpose:

(1) The burden of long school hours will be reduced.

(2) Pupils will have one half of each day free to remain with their families and participate in their work in and outside the home.

(3) For children of families who do not work with their hands arrangements will be made for some work in the village or in the school.

(4) Arrangements will be made for organised social work by the pupils.

(5) Wherever possible, a village school committee will be constituted.

There will however be no reduction in the time allotted for the study of the Language, Elementary Mathematics, History and Geography, Hygiene,

and Civics and moral instruction. They will thus receive the same academic instruction as before to be eligible to join the First Form.

According to the statistics of the year 1950-51, there were 7,982,214 children (3,978,618 boys and 4,003,566 girls) of the age group 6 to 12. Of these, only 4,068,720 (2,596,638 boys and 1,472,082 girls) were in schools. The total number of schools were 33,040 (including 2,599 Higher Elementary schools); 1,830 were managed by Government, 14,760 by District Boards, 1,064 by Panchayats, 1,455 by Municipalities and 18,931 by private managements.

Of these 33,040 schools, 6,256 schools were in urban areas with 1,091,276 pupils and 45,439 teachers; these will not for the present come under the new scheme. The following are the particulars with regard to the remaining 31,784 schools that will come under the new scheme:

	Management.			Total.
	Government.	Local Board.	Private.	
	1,762	14,501	15,521	31,784
Number of pupils	117,418	1,349,273	1,470,536	2,937,277
Number of teachers	3,561	37,539	51,068	92,168

Inspecting Officers have been asked to collect various particulars required for introducing the modified scheme. We have received so far particulars for 26,681 schools coming under the scheme. It may be noted the total number of such schools will be larger than 31,784 which was the figure for 1950-51.

In the year 1952-53, there were 2,365,315 pupils (1,677,931 boys and 687,384 girls) in the 26,681 schools about which particulars have been received. For 687,384 girls no special arrangements need be made as they will occupy themselves in their homes. Of the 1,677,913 boys, 1,489,117 belong to occupational families and only 188,814 to non-occupational families; the percentage of boys of non-occupa-

tional families to the total is 11. Going by the reports so far received and subject to a further check, out of these 26,681 schools, all the boys in 15,808 schools belong to occupational families and will work with their families.

Arrangements have to be made in 10,873 schools for providing work for a certain number of boys who do not belong to occupational families. Out of these 10,873 schools, it has been reported that for 0.819 schools there are available 26,918 farmers and 18,914 craftsmen. We have the names of these farmers and craftsmen and these are willing to help in the successful working of the scheme. For 54 schools, however, it is reported that no craftsmen are available.

Students in Community Projects

The students reading in the Colleges at Madurai and Tiruchy during their vacation at Sholavandan formed an Association and named it "Community Volunteers Association" under the guidance of the Assistant Project Officer, Sholavandan.

On May 4, 1953, the social work was inaugurated under the presidency of Sri N. Karuppa Pillai, President of the Village Panchayat Board. The students closed the insanitary pits, swept the cheri streets and dug soak pits. They are continuing the social work by contacting every householder individually and inducing them to take interest in Community sanitation. The students are also conducting an Adult Education Class.



Students at work on a drainage in the Madurai Community project area.



Students co-operating with the villagers in sanitary work.

Palm Gur Industry and Prohibition

One of the Chief measures undertaken in the Madras State towards the rehabilitation of ex-toddy tappers under the ameliorative programme connected with prohibition is the organisation of palm-jaggery co-operatives. The manufacture of jaggery from the tap juice of palmyrah trees is an industry with which the ex-toddy tappers were already familiar in the pre-prohibition days. Government's policy is to permit the manufacture of jaggery from the sweet toddy of palm trees under the auspices of co-operative societies specially formed for the purpose. Recent amendments to the Madras Sweet Toddy Rules permit the members of jaggery manufacturing co-operative societies to manufacture sugar, sugar-candy and other such products besides jaggery.

The development of palm gur industry is however limited to the extent to which it does not encourage the evasion of the Prohibition laws of the State. The concession to tap palm trees for jaggery manufacture was withdrawn in the Rayalaseema districts in the year 1950 but on repeated representations of the ex-tappers in the Rayalaseema districts, Government have permitted the formation of a jaggery co-operative society in a select area in each of the Anantapur, Cuddapah and Kurnool districts. In view of the adverse seasonal conditions, Government have restored the concession to tap date and palmyrah trees in the Chittoor district for the manufacture of jaggery. Government have not granted the concession to the Bellary district. Even in certain other districts, the concession was suspended for a time when there were abuses on a large scale.

Subsequently, on representations from the ex-tappers, Government have restored the concession in select areas. The issue of licences for tapping sweet toddy for jaggery manufacture is necessarily related to the Prohibition policy of the Government and their renewal is permitted only in consultation with the Prohibition (Enforcement) staff and with reference to the experience of working of the concession during the previous tapping season.

Working of Co-operatives.

There were 2,115 palm jaggery societies in the State on 30th June 1952

with 1.63 lakhs members of whom 1.58 lakhs were ex-toddy tappers. Their paid-up share capital amounted to Rs. 8.46 lakhs. During the co-operative year ended 30th June 1952, 1.25 lakhs licences were given to the members of the societies for tapping palm trees for jaggery manufacture. Of these, 1.17 lakhs were for tapping

Jaggery produced.	Palmyra.	Coconut.	Date.	Sago.	Total.
Quantity in lakhs of maunds of 25 lb. each	23.05	2.21	0.02	0.08	25.36
Value (rupees in lakhs)	78.86	11.95	0.11	0.34	91.26

The societies provide their members with small loans to meet their expenses in connection with the manufacture of jaggery. During the year, they issued a sum of Rs. 2.92 lakhs as loans and a sum of Rs. 3.45 lakhs were outstanding at the end of the year.

Wherever possible the societies undertook the marketing of palm

palmyra trees, 7,174 for coconut trees, 306 for date trees and 279 for sago. The number of palm trees tapped during the year was 35.28 lakhs. The quantity and value of palm jaggery produced by the members of the jaggery societies during the year were as follows :—

	Quantity.	Value (rupees in lakhs).
Through jaggery societies ..	5.03 lakhs maunds	23.84
Through marketing societies.	42,927 maunds	1.44

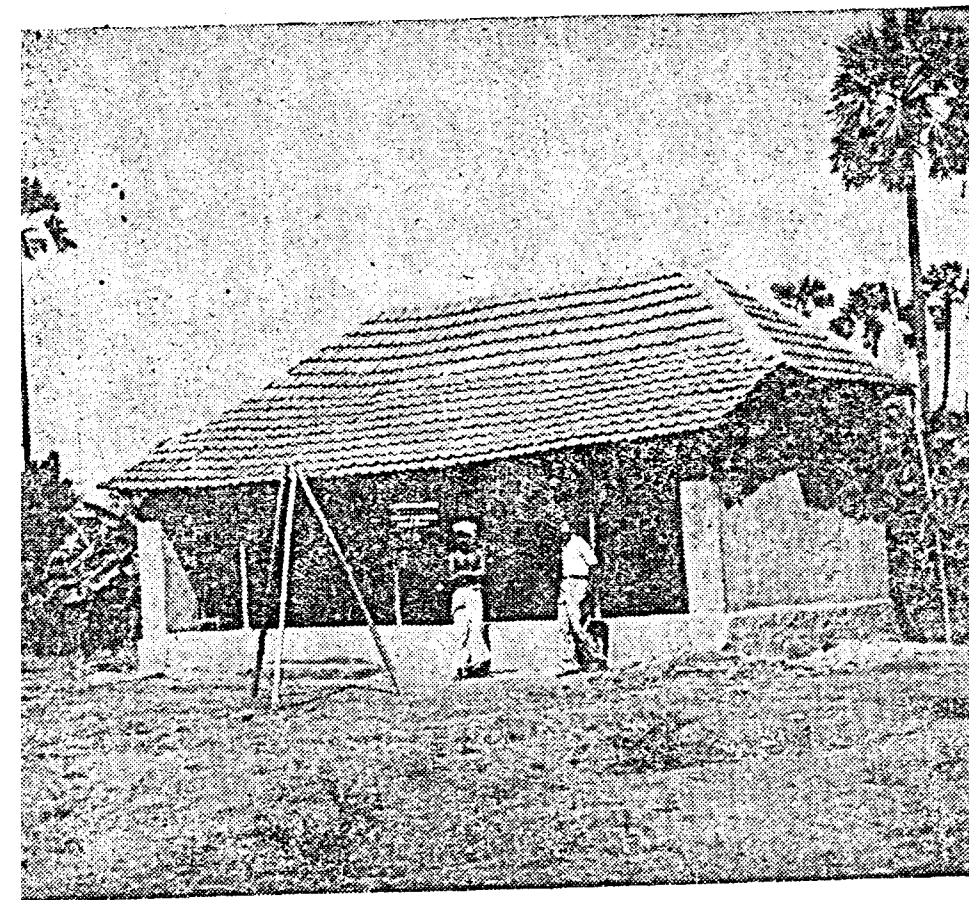
Palm jaggery marketing societies have been formed in the Tirunelveli, South Kanara, Coimbatore and West Godavari districts for the purpose of marketing palm jaggery on a co-operative basis. The Tirunelveli

jaggery produced by their members in order to enable the tappers to eliminate the middlemen. Nearly one-fourth of the jaggery produced by the members during the year was marketed in this way. The quantity and value of palm jaggery sold through primary jaggery societies and through marketing societies are as shown below :—

	Tirunelveli District Jaggery Loan and Sale Society.	Kunnathur Co-operative Jaggery Marketing Society.
Quantity of jaggery purchased up to 31-3-1953 ..	13,461 maunds	3,160 maunds.
Value	Rs. 87,157	Rs. 17,734
Quantity of jaggery sold ..	14,877 maunds	3,160 maunds.
Value	Rs. 99,647	Rs. 17,919

A special staff of 102 Senior Inspectors and 102 peons is entrusted with the work connected with the organisation and supervision of jaggery manufacturing co-operative societies. Most of the Senior Inspectors were given a month's training at the Central Palm Gur Training School, Cuddalore, so as to enable them to guide the ex-tapper members of the societies in the manufacture of palm jaggery. Besides organisation and supervision of the jaggery societies, they attend to the issue of licences to the members for

tapping palm trees for the manufacture of jaggery, assist the societies in the maintenance of accounts and marketing jaggery, etc., ensure that all the sweet toddy drawn by the members is converted into jaggery and that no abuse of the concession takes place, verify whether the jaggery produced by the members is according to the standard prescribed, report cases of abuse of the concessions to the authorities concerned and see that the panchayat-dars and members of the Jaggery societies work the concession well.



Palm Gur godown in Tirunelveli District.

In 1949, the State Palm Gur Organiser was appointed to guide and assist the members of jaggery co-operatives in the manufacture of jaggery on improved lines. Improvement in the technique of the industry.—In view of the potentialities of the Palm Gur Industry both as a source of providing employment to the ex-tappers and supplying a very nutritive article of food, a scheme for giving State-wide training to the ex-tapper members of jaggery manufacturing societies in the improved methods of manufacturing palm jaggery and for introducing the industry in areas where the tappers were not quite familiar with it, was launched in December 1949.

The Government of India are meeting 50 per cent of the recurring expenditure on the scheme.

Training.

With a view to impart the necessary training to the tapper members of jaggery societies in the improved method of manufacturing palm jaggery, palm gur instructors were recruited and trained in the Central Palm Gur

Training School, Cuddalore. There are now 29 palm gur instructors who attend to the training of the ex-tappers in the improved technique of production of jaggery. A Deputy Palm Gur Organiser with headquarters at Eluru is

supervising the work of the Palm Gur Instructors in the Andhra districts, while in the Tamil districts the work is supervised by the Palm Gur Organiser.

The training comprises construction of improved furnaces with a view to reduce fuel consumption, application of lime in due proportion to the pots for collection of sweet toddy, to prevent alcoholic fermentation, washing and cleaning the pots, various processes of deliming the sweet liquid before heating and the using of improved iron pans. Besides training selected ex-tapper members in the improved methods, the Palm Gur Instructors conduct demonstrations of the various processes in the villages.

The tappers have begun to realise the benefits of the improved methods and are able to make better jaggery at a less cost. The women-folk who attend to the boiling of the juice appreciate the improved method on account of the benefits conferred, viz., economy in the consumption of fuel and elimination of smoke.

Improved Implements.

In order to create an incentive among the tappers to use improved gur making equipment and to bring home to them the advantages in the use of such equipment, 10,000 sets of improved gur making equipment were distributed free of cost to them in the first instance. During 1952-53 Government provided a sum of Rs. 10,000 to be disbursed as subsidy towards 50 per cent of the cost of gur making

Necessary for General Uplift of the Country

Having achieved Independence, the problem before the country is to raise the living standard of the general mass of the people. This rests entirely on finding gainful employment for all and on production of more wealth. Though heavy industry has a very important role to play in this direction, it cannot by itself solve this problem. The growth and expansion of the cottage industry is very necessary for the general uplift of the country. Palm Gur Industry has occupied an important place amidst our ancient cottage industries and its development would also assist in our drive for food self-sufficiency programme.

I am glad that the All-India Palm Gur Workers' Conference will be holding its Session in Madras in the month of May 1953. I wish this Conference all success.

GOVIND VALLABH PANT,

Chief Minister of Uttar Pradesh.

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whatever else it may also provide for.

Misplaced Emphasis.

But instead of this, the system of education prevailing now treats less of things than of the names of things, the written figures and pictures of things more than of the things themselves. To repeat the words correctly is everything. And this is intrinsically so difficult when isolated from the things themselves. In proportion as there is attention to the names, signs, symbols and representations, there must be inattention to the things signified. The attention of a child is not an unlimited quantity, on which you can make an overdraft. The result is that the words become all important and the meaning of things is not grasped.

If knowledge is to be a permanent and true acquisition, it must be earned by experience, by contact with physical things, by error and failure as much as by success, by damage and injury as much as by safe and successful practice. 'Easy come easy go', is a saying as applicable to knowledge as to wealth. Rules learned from mere instruction are bound to be forgotten and learnt again and again; when reached by experience they become enduring possessions.

Senses Neglected.

The education of the senses is not only neglected, but is effectively and physically prevented by long class room

Adviser for New Scheme

Sri G. Ramachandran, Director, Gandhigram, has been appointed as Educational Adviser to the Government for Elementary Education. He will advise the Government on all matters relating to the modified scheme of Elementary Education, 1953, and the Basic Education Scheme. He will also tour in the State and give advice, guidance and instructions for the implementation of the schemes and for popularizing them among the teachers and the public.

imprisonment in the earliest period of life. The social elevation of the process draws an increasing number of children into the fatal pool of damage. As a result, all education partakes of a drowsiness, a haziness, an insufficiency, which it is impossible to cure.

The truths about number and form and the laws of space were all originally drawn from actual objects; and to present these truths to the child in the concrete is to let him learn them as the human race learnt them. If he is made to learn them, i.e., to repeat them as abstractions, the abstractions can have no meaning for him, until long afterwards he finds that they are simply concise statements of what he later by himself discerned from concrete things. Most of us know how exhilarated we feel in middle-age or even later about the rules of grammar and arithmetic and geometry, which we had as children simply got by rote or something equivalent to it. This is the exhilaration of a reverse discovery as when a boy or girl finds his long-lost parents by an accident.

Value of object-Lessons.

The teachers will tell me, Oh, yes; we have object-lessons in schools. Your principle is being kept in mind, it is nothing new. Yes, there are object-lessons. To tell a child this and to show that to the other. But this is not to teach it how to observe, but to make it a mere recipient of arranged things and other people's observations. Object-lessons should not only be carried on in the school-premises, but should be extended to a range of things far wider, and continued to a period far later, than now and of things in their natural order and disorder. They should include the fields and the gardens and all the activities going on in the countryside.

Any piece of knowledge which the pupil has himself acquired becomes, by virtue of the conquest, much more thoroughly his than it could else be. The preliminary activity of mind which his success implies, the concentration of thought necessary to it, and the excitement consequent on his triumph, conspire to register the facts in his understanding and memory in a way that mere information heard from a teacher, or read in a school-book cannot carry with it.

Reasoning.

Only after an ample fund of observations has been accumulated, should

reasoning begin. Every study should have a previous concerted introduction. Children should be led to make their own investigations, and to draw their own inferences. They should be TOLD as little as possible. Humanity has progressed solely by self-instruction. To achieve the best results, each individual mind must progress somewhat after the same fashion. This is continually proved by the marked success of self-made men.

We who have been brought up under the ordinary school-drill, and have carried away with us the idea that education is practicable only in that style, think it hopeless to make children their own teachers by leaving them to go about and learn. If we rightly estimate the amount of out-of-school wisdom, which every boy gathers for himself—if we mark the unusual intelligence of the uncared-for street GAMIN, as shown in whatever directions his faculties have been tasked—we shall find that the need for perpetual telling and teaching results from our own stupidity, not from the child's. We drag it away from the facts in which it is interested, and which it is actively assimilating of itself. We put before it facts far too summarised for it to understand; and therefore distasteful to it.

Passive recipients.

Finding that it will not voluntarily acquire these facts, we thrust them into its mind by force of threats and punishment, non-promotion, disgrace, creating competition and jealousy among one another and the like. In most of the victims we produce a morbid state of mind and damaged faculties and disgust for knowledge in general. We make a bright intelligence into a mere passive recipient of instruction and then succeeding in this melancholy task we infer that education must necessarily be carried on thus. Having by our method induced helplessness, we make the helplessness a reason for our method.

Now all that I have said so far, believe me, is not my invention or composition, but almost word by word from one of the most eminent of the world's men: Herbert Spencer, whom you all revere.

Spirit of Enterprise.

The new scheme is based on a desire to give greater effect to these firmly established principles of

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education. But I know you have many fears. 'Allow me a little pause here. When I look back and contemplate on the recent past, on the confidence, courage almost amounting to intrepidity that marked the radically revolutionary movements initiated 35 years ago when I was not so young as may be imagined but had already done 18 years of busy work at the bar, enough to give all the commonsense and all the fear and worldly wisdom one may want, when I recall the enthusiasm with which men received those ideas, out of which our freedom has come, and I reflect on the present-day hesitation and fear and *Status Quoism* that we meet with when any far-reaching proposal for social, economic, occupational or educational reform is recommended, I am filled with sadness—'Oh!' let us first experiment in a few places; Oh, we don't know what may happen; Oh, we should not do this; it may cause this, it may cause that, etc.'"

What has happened to us? Just when the spirit of enterprise is most wanted, we seem to have lost it. "Oh, we may go naked if we hurt the textile factories" "Oh what shall we do for money if we close the toddy shops" "Oh, we cannot antagonise this section or that section", "Let us wait. Let us go slow, let us try not to plunge into the unknown, etc., etc." These are the present-day reactions to any call for enterprise and adventure. Let us cast this fear aside. Let us have courage to do, to err and recall if necessary and thereby progress. Let us not cling to the disastrous pillar of 'risk nothing and do nothing'. That is not the brave way to progress. Do not put things off. Procrastination is the thief of progress. "THAT we would do, we should do when we would, for this word "would" changes and has abatements and delays as many as there are tongues, are hands, are accidents", so said the King in *Hamlet*. And truly, as Shakespeare so often does.

Timidity Deplored.

Whenever there is a chance we vie with one another in saying that the education we have been giving to our children is not satisfactory. Indeed I may claim that I am more appreciative than most others as to what is being done in our schools and colleges, as in so many other fields of national effort. Others condemn more

and appreciate even less than I do. Yet when I propose something I hear the objection:—"Oh, it is a risky move. We don't know what may happen". So, let us go on ruining our children, they demand. I deplore this more than I deplored foreign rule. It is not an exaggeration. There is more misfortune in this than there was in that. Because, this saps life and, in a continual process, destroys the very roots of hope and progress by attacking the intelligence and spiritual power of coming generations, thereby making freedom futile.

I have learnt and got confirmed in a few things in my long and intimate association with Gandhiji. Among them is this one: that we should drop the stupidities of the middle-class and find nobility in manual work and learn to appreciate the intelligence of the unlettered. Manual work is not to be a symbol of your condescension, or a skilfully devised indirect channel for our old friend the manipulation of written symbols called learning or knowledge, entitling a man thereafter to remain idle and consider himself big, an asset to the country. Manual work, real solid work, should be regarded as something useful for society and as something in which you are made to see that you are distinctly inferior to others to whom a lower place than yours is wrongly given in the social hierarchy.

Social Humility.

Work teaches social humility, besides giving the basic material on which instruction in science can thereafter be given and true knowledge founded with stability and advantage. Work is moral education and it gives concrete knowledge. School instruction now is the art of manipulating time-saving symbols to gamble for a position for yourself in society. I do not grudge the gamble, but I want to eliminate the mistake of thinking that the said school instruction is everything. We can create an administrative machine built entirely round school instruction and then of course it is easy to prove it is essential and the only essential.

I know from bitter experience how our official machine breaks down most miserably, when Government has to handle stores or run a workshop or a transport or a business in grains or cloth or steel or cement. People are apt to attribute the failure to all sorts of

things and live on arguments freely founded on some exceptions. But the disease is traceable to the wrong early education, the habits formed in childhood, which persist through life and which characterise those who man Government Departments.

Cheerful Schooling.

I am convinced that the proposed changes will make our children take to schools more cheerfully and also enable them to learn better the very things which the conservative middle-class parent wants the child to learn. I am clear in my mind that we are imprisoning the pupils too long in the class room. I feel this so strongly that I would be content if I simply got you all to agree to cutting down the school-hours even if nothing else be possible. There is much hard work to be done before the positive part of the changes can be brought into effective shape and become a part of normal education. But all that cannot be done and completed before-hand for us to begin when everything is ready. Changes cannot be organised that way in a vast country.

I have no doubt we have done well in our State in the field of elementary education. We have had wise and capable officers in our Education Department who have done very good work. We have perhaps a record better than that in many other States in India. It is just because so much

Conference Held

A Conference of the Inspecting Officers of the Education Department was held on the 1st, 2nd and 3rd June 1953 in the Legislative Council Hall, Fort St. George. On the first day the Presidents of District Boards also attended the Conference and matters relating to the implementation of the modified scheme of Elementary Education were discussed. The Conference was inaugurated by Dr. M. V. Krishna Rao, Minister for Education. Sri C. Rajagopalachari, Chief Minister, also addressed the Conference.

Aduthurai Sets an Example

By SRI M. S. SIVARAMAN, I.C.S., Director of Agriculture.

Some of you might have wondered why a Farmers' Day should be held right in the midst of summer in the Tanjore Delta when normally you expect no crop and all that you see in the fallow fields are the lingering paddy stubbles and the deep cracks in the soil. But I am sure that those of you who have gone round this station will now realise that the celebration today is not just midsummer madness: but an attempt to demonstrate that fallow periods need not and should not exist in any proper system of cultivation of delta lands.

Two years ago when I visited the farm in June 1951, an area of less than two acres was under experimental cultivation of cotton, and in the remaining areas Wild Indigo (Kolingi) was found here and there and the village cattle were roaming in large numbers. But in two years the Superintendent has transformed the agricultural picture of this Station by adopting the following three measures:—

(i) Protecting the farm against cattle trespass by planting Kiluvai.

(ii) developing supplies of green manure from 60 tons to 180 tons and of composts from 83 tons to 120 tons a year; and *

(iii) by putting up filter points to help the early preparation of kuruvai nursery and the irrigation of a summer crop of cotton.

Double Crop Area Raised.

As a result the double crop area in this farm has been raised from 16 acres to 32 acres, the summer cultivated area from one acre to 25 acres; the farm income has gone up from Rs. 26,300 in 1949-50 to Rs. 45,500 in 1951-52 at pre-control rates for paddy and the yield of the thaladi or second crop of paddy has risen from an average of 2,000 lb. prior to 1949-50 to over 3,500 lb. in 1951-52 and nearly 4,000 lb. in

(From the Welcome speech by Sri M. S. Sivaraman, I.C.S., Director of Agriculture, at the Fourth Farmers' Day at Aduthurai.

1952-53. The total output of paddy has gone up from 1.07 lakhs of lb. in 1948-49 to 2.33 lakhs in 1952-53. In addition, the farm has grown over 17 acres of superior cotton 216 F which will yield about 1,200 lb. of seed cotton and a net profit of over Rs. 400 an acre and provide employment to agricultural labour during the idle period in summer.

The agricultural transformation of this farm is an accomplished fact and if it is a forerunner to what will happen

elsewhere, there is no need to take a gloomy picture of the future of the country. In two years' time, we have doubled the yield of the thaladi and the total output of paddy and also raised an extra crop of cotton on lands that have already grown two crops of paddy in the year. Both land and labour have been kept busy all the year round.

The Aduthurai Model.

What has been accomplished in this farm can be accomplished equally well on every acre of irrigated paddy in India. It is not as if Aduthurai is in a particularly fortunate situation. We had the same difficulties of inadequate supply of manures and irrigation for a system of all-the-year round farming but we have surmounted them with a very small extra expenditure and it is possible to do the same in nearly eight million acres of irrigated paddy in the State. There is abundant supply of sub-soil water and all that is required is a concerted effort to tap it. With a view to indicate that this is possible, the Government have sanctioned a pilot scheme for the installation of 600 filter points in 12 districts in the State and I am grateful to Sardar Datar Singh who took personal interest in the matter to get the scheme sanctioned by the Government of India.

All those who have gone round the farm could not but be impressed by the tremendous output of green manure in this farm by raising Glyricidia along paths and bunds and Sesbania speciosa along the margins of fields and on a field scale in six acres. Two years ago Sesbania speciosa was planted in the margins of 20,000 acres in the State and last year the Department planted in two lakhs of acres and we have programmed to develop it in two million acres this year. Grown along the margins of the paddy fields along with paddy Sesbania speciosa helps us to successfully solve the hitherto insoluble problems of cattle trespass, inadequate irrigation and paucity of seed supplies which kept down the area under green manure.

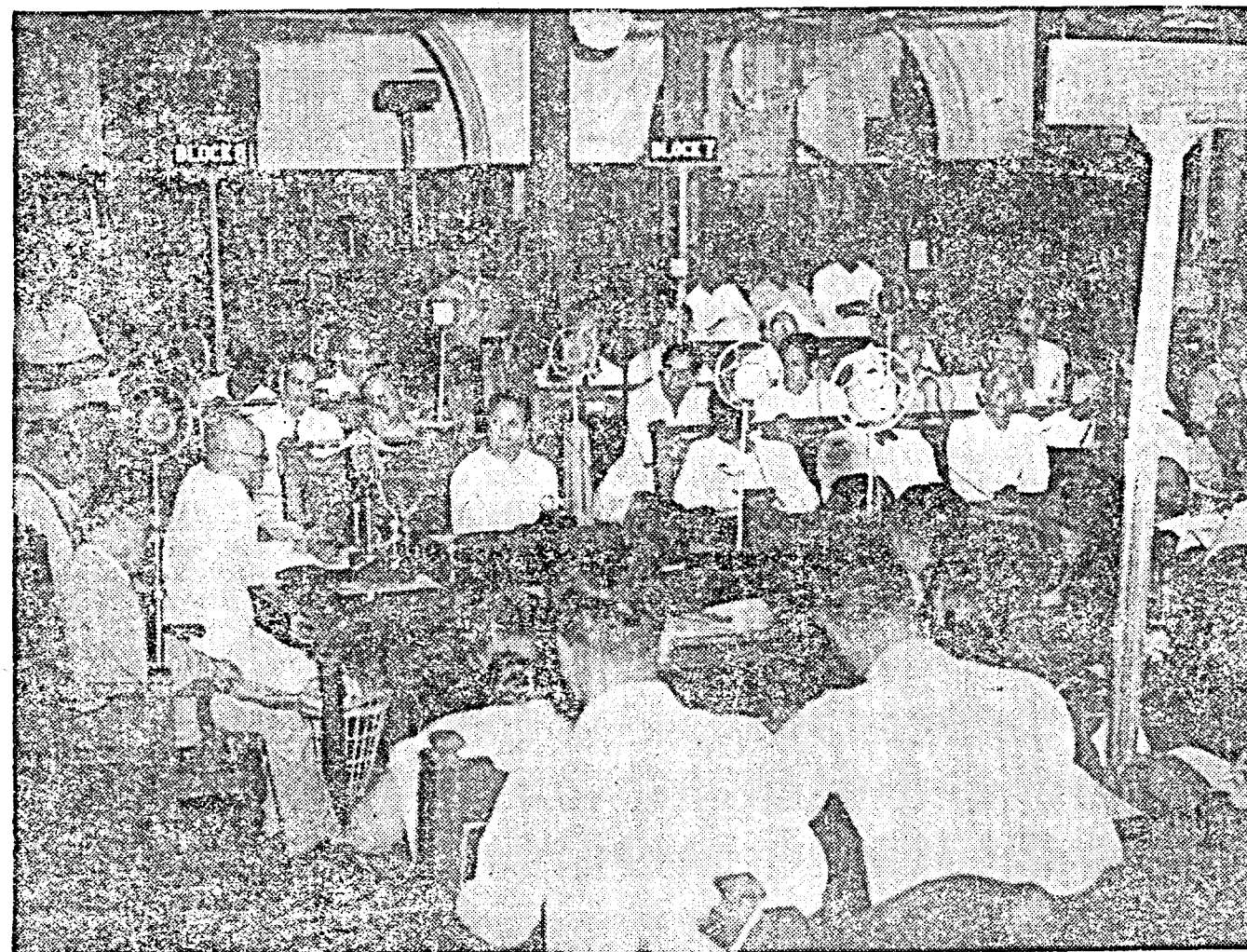
The marginal plantation gives us enough manure for the next crop and nearly 60 lb. of seeds per acre. If 50 lb. of sesbania seeds collected before

Reduction in Price of Ammonium Sulphate

The release price of Ammonium Sulphate to the distributing agencies in the State has been reduced from Rs. 410 per ton f.o.r. Madras to Rs. 335 per ton f.o.r. Madras. The commission payable to the distributing agencies has also been reduced so that as a result the consumer's price of Ammonium Sulphate will be brought down by nearly Rs. 8 per bag. The exact price will be published at each depot.

The Madras Government have also decided to import an additional quantity of 44 000 tons of Ammonium Sulphate in 1953 which, with the existing stock, is expected to meet fully the needs of agriculturists for intensive manuring and also any increased demands to cover new areas. Ryots who desire to purchase fertilisers are advised to contact the nearest depot of the distributing agency (private firm or co-operative society) and secure their requirements.

The Government trust that the agriculturists will take this opportunity to keep adequate stocks of fertilisers for the coming manuring season and that they will endeavour to achieve a substantial increase in food production during the current year.



Sri C. Rajagopalachari, Chief Minister, addressing the Conference of Inspecting Officers of the Education Department held in the first week of June in the Legislative Council Hall, Fort St. George.

True Knowledge from Manual Work Chief Minister Commends New Scheme in Elementary Education

By SRI C. RAJAGOPALACHARI, Chief Minister of Madras State.

We are none of us content with quietly unfolding our own individualities to the full in all directions. We have a restless craving to impress our individualities upon others and to subordinate them. To get above as many as possible and be revered by them and to propitiate those who are above us, this is the struggle in

which all the energies of life are expended. Naturally this determines the character of our education. So it has come to this: The consideration is, not what knowledge is of most real worth, but what will bring most applause, honour, respect: what will most conduce to social position and influence, not what is truly valuable to society, but what will be most imposing. Real utility is ignored or grossly undervalued in practice even if allowed the name of importance in academic discussion.

Leaving out a small number of people whose places cannot provide room for

all those for whom we have conceived universal free elementary education, what are all men employed in? They are employed in the production, preparation and distribution of commodities. We want greater volume and better quality in all this in order to achieve greater prosperity. We want efficiency. And on what does efficiency in the production, preparation and distribution of commodities depend? It depends on education fitted to provide men with an adequate acquaintance with these processes. Elementary universal education should therefore provide opportunities for such direct experience,

From the Address by Sri C. Rajagopalachari, Chief Minister, at the Conference of the District Educational Officers, held at the Madras Secretariat, Fort St. George.

good work has been done already that I gather the courage to propose that we should now do better. You have all heard what the Minister for Education and the Director of Public Instruction said about the steps taken to effect the changes now proposed. His enthusiasm fills me with hope that the whole department will take up the new work with equal earnestness. I am aware that in the minds of even those who have given support to my new scheme there are fears and misgivings regarding the details of the procedure to be laid down for implementing the proposals. We shall do everything possible from time to time to overcome difficulties.

Closer to Life.

What I have proposed is, I think, in line with the laws of nature and of peaceful and regulated social development. The school day must be reduced to half and during the other half the children should be thrown into the lap of the family and the home and the work which sustains the family and the village. I wish to bring the school closer to the home and the village and to the life of the people in the midst of which the school is set. The school should not be treated as a separate world with which the home has nothing to do except supplying the pupils.

The school should be made an integral part of the village life as the villagers know it. Is this a dangerous proposal? Under the supervision of the Headmaster and with the co-operation of the parents and all those engaged in various types of productive and useful work in the village, the children who are released from the class rooms for half the day will have an opportunity to observe and understand and in their own little but significant way share in the life and work of the village. I want on the one hand to release children from the strain of whole-day schooling and on the other I want to see that the children so released run away to do something or other which will be pleasurable and also useful to them and the village.

Better Understanding.

This will bring a little more joy into the hearts of our children and there-through increase their capacity to understand better and actually to learn more than they now do in the schools. Today the children go less and less smart as they grow in

years in schools. The more our children are educated the less they are inclined to do any work with their limbs. The more they are educated the further they run away from the villages. All of us are agreed that the villages should be improved.

But can we do that by giving them an education which fills them with incompetency and aversion for village life? How can we improve the villages through a system of education which makes every growing boy and girl feel that the best way to better their conditions is to run away from the village as soon as they grow up? Life in the village can be sustained only by bodily labour. In our schools children are made to develop aversion to bodily labour. You might ask me why then I do not propose to apply the new scheme to the towns first. If you ask me that question I feel you have not understood my proposals. It is the village people who are running away to the towns.

Source of the Trouble.

It is therefore at the very source of the trouble that steps should be taken to correct the situation. If we improve the village schools the town schools can be brought into the line tomorrow. The majority of the people are in the villages and therefore the majority of the children are also there. If the new scheme is worked well in the villages the town schools will certainly be brought into the picture a little later.

If my proposals are intrinsically good and educationally sound, then those who have the good of the villages at heart may not raise the question why they are sought to be implemented in the villages earlier than in the towns. Some people seem to think that it is wicked to give to the villages what is very good, earlier than to the towns. Town people have really less capacity to understand what is beneficent for the whole country by reason of their habits and outlook.

Healthier and Happier.

It is thought the changes are drastic but really they are in the direction of more gentleness towards our children. When anything is done in a particular way for a long time, even good and wise people come to think that any change is drastic. We must release ourselves from such inhibitions. What I have proposed is simple, natural and

good. What are the good results we want? We want our children to be healthier and happier. We want them to benefit by the instruction given in the schools. More than all we want them to develop a robust love for all good and useful work.

Let no one make the mistake of thinking that I want the children between the ages of five and twelve to produce furniture or go to a blacksmith and produce first-class metal implements or go to a farm and increase paddy or cholam production. I know what little children can do and what they cannot. What I want is that our children should learn to associate themselves slowly, and without any strain, in all productive and useful work going on around them. Let us not stress the distinction between productive and unproductive work. All useful work in the village is productive of some good or other. Sanitation is as productive as farming or carpentry or pottery.

Speaking of pottery my mind is filled with wonder at what a child can learn standing near a potter's wheel. Nothing can fascinate children more than to watch the quick and beautiful emergence of variegated shapes and moulds under the fingers of the potter. Any child watching the process will be filled with ecstatic joy and it is from such wonder and joy that all learning and craftsmanship arise. I would love to have a potter attached to as many schools as possible. If such a one is not available in the village let us bring one into the village. The cost to be incurred in this connection will be nothing compared to the gain.

More learning, not less.

The fear has been expressed that the children will learn less in arithmetic, geography, history, language, etc., if the class hours are reduced to three. This is due to a complete misunderstanding of the present position and what is sought to be achieved. Apart from the fact that it can be mathematically shown that the hours given to the study of these subjects are not substantially reduced, the chief point to remember is that when children are rescued from too many hours in the class room, they will naturally come to the study of these subjects during the hours now proposed with a fresher and keener mind. Even if it can be shown that there may be difficulties and shortcomings in the

positive part of the proposed scheme, the one thing that cannot be urged is that children will learn the scholastic subjects less efficiently.

I have not the slightest doubt that the children will learn these subjects better under the new arrangement. We have now taken up Basic education on a fairly large scale in our State and you know we have naturally exempted Basic schools from the scope of the new scheme, because these Basic schools are already trying to do what is now proposed for the non-Basic schools. I have no doubt that if the new scheme is implemented it would make the spread of Basic education much easier. I therefore expect all those who care for Basic Education to give their wholehearted and energetic support to the new scheme.

Increasing Attendance.

Again the scheme will definitely open the way to bring in more children into the schools. All attempts at increasing attendance in the schools have failed because working parents think school-going is above their financial position. They cannot afford to send their children to schools for the whole day. The new scheme will help to create the conditions which will enable the parents cheerfully and without the feeling of loss or sacrifice to send their children to the schools.

If we assure the parents that their children will get full instruction in the half-day and that for the rest of the day they will be available to help in various little ways in the home and with the family, there will be a wave of joy in the minds of the parents that the education of children has been made easier. It is not as if some of the children in the village, the lucky ones, are given longer tuition and the poor folk's children are given tuition for lesser hours. The entire school system is reduced to what suits the poor folk, and without any detriment to anybody.

Easier Arrangements.

A majority of our village schools have only one or two teachers even where there are three or four classes. That means poor total pupil strength and an insufficient number of teachers handling too many classes. This is really scandalous if it is widespread and I am informed it is widespread. Under the new arrangement this can be

Scholarships for 1953-54

Residential and Non-residential scholarships are granted by the Harijan Welfare Department to pupils belonging to Scheduled Castes, Scheduled Tribes and other eligible communities (studying in Standards IV to VIII in Elementary and Basic Schools, Classes IV and above in the Secondary Schools and to the students studying in College classes). Scholarships are also granted to students belonging to such communities, who take up professional, commercial, and industrial courses of studies. Members of the Backward Classes studying in Arts and Professional Colleges and those taking up commercial and industrial courses of studies are also eligible for these scholarships.

Applications for scholarships for 1953-54 should be sent in the prescribed form through the heads of institutions to the Director of Harijan Welfare, 27, Halls Road, Egmore, Madras-8, or to the District Collectors concerned, as the case may be, on or before July 15, 1953, or within 15 days after the admission of the students in the institutions. The grant of scholarships is governed by the rules published on pages 637 to 646 of Part II of the *Fort St. George Gazette*, dated May 20, 1953, and subject to availability of funds.

remedied. It is easier for two or three teachers to handle even five classes under the new arrangements than to handle all of them simultaneously as at present. We shall now have more children and more efficient teaching.

In a big change-over in regard to educational methods on a State-wide scale, it is certain there would be many difficulties to overcome. We shall certainly deal with all such difficulties. But there should be difficulties in the way of those who are eager to implement the scheme. You should all sit together and study all the various implications of the new scheme.

Far-reaching Effect.

We have in this State introduced many important reforms and measures. We have dealt with such difficult things as temple-entry, closing down of all toddy and arrack-shops, de-control, etc. No one would have let us do them if we had organised consultations and debates. The disputes and controversies would have effectively smothered the ideas and no reforms would have emerged, neither the opening of the temples to the Harijans nor Prohibition nor de-control. I feel that the new scheme of elementary education will be an achievement not less important. It will affect the whole of education and the life of all our children. The consequences will be far-reaching. Please therefore help me in this difficult task.

I am not unaware of the difficulty in changing things especially in the field of education. There are two if not three generations of men directly concerned in schools. An idea must be accepted by those who have to execute it before any reform can hope for success. There are ambitions and fears of all kinds.

More than that, there is the training and equipment of a previous generation who are teachers and there is the greatest of all difficulties, the momentum lodged in the mechanism of educational organisations which presents a very great contrary force against any new idea. Very often new ideas are accepted but old ideas continue to operate with only changed names. I hope therefore you will all put your best efforts in this task of nation rebuilding.

Facts and Figures

The total concealed income discovered by the Income-tax Investigation Commission and by voluntary disclosures during 1952-53 totalled Rs. 20.54 crores.

The total despatches of sugar for the first four months of the current year are 5.55 lakhs tons as against 4.15 lakhs tons during the corresponding period last year.

Production of bicycle tyres in India increased from 3,941,238 tyres in 1951 to 4,137,800 tyres in 1952.

India still has 21 privately-owned railway lines with a total mileage of 1,033.74 miles valued at approximately Rs. 734 lakhs.

Glorious Enterprise for Children and Teachers

By Dr. M. V. KRISHNA RAO, Minister for Education.

We are on the eve of the new academic year. All the elementary schools in our State are opening this week. Many of you may be aware that the Government have decided to introduce certain changes in the present scheme of Elementary Education in our State which are considered momentous and of great significance to the future of Education, not only in our State but in our country. I shall try very briefly, to place before you in broad outline, the features of the New Elementary Education Scheme and to clarify some of the points of doubt and difficulty that have been brought to my notice in the course of conferences and consultations.

What is this new scheme? The answer is utterly simple. School hours for little children in the first five grades of the elementary schools are reduced from five to three hours per day. The school session a child is required to attend in the day is only either in the morning or in the afternoon. During the other half of the day, the children will be thrown back into the lap of the family and the village to play, to observe and to learn to do such simple items of work which a child of the particular age group can do easily and pleasantly.

The principal object of the new effort is to prevent pupils from becoming physically and mentally incapable of productive activity because of their schooling and to give full scope for the development of their intelligence and skill, while allowing them ample opportunity and freedom for play. The reform will be introduced to cover almost the entire number of elementary schools in the State in all villages including major panchayats. Elementary schools in municipal towns alone will not be covered this year. In about 35,000 schools, as against the total number of 38,000 schools in the State, this new scheme will be in operation from now on. This scheme is intended to be extended to municipal areas also as early as possible.

Long Hours Reduced.

The school hours till now consisted of three hours in the morning and two hours in the afternoon, and the working week consisted of 5½ days. Hereafter for every pupil there will be only three working hours per day either in the morning or afternoon alternately. There will be six working days in the week instead of 5½ but the total number of working days in the year will be as hitherto 220. The first obvious good feature of the scheme is that the burden of long school hours will be reduced.

The children attending the lower elementary schools are generally of the age-group 6—11, too full of energy and thirst for activity. It is not conducive either to their mental or physical development to confine such children of tender age to the class-room, more often crowded than not, for long hours without giving them sufficient opportunities for free play and learning from his actual environment. Pupils will have one half of each day free to remain with their families and participate in their work in the house, field or elsewhere according to their age.

Work and Play.

Headmasters with the help of parents and village farmers and craftsmen will arrange how best the free part of the day outside the class-room may be utilised for play and easy items of work. There will be special arrangements made for children of families who do not work with their hands, either by being attached to farms or village craft workshops taking into consideration their age. In some cases arrangements will be made in the school itself to absorb those pupils who may not be so attached, either to their families or others in the village.

It will thus be seen that the confinement in school has been considerably reduced and the time thus released will be utilised for work and play. The half-day devoted to school instruction is found by the Educational Officers in the State to be quite

enough to cover the teaching of the subjects hitherto covered by school instruction, namely, Language, Elementary Mathematics, History, Geography, Hygiene and Civics. The same syllabus and same number of periods will be assigned for each of these subjects. Pupils will have enough instruction in these subjects to enable them at the end of the usual period to join the I Form of a secondary school.

The only change will be that items like Nature Study, Gardening and Craft will be done realistically in the natural environment of the village. All pupils will go through the scheme without distinction as to the nature of the families to which they belong. Thus the fear which has been expressed that the new scheme, by reducing the hours of formal instruction, will lower the standard of knowledge of the children is not founded on facts. Basic schools which have their own scheme of work are not touched by this new scheme. They will carry on as hitherto.

Rational Arrangement.

This scheme will enable more rational arrangement to be made for the teachers to do their work. At present one teacher is often in charge of more than one class at the same time and throughout the day. Hereafter he will be enabled to concentrate on one class in the morning and another in the afternoon. Although one teacher is allotted for 20 pupils as per the rules for aided elementary schools, the strength of the school and the classes is such that one teacher has had to attend to more than one class. There are five classes in elementary schools and it is only in a small number that each class has a teacher of its own.

In most of the schools for the five classes there are only two or three teachers. This has always been felt to be a bad arrangement. Under the new scheme this evil is considerably, if not entirely, eliminated. Where there is the full strength of teachers

for the classes each class will be divided into two sections attending alternately in the morning and afternoon.

Relief to Teachers.

There is also a misapprehension that the new scheme will result in retrenchment of teachers. Let me assure teachers that no retrenchment is contemplated. But, on the other hand, the direct result of the change will be reduction of the number of pupils to be handled by a teacher at a time and where there is under-staffing there will be lesser number of classes to handle at a time. This will mean immediate relief to the teacher who is often strained to the utmost. The number of students per teacher being less, each will receive more individual attention.

On the average hereafter each teacher will have a reduced number of pupils at a time, thus enabling him to expand the strength of the classes almost to double, without any detriment to attention paid to the pupils. Particulars received in the office of the Director show that all the boys in as many as 16,000 schools belong to occupational families and will therefore work with their families under the new scheme. For other schools, it has been reported that there are available 27,000 farmers and 19,000 craftsmen whose names have been registered for the accommodation of pupils who do not belong to occupational families.

Greater Activity Envisaged.

Some critics raise the objection that it is wrong to put these young children between the ages of six and twelve to work. They forget that what actually was being done until now, is to keep them confined in the school-house for five hours every day, whereas under the new scheme they will be in school to receive scholastic instruction for three hours and during the rest of the period which was formerly devoted to the class-room they will be free to work or to play.

It is not intended to make the out-of-school curriculum too rigid or organised without due consideration of the age of the pupil. The sponsors of the scheme are really particular that instructional school hours should be reduced from five dreary hours to three hours of greater activity. It is not considered good to keep pupils

confined in schools without adequate attention being paid to them which was the result of having two or three teachers in schools with five classes. There will be no need for any retrenchment of teachers by reason of the reduction of the two sessions of school work to only one, because it is anticipated that there will be an increase of strength in each school.

Doubling the Potential.

The scheme thus provides for considerable increase of strength of pupils almost doubling the potential. Further, families which are unable on account of their having to work hard to make both ends meet, will be enabled to release children up to the age of twelve to go to school either in the morning or in the afternoon only, without detriment to their family work and occupation. This broadly is the new scheme.

There were 7,982,214 children (3,978,648 boys and 4,003,566 girls) of the age group 6—12 in 1950-1951 in our State. Of these only 4,068,720 (2,596,638 boys and 1,472,082 girls) were in schools. Thus only 47.8 per cent of the children of the school-going age have been brought under instruction. This is an extremely unsatisfactory position to-day. Even among these school-going children it is a well-known fact that there is considerable amount of wastage prevailing in our elementary schools.

Lasting Benefits.

The old scheme was planned in such a manner that any child that completed the Standard V course would become a literate. What happens actually in our schools? Out of 1,222,775 pupils enrolled in Standard I in 1946-47, only 461,686 reached the Standard V in 1950-51. In other words only 37.8 per cent of the pupils completed lower elementary course. Thus it is only a small percentage of those children admitted into Standard I that go up to the last stage, namely, the Standard V of the elementary school.

What happens to the rest? Most of them drop out of the schools before they come up to Standard V and become literate. Is it not obvious that the effort and the public funds spent on such pupils are really waste as there is no return whatever of any lasting benefit for them?

Combating Wastage.

It has been realised that occupations in which the services of children are required at home for a part of the day may be one of the causes of their withdrawal from school. The conditions of class teaching may also influence wastage. Many tender children who are subjected to its rigors attempt with some amount of success to escape altogether from the school. These increase the wastage. The poor economic condition of many classes of people make it impossible for them to get their children even through a full elementary course of education. The parent sends the little urchin to school between the fifth and seventh year when he is supposed to be a nuisance at home and takes him away as soon as he can be a little useful at home.

This has been recognised as a major factor in the enormous wastage of which every educationist in India has been complaining for decades. The scheme of compulsion has been largely a failure in our country for these very reasons. Over and above all these difficulties, is the major factor of lack of finance. We are spending in our own State seven crores and odd from State funds and two crores and odd from other sources annually on Elementary Education out of a total of 12 crores spent on Education, the expenditure on Education being nearly 20 per cent of the total Budget. Our ideal has been to give a school for every village or group of villages with over 500 population. But we have still about 4,000 villages without schools. We are not able to expand Elementary Education as we ardently wish.

Full Blossoming.

So, we have been faced with the problem of inducing as many children as possible to come to schools where they exist, and to start new schools in unserved areas. The financial resources of the country are conditioned by an all-round economic development in the country. Two concrete proposals to reduce the cost of the programme to a level where it would be within the financial competence of the nation have held the field in our country for the last 15 years. One is the doctrine of part-time instruction propounded by Sri R. V. Parulekar and the plan of Basic Education by Mahatma Gandhi.

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MADRAS INFORMATION

Our own Chief Minister, Sri Rajaji, one of our most eminent thinkers on Education, has advocated for many years with great conviction that apart from the negative side of part-time instruction, there is a positive wonderful possibility of developing and utilising the free half of the day to guide our children to a full blossoming of their personality, providing for all-round development of their mental, physical and moral capacities, and skill. A stage has come in our country after freedom, when we have to adopt and implement a programme in the immediate future on these lines.

Advantages Recounted.

Now I will recount the advantages of the reduction of school hours :

(1) It will enable poor parents to send their children to school without much disturbance to the work which the children are required to do for the family.

(2) A reduction of school session to 3 hours a day and adjustment of school hours to local conditions will promote the expansion of Elementary Education and the beneficial results which are supposed to accrue from compulsion but which are not actually realised, may be secured in large measure by this method.

(3) It will bring to school many a child that is staying out to-day, because the working hours of school are unsuitable.

(4) Three hours formal instruction per day is quite enough at the primary stage.

The quality and the quantity of instruction will improve in single-teacher schools. The five long hours of education do not mean better education, but only an endless boredom to the pupils in single-teacher schools. The shortening of the school session will make the school more pleasant to the children. If the total session is reduced to 3 hours a day and the school hours suitably adjusted, the economic causes of wastage will cease to operate and the extent of waste greatly reduced.

A Pledge Redeemed.

(5) Lastly the reduction of school hours will increase the pupil-teacher

ratio and lead to a substantial reduction in the cost per pupil and make a programme of universal education financially feasible. Our Constituent Assembly which succeeded the foreign Government as Sovereign power in India declared in Article 45 of the Constitution that "the State shall endeavour to provide, within a period of 10 years from the commencement of this Constitution, for free and Compulsory Education for all children until they complete the age of 14 years".

Here a solemn promise has been given to our people. We have to endeavour to make Education universal but we have to give the right direction at the start and build on sound and healthy foundations. The universalization of Basic Education free for all children between 7 and 14 as adumbrated by Mahatmaji is the accepted policy of the Government and Basic Education should centre round some form of productive manual work and all the other abilities to be developed or training to be given should, as far as possible, be integrally related to the central handicraft.

This will lead to a concert of "hand, head and heart" by developing the manual, intellectual and emotional capacities of the child in perfect harmony with each other, leading to the education of the whole man. It is remarkable that it is the very people who objected and still object to Basic Education—some of them calling it sweated child labour who are now too critical and sceptical about the usefulness and soundness of the new scheme. But to all those who value and believe in Basic Education, let me promise that the new scheme of Elementary Education will fully create the proper climate for Basic Education and pave the way for its expansion.

Double Blessing.

To-day Basic Education has to move up against the force of a contradictory educational current. Tomorrow in the context of the new scheme, Basic Education will appear natural and it will develop rapidly in a favourable environment. We have thus a double blessing on our hands, i.e., a thing good in itself and a thing helping the growth

of another which we have already accepted as excellent. It is not as though everything will be perfect as soon as the new changes are introduced. Not at all! Let us be sure that the changes are fundamentally in the right direction. As we work we shall find what the difficulties are and what our errors are. We shall face the difficulty and correct the errors. An *a priori* rejection will not take us anywhere.

It is in this spirit that I appeal to the parents and the teachers to look at the new scheme and help in working it. A heavy responsibility rests on all those concerned in the educational line. A great scheme with potentialities of great good is in their hands. It is their privilege and duty now to implement it. They cannot do so, unless they make it their own in truth and in spirit. They must plunge into the work with the zeal of a missionary, particularly the teachers in the elementary schools. It is not that I am unaware of their difficulties, but if they work the scheme devotedly they will find they have at the same time created conditions for their own betterment. I have no doubt on that score.

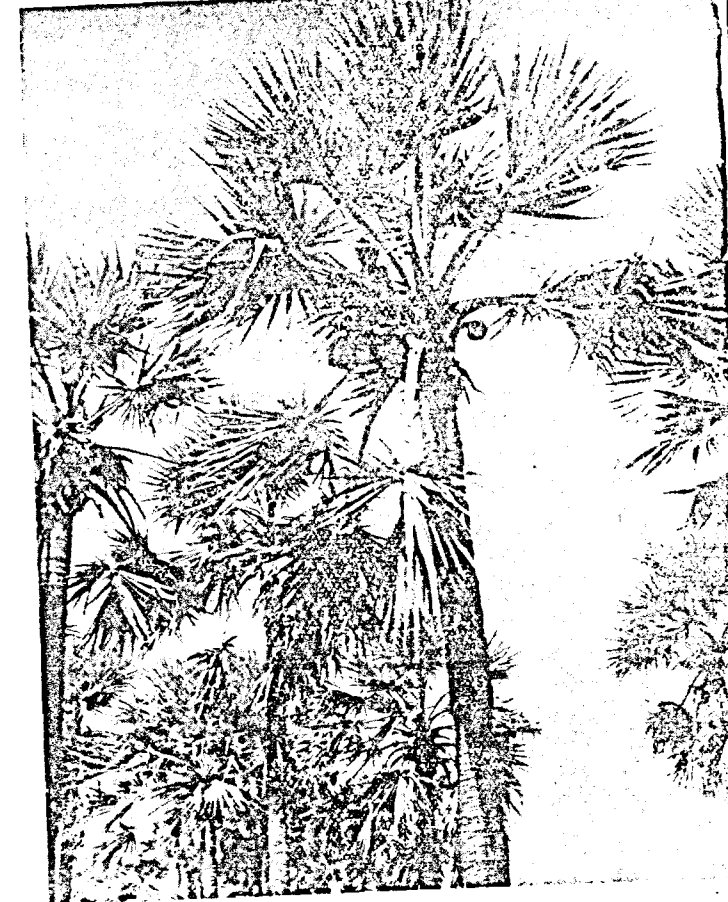
Glorious Enterprise

Some friends have urged that the principle of this scheme should be applied to the secondary and collegiate stage. I have not the least doubt that the principle could be applied to the lower secondary and even secondary stage. But before one could run, one should walk, and there is need for creating the necessary congenial atmosphere and spade work has to be done. I consider this a great and glorious enterprise in which the children and their teachers and their parents are participants. I am sure that they will stand together and thus better the conditions and work for each other.

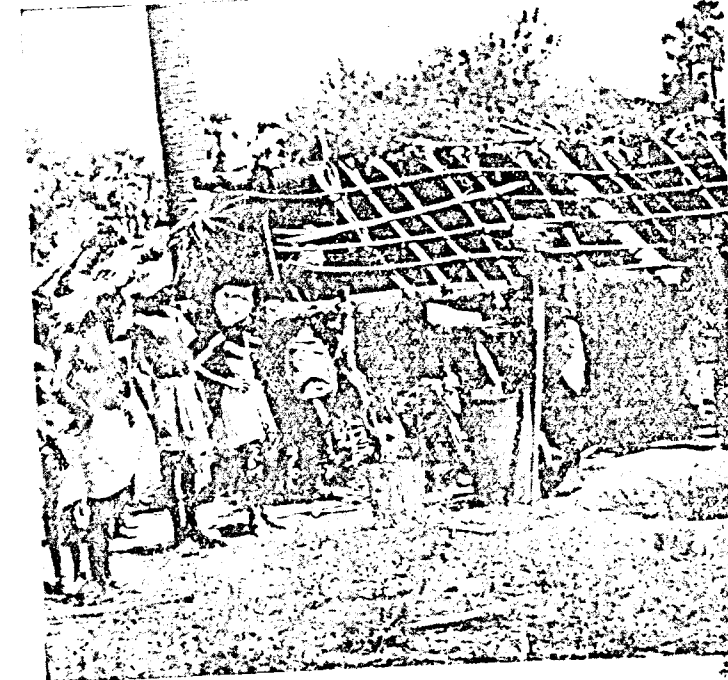
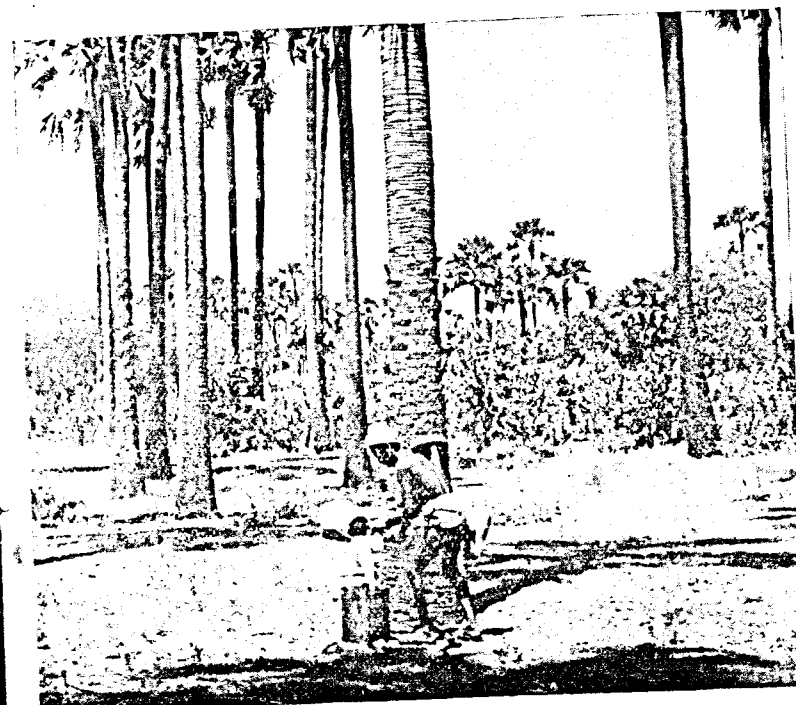
The promise is rich; darkened, of course, by difficulties and doubts which prudence entertains but faith ignores. "Prudence is passive, while Faith is active and it leads its votary steadily on, bringing the goal nearer with every forward step."

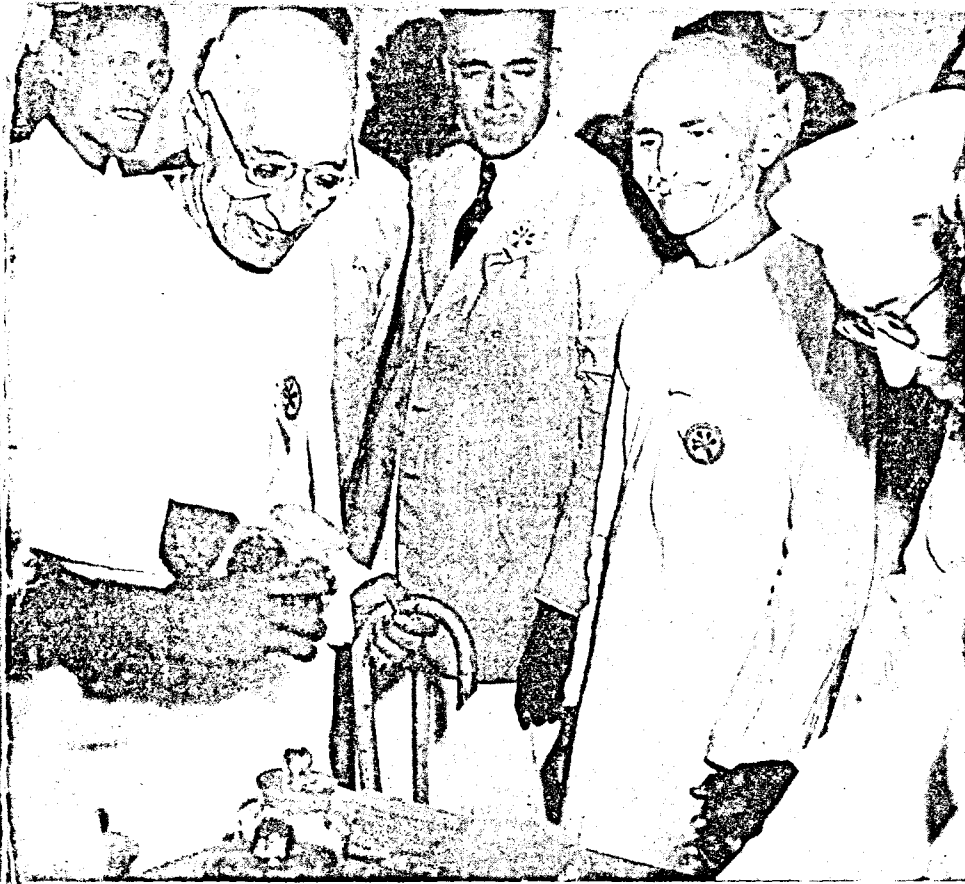
(A.I.R., Madras.)

PALM GUR PROCESS—I. TAPPING THE TREE



The tapper sharpens his knife (top left), then selects his tree, climbs it, and makes an incision to get at the palm juice (top right). The tapped fluid is then collected from the tree and poured into tins (bottom left), and taken to the palm gur processing shed (bottom right).





ALL-INDIA PALM GUR WORKERS' CONFERENCE AT TUTICORIN

The Fifth Session of the All-India Palm Gur Workers' Conference was held at Tuticorin from June 10 to June 13, 1953. Sri C. Rajagopalachari, Chief Minister, inaugurated the Conference. The object of the Conference is to co-ordinate the activities of palm gur workers all over India and to devise ways and means for speedy and sound development of the palm gur industry.

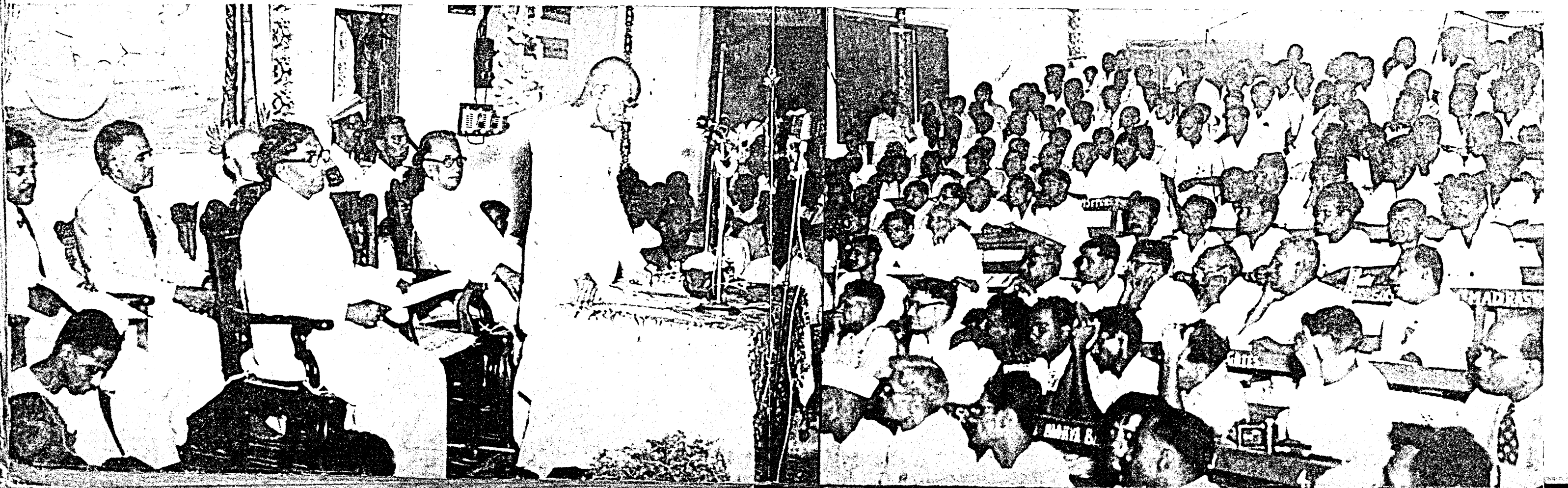
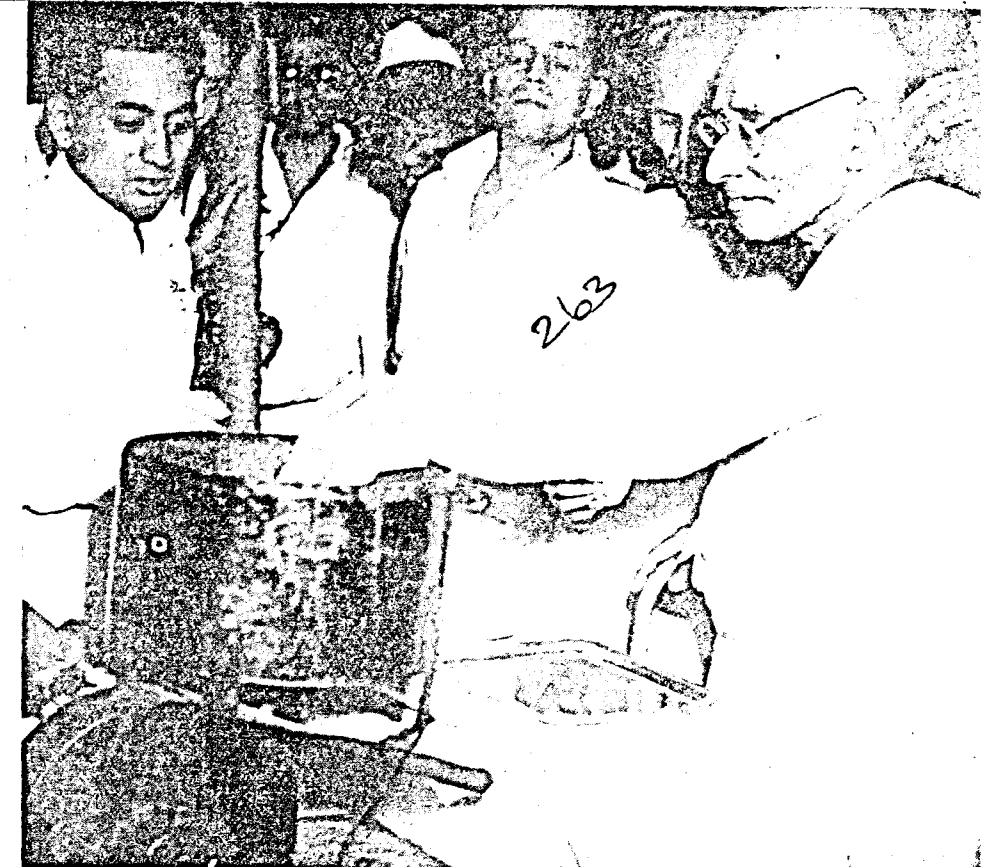
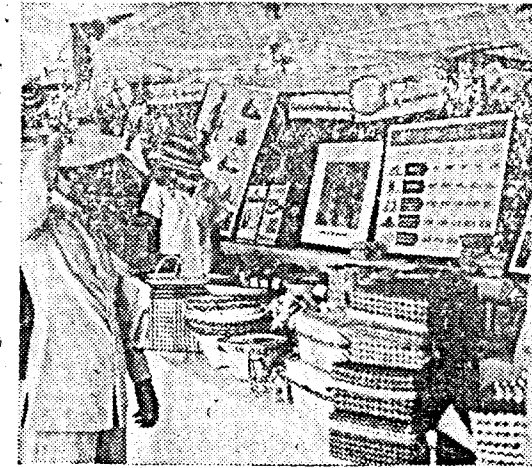
An Exhibition was also held on the occasion. Samples of the different varieties of palm gur and palm products, tapping tools and gur making equipment were on display. Practical demonstrations in improved methods were conducted.

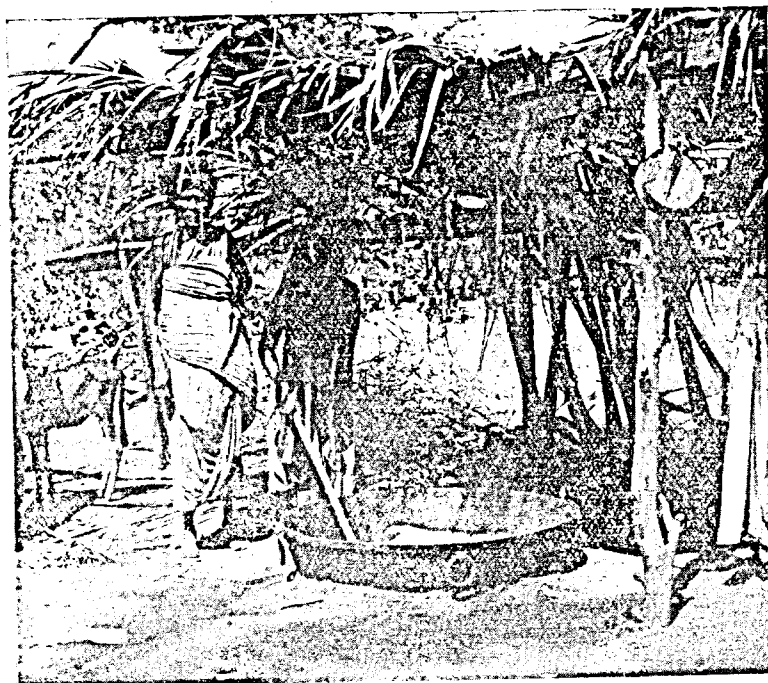
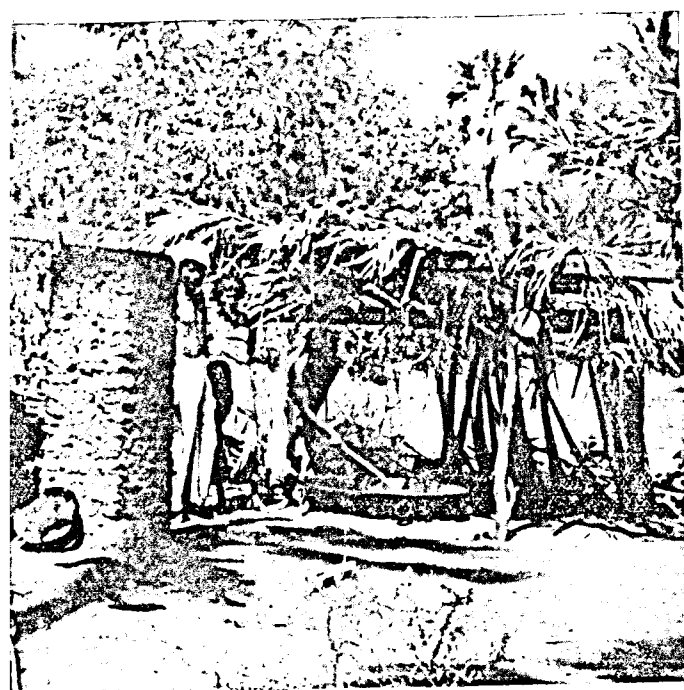
Pictures show :

Left top : The Chief Minister and party examining palm gur toffee and *(right top)* inspecting the sugar-candy machine.

Centre : Sri V. C. Palaniswami Goundar, Minister for Prohibition addressing the Conference *(left)*; Palmyra leaf products on view at the Exhibition *(right)*.

Bottom : Sri C. Rajagopalachari, Chief Minister, inaugurating the Conference.





The palm juice is boiled in the big pans (top left). Close up of the boiling process is also shown (top right). The boiled juice is then set for cooling (bottom left), and then moulded in coconut shells. After moulding it sets into the familiar palm gur cakes (bottom right).



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MADRAS INFORMATION

Epoch-making Change in Educational System

By LIEUT.-COL. S. PAUL, Principal, College of Engineering, Guindy

Ever since I read in the papers about the modified scheme for school education, I was one of those who had followed the progress of the same with eager interest. As a Principal of the Engineering College, Guindy, connected with technical education for about 30 years, I was of the opinion that the principles underlying basic education should also be implemented in a modified form in technical institutions and to a large extent this has been implemented in various forms such as the conduct of the IV, V and VI Engineering Exhibitions, Guindy, the running of the hostel by the students, the running of a canteen for giving special amenities to students, the Social Service work in nearby villages, the running of the transport system by a Committee of students, the running of a power farm and dairy farm for the benefit of the students and the building of a dam across the Adyar river for implementing the water-supply to the Engineering College, Guindy and the nearby places like Little Mount, Saidapet and Alandur.

In implementing such schemes there has been a certain amount of criticism even from experienced members of staff and from the public. But it goes to the credit of the students that they have whole-heartedly co-operated in the schemes and the implementation of such activities has brought very beneficial results.

Nearest and Best Approach.

The starting of basic education in the State has not met with the same zeal and enthusiasm as it warranted, but it may be attributed to the fact that the principles of basic education cannot be fully integrated into the existing structure of school education. The present proposal of the Chief Minister, however, is the nearest and best approach to achieve the same purpose. I wish to give two instances where such a scheme has been tried and proved to be very successful.

My father was the Manager in Karainagar, Jaffna, Ceylon, for 13 Tamil schools and 1 English school. The hours of class work for these schools was only one session from 10 a.m. to 1 p.m. The pupils of the schools consisted of

various classes, some being children of farmers, others children of fishermen and others following different other vocations. But in all cases the children were out in the morning from 5 a.m. to about 8 a.m. helping their parents in their normal vocations and attended school from 10 a.m. to 1 p.m. In the afternoon, they again assisted their parents and even took part in healthy recreational games.

Good Standard Attained.

The knowledge that these pupils attained in the Tamil schools, where the instruction was entirely in the vernacular, and in the English school was marvellous. The knowledge of their regional language, English, Grammar, History, Geography and Arithmetic, was very high. In the annual test conducted by the Inspector of schools I have seen the remarks made by the Inspector about the standard attained by the pupils.

In one instance, the Inspector of Schools examining the high school students wrote down in the "blue book" that the standard attained by the pupils was perhaps the best in the whole of the Island. The pupils from some of these schools have risen to the highest proficiency in the Island and are today occupying most important positions in the Government. Even in competitive examinations they have ranked high.

Teachers Set Example.

One of the most important things to note about the teachers in these

schools was that they themselves followed some vocation mainly farming and their knowledge of sowing, reaping, weeding, planting of crops, irrigating was as good as their proficiency as teachers. They could put their hands to any sort of manual labour and were proud to belong to such a profession, although they were teachers.

As a youngster I met one of the teachers, one day late at night, carrying a huge bundle of straw on his head. He was an M.A. of the Madras University and was an F.R.A.S. On his exposition of the Haley's Comet, the Royal Astronomical Society granted him a Fellowship. Although he was a professor of Mathematics yet he was one of the ablest Tamil scholars and there is a history behind his career. This is an example of a country where the percentage of literacy is as high as 95 per cent.

The Singapore School.

I was also a pupil in the Anglo-Chinese School, Singapore, for a period of two years. Singapore is a place which has had not only the impact of British organisation and culture, but, has to a large extent, got the impact of American training and culture. The schools in Singapore, during the time I was a pupil, was conducted in two sessions: the morning session from about 8 a.m. to 12 noon for one set of pupils numbering about 2,000; and the evening session from about 12 noon to 4 p.m. for a different set of pupils. The idea of running two sessions was to enable the majority of pupils to assist their parents in whatever walk of life they were.

Educational Concessions

The Government have declared that the communities *Muthuraja* and *Muthiriyar* are eligible for fee concessions under rule 92 of the Madras Educational Rules, as they are only variants of *Mutracha* and *Muthiriyar* respectively, which communities are included in the list of backward classes other than Scheduled Castes and Scheduled Tribes.

As a student of the Anglo-Chinese school I have accompanied some of my friends, who were in the shoe-making industry, and I have seen these pupils experts at making shoes. There were others who used to assist their parents in carpentry work. I had a passion for work of this nature and I have spent hours in shops working with carpentry tools.

Working While Learning.

There were several others who were shop assistants in their father's shops. Many others were children of farmers,

coming from a distance of three to five miles, and I have gone into their gardens and seen the magnificent way in which they were cultivating vegetables and flowers especially orchids. There were two brothers who were Punjabis and whose father was running a dairy farm and supplying milk to thousands of residents in Singapore. I have seen the way the two brothers used to assist their father in running his business in the afternoon and in certain instances I have seen one of them delivering bottles of milk to various houses early morning before attending school. The idea of working half-a-day and studying half-a-day is mainly an American idea and it has fitted into the scheme of the life of the people in Singapore and Malaya, in a marvellous degree.

The above two examples are given to show that the modified scheme now contemplated by the Chief Minister is the solution to the educational problems of our country and deserves the fullest co-operation and support especially by the teachers and the managements who are running the schools in various parts of the State. As a Principal, of this institution, I have had occasion to deal with thousands of students who sought admission to this College to be trained as Engineers. Sometimes it has been very pathetic to see the helplessness exhibited by the students in tackling practical work which is so fundamental to an Engineer.

In training the cadets of the University Officers Training Corps, with which I was associated for over 21 years, I had noticed the colossal ignorance exhibited by the students in the handling of a pick and shovel for training in trench digging, which is so vital for a soldier; this is a proof that our educational system has not integrated certain type of training which is so vital to students. Where I could handle a shovel and a pick with skill and proficiency, the students were heavily handicapped.

Dignity of Labour.

It is time that we brought into the scheme of our education an attitude in the minds of our pupils that they were born in the soil, that they were bred in the soil and that they will return to the soil and it is, therefore, expedient and necessary that they should know the way of life, the dignity of labour and that they should

not be ashamed to own that they are the sons of farmers and the sons of labourers, that their fathers maintained the dignity of their profession, which they should own as a proud heritage.

I am sure that if the teachers and the managements have caught up the vision of this epoch-making change in the history of our school education that is being now launched by the Chief Minister, they would realise that it is not antagonistic to the scheme of education that has been in existence all these years. On the other hand, they will be clearing the weeds and thorns which has accumulated round this noble edifice and which is tending to cloud the issues. In my opinion, the

What They Say About The Scheme

The *Hitavada* of Nagpur writes that if properly worked out this scheme will lead to a great orientation in education in Madras State and might well provide the pattern for educational reform for the rest of India. It is perhaps the finest contribution to the solution of our educational problems since Gandhiji's bold advocacy of basic education.

The *Swatantra* writes: "We believe in this scheme of the Government much more than the Government themselves seem to do.....The application of the scheme should be extended to secondary and college students also."

The *Indian Express* says: "If knowledge is to be true and permanent acquisition of something more than verbal instruction is called for and that manual work of any kind will not only inspire the child to do many things for itself, to give the quality of self-reliance needed."

The *Swadesamitran* wonders why certain persons attack the new scheme of elementary education and says that Rajaji's explanation of the scheme will set the minds of the critics at ease.

The *Ananda Vikatan* says: "This scheme will facilitate increasing of

modified scheme of school education deserves the heartiest support and fullest co-operation of every one concerned.

Grants for Relief

In April 1953 the Government have sanctioned grants amounting to Rs. 2,80,000 to the Cuddapah District Board, for road works undertaken by the District Board for providing labour to unemployed agricultural labourers in the district.

State Soil Conservation Board

The Secretary to Government, Food and Agriculture Department, has been appointed a member of the Madras State Soil Conservation Board.

accommodation in the existing schools by hundred per cent. Further, children can undergo training in their hereditary calling or profession after school hours.

The *Grama Rajyam* writes that the scheme is highly beneficial to the school-going children and it helps the Government to derive maximum benefit by incurring minimum expenditure.

The *Narayana* of Udipi welcomes the new changes introduced in the system of elementary education as a bold experiment.

The *Kalki* says that the new scheme provides general and technical education to the students. Such a system is unique and will greatly help the development of industries in India.

Sri N. V. Gadgil, addressing the annual general meeting of the Poona District Education Association, said that he had discussed the question of free and compulsory primary education with some of the leading educationists in the country. They were of the opinion that there was no harm in reducing the period to three hours in rural areas. The suggestions originally made by Sri Rajagopalachari, deserves consideration, says Sri Gadgil.

Progress of Crop Production, Agricultural Research Station, Aduthurai

Serial number.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.
1. Total area of the farm 52.55 acres.					
2. Particulars of land utilization in acres.					
(a) Kuruvai	15.64	25.63	25.57	26.15	32.2
(b) Thaladi	18.41	29.80	29.94	30.31	38.2
(c) Samba	23.29	13.47	13.76	13.39	5.5
(d) Cotton	0.44	0.44	1.15	18.00	17.00
(e) Vegetable and Fruits	6.60	4.63	4.20	4.20	4.20
(f) Buildings, Roads, etc.	4.25	4.65	4.65	4.65	4.65
3. Total production of crops—					
(a) Kuruvai	107,052 lb.	148,093 lb.	1,55,083 lb.	217,246 lb.	233,092 lb.
(b) Thaladi					
(c) Samba					
(d) Green Manure					
(e) Cotton	20 tons.	60 tons.	100 tons.	180 tons.	397 tons.
				12,000 lb.	17,000 lb.
4. Profit per acre—					
(a) Kuruvai	Rs. 100	Rs. 235	1 Rs. 100	Rs. 413	Rs. 474
(b) Thaladi	Rs. 208	Rs. 107	2 Rs. 84	Rs. 425	Rs. 543
(c) Samba	Rs. 265	Rs. 247	Rs. 312	Rs. 347	..
(d) Cotton	..	..	..	Rs. 137	Rs. 300
(e) Vegetable	Rs. 900	Rs. 940	Rs. 1,000	Rs. 1,040	Rs. 1,200
5. Total expenditure and Receipts—					
(a) Expenditure	Rs. 13,000	Rs. 17,500	Rs. 18,000 *	Rs. 27,000	Rs. 32,400
(b) Receipts	Rs. 18,000	Rs. 26,300	Rs. 38,000	Rs. 45,000	Rs. 55,000

* Part of the labour was attended to by trainees and so the expenditure was low.

It would be seen that the total production of paddy in 1952-53 is more than double that of 1948-49 and an extra crop of cotton is being grown on lands that have already grown two crops of paddy in the year. Both land and labour are thus being kept busy all the year round.

the harvest of paddy is sown in the paddy field just before the harvest an acre will produce green manure for 10 acres of paddy area and the problem of green manuring the paddy fields can be completely solved.

Manuring Problem.

This year we have also programmed to cut and dry sesbania and keep the dry plants without composting so that they can be used as manure for the thaladi crop. We have already found by experiments in Maruteru and Samalkot that such drying of sesbania does not take away its manurial value. We have therefore initiated a system of manuring which will completely solve the manure problems of both the first and second crops in all areas in the State. A very simple and inexpensive way of developing agricultural production has been demonstrated to you here and in over two lakhs of acres last year. If only the will to improve production can be equally developed there will be no problem of deficit

agricultural production for some years to come.

Concession to Ryots

The Government have directed that the scheme, announced in the Order, dated November 8, 1952, by which agricultural materials and departmental services were given to the ryots in the selected areas at concessional rates by reducing the standard rates up to an extent of 20 per cent, be revived for a further period of one year during 1953-54 also.

This action has been taken with a view to induce the poor and deserving ryots to grow more food crops and evoke a keen interest in them in the drive for increased food production.

Geological Survey Bulletin

A bulletin on the mineral Magnesite by Shri N. K. N. Aiyengar has just been published by the Geological Survey of India.

The bulletin gives a brief account of all the known occurrences of this mineral in India, describing in detail the important deposits in the Salem district of Madras on which the author has worked personally. The next section deals with the utilization of the mineral in the manufacture of refractories, magnesium cement, metallic magnesium and their products with accounts of the methods of manufacture. The last section is devoted to the discussion of the future of Indian magnesite.

There are also three tables indicating the total quantity of the mineral produced and exported from India and its world production between 1934-1950. The bulletin also carries a bibliography and some photographs of the Salem deposits.

Role of Trade in India

The role of business in the Economy of India is a subject of great importance, though it has not received specific attention in the Five Year Plan. This may be on the assumption that business is ancillary to production and consumption and can look after itself. This is a dangerous assumption because it overlooks that production and consumption, in the existing economy are separated not only by time and space, but are complicated first by their failure to balance each other, second by the intervention of the State and third by finance.

Business is therefore not a simple question of purveying but a complicated question of equating potential and real demand with supply over a vast area, subject to changing and differing factors. A clear conception of the role of business, and clear principles for organization are therefore necessary.

Spirit of Adventure.

India has known business for ages. Its trade at one time furnished spirit of adventure to Europe and even led to the discovery of America. The British Empire in India rose out of its trade. In the reverse direction, the presence of Indians in most countries of the world today is due to trade. Yet, we cannot say that Indian business is scientifically organized, or that it partakes of modern methods.

Properly speaking, marketing has to extend to the beginning of production to the end of consumption. It must know what the consumer wants in detail and in the aggregate and influence the scattered body of producers accordingly. It must find not only the finance, storage, transport for the supply, but it must also create finance and stabilise the demand. That this happens naturally and through the unco-ordinated efforts of countless individuals is true, but what is happening is not the best.

Not only is trade limiting its possibilities, but both production and consumption are falling short of their scope. Hit and miss methods may be usual to an undeveloped or small economy, but

From the address by J. M. Lobo Prabhu, I.C.S., Secretary to Government, Development Department, on the "The Role of Trade in India", at The U.S.I.S. Discussion.

a continent like India, determined to fully utilise its resources, human and material, on one hand, and to establish a welfare State, on the other, has to make trade a consciously co-ordinated instrument of policy.

Market Research.

How can this be done? Firstly, there should be more information, market research, in particular. This should comprehend not only what people consume, but what they should consume and how. Sample surveys in different areas appear to be necessary. Next to collection of information is its dissemination. Chambers of Commerce at present tend to be concerned with day-to-day problems, without much regard to the future.

In U.K. and more so in U.S.A., they play a more aggressive part, which we could copy with profit. They are the proper meeting ground of those who wish to produce and to sell. To secure co-operation between the two, Chambers could organize seminars on information to be available with them, and from talking people may pass to doing.

Role of Credit.

Finance is of importance at both ends of the trade. In this country, credit plays a far smaller part with producers, traders and consumers than it does in countries of comparable economics. For producers, the rates of interest, and the security demanded, are high, those to agriculturists being prohibitive to the degree, that no credit is available except such as Government may provide. Even for industry, the rate of interest, on capital and working cost is in many instances higher than the profit realisable in the first few years. Trade can obtain credit on mortgage of stocks, but the proportion covered is not large.

On the consumption side, not even the hire purchase system is known. The advantage of credit to consumers is not only that their demand is advanced and raised to support production, but their work and savings are, in a sense mortgaged, which adds to the national dividend. There can be no doubt that the future of trade and production generally depends on expansion of credit.

State Help to Trade.

State help to trade is a large subject. Since the war, the State has become a

large participant in trade. The benefits of this have been questioned. It is asserted that the State lacks the proper approach to trade, being on one hand slow, unimaginative, indifferent to profit, and on the other so massive in its impact that it obliterates the incentives arising from supply and demand. Generally, the State is now retreating from actual trade, but is tending to assume a more important functional role.

Its import policy aims at stimulating local production. Its taxation policy is also designed to favour certain types of production, for instance the cess on mill cloth is meant to advance handloom cloth. Railway freight also have the same purpose. Decentralization of industry, warehouse construction, control of futures are other aspects of the functional activity of Government. Perhaps there is no conscious planning but the various measures tend to make trade an efficient link between production and consumption.

Trade therefore is becoming increasingly an instrument of higher returns in the economy of country. Government is doing its part. It is now for private enterprise to increase its contribution so that trade becomes a great bridge for the flow of the country's wealth.

Time Limit Fixed

With reference to the award of a price of Rs. 2,000 for the invention of timesaving machinery for husking and slicing arecanuts, the Indian Central Arecanut Committee has fixed 30th September, 1953 as the last date for submitting entries to the competition for the invention of the timesaving machinery for husking and slicing arecanuts. A panel of judges will scrutinise the machinery at such time and place as the Committee may decide. All competitors may send in their entries to the Secretary, Indian Central Arecanut Committee, Kozhikode, before 30th September 1953.

K. K. Nambiar,
Secretary.

Control Orders in force on June 15, 1953

Food and Agriculture Department

MOVEMENT OF PADDY AND RICE WITHIN THE STATE.

G.O. Ms. No. 1068, Food and Agriculture, dated 1st July 1952.

In view of the revised food policy a new Control Order has been issued regarding the movement of paddy and rice within the State. According to Order I of Notification I, the State is divided into six zones and the movement of paddy or rice or their products from one zone to another zone by mechanical means is prohibited except under a permit issued by the Collector of the districts concerned. Free movement of paddy or rice or their products within the zone is allowed. According to Order II of Notification I belt area restrictions already existing in the districts of South Arcot, Tanjore, Ramanathapuram and Anantapur on the movement of paddy or rice or their products are continued.

According to Notification II only landholders will be allowed to transport paddy or rice from the produce of their lands from one to another zone for their personal consumption. This new zonal Control Order cancels the notification issued in G.O. Ms. No. 550, Food, dated 18th June 1948, and G.O. Ms. No. 478, Food, dated 27th May 1948.

The Zonal Control Order issued in G.O. Ms. No. 1068, Food and Agriculture, dated 1st July 1952, has been amended due to the inclusion of Hosdrug sub-taluk of South Kanara district in the sixth zone comprising Malabar and the Nilgiris (G.O. Ms. No. 1216, Food and Agriculture, dated 26th July 1952.)

By G.O. Ms. No. 1346, Food and Agriculture, dated 20th August 1952, the Zonal Control Order has been amended to prohibit the movement of paddy, rice and their product even by non-mechanical means of conveyances from one zone to another zone within the State except headload by peasantry up to one maund for personal or family use. Orders I and II in Notification I of the Zonal Control Order for paddy and rice issued in G.O. Ms. No. 1068, Food and Agriculture, dated 1st July 1952, have been amended

allowing the bona fide travellers to take with them two Madras measures of rice or four Madras measures of paddy as part of their personal luggage (G.O. Ms. No. 1712, Food and Agriculture, dated 5th November 1952).

Order II in Notification I of the Zonal Control Order for paddy and rice issued in G.O. Ms. No. 1068, Food and Agriculture, dated 1st July 1952, has been amended empowering the Police officers not below the rank of Head Constable and Revenue officer not below the rank of Revenue Inspector to seize the articles in respect of which they have reason to believe that a contravention of the order has been committed and also making a provision that the searching officers, while exercising the power of entry should pay due regard to the social and religious customs of the occupants of the premises (G.O. Ms. No. 1737, Food and Agriculture, dated 8th November 1952).

The Government have issued amendments to Order I of Notification in G.O. Ms. No. 1068, Food and Agriculture, dated 1st July 1952, for regulating the movement of paddy or rice to Fort Cochin (Malabar district) and Amindivi Islands (South Kanara) by permit system, and for enabling the Southern Railway to transport the grains from one zone to another in the State for meeting the requirements of the departmentally managed refreshment rooms (G.O. Ms. No. 2011, Food and Agriculture, dated 29th November 1952.)

In G.O. Ms. No. 640, Food and Agriculture, dated 29th April 1953, an amendment has been issued to the Zonal Order according to which Zones 2 and 3 have been merged into one zone and the two villages of Periya and Kodoth of Kasargod taluk of South Kanara district (Zone 5) have been taken and tagged on to Malabar Zone (Zone 6) and the zones re-numbered. There are at present only five zones.

PLYING OF MOTOR VEHICLES AT NIGHT.

G.O. Ms. No. 1306, Food and Agriculture, dated 9th August 1952. In supersession of the Order issued in G.O. Ms. No. 393, Food, dated 3rd April 1947, the Government have

issued an order prohibiting the plying of motor vehicles carrying paddy, rice millets and their products, excluding products of foodgrains which are used as cattle feed, namely, rice bran, wheat bran, bran and husks of millets and maize between the hours of 7 p.m. and 6 a.m. on any road or land situated in a district which is notified by the Collector in the District Gazette.

The Government have issued an amendment so as to enable them to exempt from the provisions of clause 1 of the abovementioned notification any motor vehicle or any class of motor vehicles engaged in the transport of foodstuffs, under permits issued by the appropriate authority (G.O. Ms. No. 54, Food and Agriculture, dated 17th January 1953).

The Government have issued an amendment to clause 1 of the Notification so as to enable the Collectors to pick and choose the particular commodity or commodities for restricting their movements on the roads specified by them.

ORDER PROVIDING POWERS TO REQUISITION STOCKS OF FOODGRAINS.

This order extends to the whole of the State of Madras. This empowers the Government to issue directions to the Collector or any other officer to requisition stock of foodgrains whenever the Government consider it necessary to do so. This also empowers Collectors to call for declaration of stocks of foodgrains from any person.

Prosecutions for the infringement of the conditions of this order should be launched only with the previous sanction of the Collector concerned.

THE COTTON CROP (COMPULSORY GROWTH WITH CHILLIES) ORDER, 1950.

This order extends to the whole of the State of Madras. At present the Order has been made effective only in the districts of Guntur, Krishna, East Godavari and West Godavari and according to this no person can cultivate the rainfed crop of chillies in these districts except as a crop mixed with cotton in the proportion of not less than one line of cotton plants to every 14 lines of chilli plants.

CONTROL ORDERS

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MADRAS INFORMATION

MANURE CONTROL ORDERS ANNULLED.

G.O. Ms. No. 14, Food and Agriculture,
dated 5th January 1953.

Consequent on the decontrol of foodgrains in the State, the Government have annulled the two control orders, the Madras Manure Dealers' Licensing Order, 1949, and the Madras Manure Mixtures Quality and Price Control Order, 1950.

THE CENTRAL FOODGRAINS (LICENSING AND PROCUREMENT) ORDER, 1952.

The Government have rescinded the Madras Foodgrains Control Order, 1947, relating to the licensing of foodgrains trade and have given effect in this State, to the Central Government's Foodgrains (Licensing and Procurement Order) 1952. They have published necessary notifications in the matter in an extraordinary issue of the *Fort St. George Gazette*, dated 29th November 1952, besides issuing a Press Note No. 158, dated 2nd December 1952, explaining the main features of the new order which are as follows:

According to the Central Government's Foodgrains (Licensing and Procurement) Order, 1952, republished with subsequent amendments in the *Fort St. George Gazette*, all persons doing business at present in foodgrains, viz., wheat, paddy (rice in husk), rice (husked) jowar and bajra including edible products thereof either in the open market or dealing on behalf of the Government and all persons desirous of starting foodgrains trade, should get themselves registered and obtain a licence under the Foodgrains (Licensing and Procurement) Order, 1952. They should maintain accounts of the foodgrains purchased and sold and submit returns to the Commercial Tax Officer concerned. Any person who stores any foodgrains in quantities exceeding 15 maunds shall, unless the contrary is proved, be deemed to store the foodgrains for the purposes of sale and to be carrying on foodgrains trade. The order is merely a registration of foodgrains dealers made in order to enable the Government to requisition stocks of foodgrains at fixed price when it is found that prices in a particular area have unreasonably risen. It also empowers the Government to require any banking company to furnish such information as may be specified in the

Assignment of Land to Political Sufferers

The Government have, for some time, been considering the hardship created in individual cases by Government's policy in respect of assignment of land made under the policy previously in force in favour of political sufferers. There have been certain cases in which political sufferers were put in possession of the land, and, owing to certain technicalities, the formal order of assignment to them had not been completed and such assignments were strictly not binding in character. In such cases, the Government are prepared to re-examine the individual cases of hardship in accordance with the following principles:

(1) Where a political sufferer under the old policy of assignment has been allowed to be, or has been put, in possession of the land, where he is a landless poor person, he would be eligible under the ordinary rules for such assignment or where he has spent a substantial sum of money in improvement or reclamation of the land put in his possession before the new policy of Government was announced, he need not be disturbed as a result of the new policy of assignment and the assignment may be confirmed. The new rules requiring the collection of market value for certain types of lands will not apply to such cases.

order relating to any financial assistance granted by to any dealer whether by way of loan or otherwise. It will thus be seen that the measure is aimed at preventing anti-social and unscrupulous activities.

All persons dealing in, or purchasing or holding stocks of foodgrains in excess of 15 maunds including those who already possess licences or exemption certificates under the rescinded Madras Foodgrains Control Order of 1947, should immediately apply to the Commercial Tax Officer concerned for a licence or exemption certificate under the Central Government's Foodgrains (Licensing and Procurement) Order, 1952, in the prescribed form.

(2) Notwithstanding the principles laid down in the above paragraph, if no assignment of land could be made on account of the rules in force in any district, for example in the Madurai district under the Periyar system, and if political sufferers are in possession of the land under the Grow More Food Scheme or any other scheme of temporary assignment and have spent substantial sums of money in reclaiming or improving the lands, they will be allowed to continue in such temporary possession for a period of 15 years from 29th May 1953. At the end of this period, the land will revert to Government, provided that if the rules in force against assignment are in the meantime relaxed, the benefit of such relaxation will be allowed to those in such temporary possession.

2. In every case covered by paragraphs 1 (1) and 1 (2) above, where a political sufferer has displaced a previous Sivoijamadar, who had spent money or labour in reclaiming or improving the land, the confirmation of the assignment in favour of the political sufferer will be subject to the condition that he pays to the previous Sivoijamadar such compensation as may be ordered by the Collector.

In G.O. Ms. No. 354, Food and Agriculture, dated 14th March 1953, the Government have delegated powers under clause 9 (1) of the Order to the Commercial Tax Officers to cancel or suspend the licence issued under the Order for any contravention of the conditions of licence. The following officers, viz., District Collectors, Revenue Divisional Officers, Tahsildars, Deputy Tahsildars, District Supply Officers, Civil Supply Tahsildars and Taluk Supply Officers in each district have been authorised to requisition stocks of foodgrains from any person holding stocks.

In G.O. Ms. No. 765, Food and Agriculture, dated 20th May 1953, the

CONTROL ORDERS

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MADRAS INFORMATION

Government have published the Government of India's notification amending clauses 3 and 8 of the Foodgrains (Licensing and Procurement) Order, 1952, providing for the issue of exemption certificates and also for the levy of licence fee in respect of every exemption certificate.

MADRAS FOODGRAINS (MOVEMENT CONTROL) ORDER, 1947.

G.O. Ms. No. 720, Food, dated
14th June 1947.

This order controls the movement of foodgrains from places within the State of Madras to places outside it by a system of permits created in certain cases and under certain conditions specified in the Order. Permits under the order are issued by the Commissioner of Civil Supplies, Madras. A week's ration at the prescribed scale forming part of the luggage of bona fide travellers and grains intended for bona fide sowing purposes granted under a certificate issued by an officer of the Madras Agricultural Department not below the rank of District Agricultural Officer and foodgrains transported under Military Credit Notes are exempted from the operation of the order.

Prosecutions for the infringement of the conditions of this Order should be launched only with the previous sanction of the Collector concerned.

This order has been extended to apply in the case of imports of foodgrains. A permit is necessary for the import of foodgrains into the State.

The order has been amended exempting Defence Services personnel who go on leave to carry ration under the certificates issued by the Military authorities up to the quantities specified therein.

The Madras Foodgrains (Movement Control) Order, 1947, has been amended in G.O. Ms. No. 192, Food and Agriculture, dated 6th August 1952, due to the removal of the ban on the inter-State movement of Pearl barley powder and indigenous barley without husk. The Movement Control Order has also been amended in G.O. Ms. No. 1323, Food and Agriculture, dated 13th August 1953, as the inter-State movement of semolina and self-raising flour imported from foreign countries has been lifted and the price restrictions removed.

The Government have issued an amendment by which producers in this State are permitted to transport across

the borders of this State millets by headloads not exceeding half an imperial maund or 12 Madras measures each, for selling in the neighbouring markets in other States (G.O. Ms. No. 198, Food and Agriculture, dated 16th February 1953).

The Government have issued an amendment by which producers are permitted to transport wheat not exceeding half an imperial maund or 12 Madras measures freely across the border of this State for sale in the neighbouring markets of the adjoining States (G.O. Ms. No. 819, Food and Agriculture, dated 27th May 1953).

By an amendment issued in G.O. Ms. No. 753, dated 16th May 1953 the following is substituted for the sub-clause (c) in clause 2:—

“(c) ‘Foodgrains’ means any of the foodgrains specified in Schedule I to this Order and includes any products of those grains but excludes all products of wheat.

THE MADRAS FOODGRAINS (RESTRICTED PLEDGING WITH BANKS) ORDER, 1950.

This Order has been re-issued as the Madras Foodgrains (Restricted Pledging with Banks) Order, 1952 (G.O. Ms. No. 1485, Food and Agriculture, dated 15th September 1952).

This order imposes certain restrictions on the pledging of the procured stocks of paddy and rice with banks by the procuring agents in the State.

THE MADRAS FLOUR (USE IN MAKING PASTE OR STARCH) PROHIBITION ORDER, 1947.

This order prohibits the use of flour for making paste or starch except under a permit issued by the City Rationing Officer, Madras, District Supply Officer, etc., or an authorization given by the Government.

Prosecutions for the infringement of the conditions of this Order should be launched only with the previous sanction of the Collector concerned.

ORDER RELATING TO THE RES- TRIBUTIONS ON THE OUTPUT OF BRAN WHEN MILLING WHEAT.

G.O. Ms. No. 947, Food, dated 22nd
August 1947.

According to this Order, all flour mills situated within the State of Madras shall, when milling wheat

restrict the output of bran to five per cent of the whole wheat.

Prosecutions for the infringement of the conditions of this Order should be launched only with the previous sanction of the Collector concerned.

MOVEMENT OF MILLETS.

G.O. Ms. No. 1947, Food and Agriculture, dated 15th December 1952.

Transport of locally produced millets, viz., Cholam, Cumbu, Ragi, Korra, Samai, Varagu, Varigalu and Maize and their products from one district to another district within the State is prohibited except under a permit issued by the Collector concerned.

This Government Order cancels the orders issued in G.O. Ms. No. 1570, Food and Agriculture, dated 4th October 1952, governing the movement of locally grown millets on a zonal basis in the State.

Prosecutions for the infringement of the conditions of the order should be launched only with the previous sanction of the Collector concerned.

In G.O. Ms. No. 255, Food and Agriculture, dated 22nd May 1953, an amendment was issued by which a bona fide traveller is permitted to take with him millets up to a maximum of two Madras measures each as part of his personal luggage, while proceeding from one district to another.

PRICE CEILING OF BENGAL- GRAM.

By a notification issued on 22nd July 1952, by the Central Government, the maximum prices at which bengalgram, bengalgram dhall and besan may be bought or sold in the State of Rajasthan and the Rohtak and Hissar Districts in the State of Punjab, have been fixed. (G.O. Ms. No. 1290, Food and Agriculture, dated 6th August 1952).

LEVY PROCUREMENT ORDER, 1952.

As envisaged at the time of introducing the decontrol policy in June 1952, the Madras Government have now proposed to build up a buffer stock of about 2½ lakh tons of rice for the coming year by an easy levy system. The Levy Procurement Order is accordingly being published in an extraordinary issue of the *Fort St. George Gazette*. The order is applicable only to the surplus areas in the surplus districts of East Godavari, West

Godavari, Krishna, Guntur and Tanjore. The main features of this Scheme are—

(1) Persons owning five acres and less are exempted from levy.

(2) Those owning above five acres have been classified into various groups for purposes of levy and the scales of levy have been fixed. An initial slab of five acres in each of these groups is however, exempted from levy.

(3) No person who is coming under the purview of the Order can sell any part of the foodgrains harvested from the lands to any person other than the District Collector or an agent appointed and notified by him in the District Gazette before surrendering in full the levy demand made from him.

In G.O. No. 1796, Food and Agriculture, dated November 1952, the Government have notified the ceiling village-site prices of paddy and rice to be procured under the Levy Procurement Order, 1952. With the fixation of the uniform pool, price of rice in the State for 1953 it is considered necessary to fix statutorily the f.o.r. and ex-mill prices of paddy and rice procured under the levy procurement scheme. Hence a separate notification has been issued in G.O. Ms. No. 294, Food and Agriculture, dated 3rd March 1953, fixing the f.o.r. and ex-mill prices of paddy and rice for the Kharif year 1952-53 (concurrence of the Government of India in the matter) was also obtained.

In G.O. Ms. No. 303, Food and Agriculture, dated March 3, 1953, the Government issued some amendments to the Madras Foodgrains (Levy Procurement) Order, 1952, clarifying the position from whom the levy has to be collected and making a provision for alteration and redetermination of levy demand by the officers competent to do so. Some more villages were notified for purpose of levy procurement and some alterations also made in some of the villages already notified in the original Levy Procurement Order.

As it is not possible to procure the target of 2½ lakhs tons of rice from the long-term crop in the districts of East Godavari and West Godavari, Krishna, Guntur and Tanjore, the Government have decided in G.O. Ms. No. 468, Food and Agriculture, dated March 30, 1953, to extend the levy procurement scheme to the second crop in the East and West Godavari districts and Kuruvai

crop in Tanjore District. Persons owning two acres and less are exempted from levy in respect of second and Kuruvai crops and those owning above two acres have been classified into three groups, viz., 2 to 25 acres, 25 to 40 acres and above 40 acres, and different rates have been fixed.

THE FLOUR (USE IN SOAP MAKING) PROHIBITION ORDER, 1946.

This Order was issued by the Government of India in their notification

Death Sentences

Marudayappa Goundan, belonging to a village in Karur taluk, Tiruchirappalli district, who was sentenced to death by the Sessions Judge, Tiruchirappalli, was executed on 3rd June 1953 at the Central Jail, Tiruchirappalli. The offence was that on 14th April 1952 he cut and killed his eldest brother Muthuswami Goundan, against whom he had been nursing a grievance for over five years.

Pannikanji alias Koodalinga Kudumban belonging to a village in Sattur taluk, Ramanathapuram District, who was sentenced to death by the Sessions Judge, Ramanathapuram, was executed on May 27, 1953 at the Central Jail, Madurai.

On July 2, 1952 at midnight, Pannikanji went up to where Perumal Kudumban and his son Thoongan of the same village were sleeping, and stabbed them one after another. Thoongan succumbed to the injuries almost instantaneously, but Perumal Kudumban survived. The crime was due to long-standing ill-will.

No. C. G. 602 (86), Department of Food, dated 1st February 1946, under the Defence of India Rules. This was republished by this Government in the *Fort St. George Gazette*, in their G.O. No. 630, Development, dated 9th February 1946. Though the Defence of India Rules are not now in force, it was considered that the Order continues to be in force under the Essential Supplies (Temporary Powers) Act, 1946.

According to the Order, no person shall use in the manufacture of soap

the flour of any of the foodgrains specified below :—

1. Wheat and wheat products (including atta, maida, rava, suji and bran) Triticum inclusive of the different species.
2. Rice in the husk (paddy) (Oraysa Sataiva).
3. Rice, husked (orvza Sataiva).
4. Maize (Zea, mays).
5. Jowar (Sorghum vulgare).
6. Bajra (Pennisetum typhoides).
7. Gram, any variety (cicer arietinum).
8. Barley (Hordenm).
9. Ragi or mandua (Eleusine coracana).
10. Rahar (cajanus indicus).
11. Masur (Lens esculenta or Ervum Lens).
12. Kodra (Kondan) (Paspalum Scrobiculatum).
13. Korra (Tenai) (Setaria italica).

PLYING OF BOATS OR OTHER FLOATING VESSELS UP THE RIVER GODAVARI BEYOND POLAVARAM TOWN IN THE WEST GODAVARI DISTRICT.

According to the Order, the plying of any boat or other floating vessel up the river Godavari beyond Polavaram Town in West Godavari District during night between 7 p.m. and 7 a.m. is prohibited. The plying of the boats or other floating vessels during day time, i.e., between 7 a.m. and 7 p.m. is permissible only after they are checked by the Special permit issuing office (G.O. Ms. No. 1071, Food and Agriculture, dated 29th September 1947).

PLYING OF BOATS OR FLOATING VESSELS ON THE KRISHNA AND TUNGABHADRA RIVERS.

According to the Order, the plying of any boat or other floating vessels on the Krishna and Tungabhadra rivers within the limits of Kurnool District between 7 p.m. and 7 a.m. is prohibited. The plying of boats or other floating vessels during the time, i.e., between 7 a.m. and 7 p.m. is permissible only after they are checked by the special permit issuing officer (G.O. Ms. No. 1220, Food and Agriculture, dated 3rd November 1947).

THE MADRAS RICE MILLS LICENSING ORDER, 1951.

This Order extends to the whole of this State and came into force on 19th April 1951. Under this Order, a licence from the District Collector is necessary for running a rice mill. Consequent on the revised food policy, the Government have ordered that it is not necessary to continue the ban on the installation of new rice mills and on the expansion of the existing rice mills anywhere in the State. The position at present in regard to rice mills is as it stood prior to 10th December 1949.

All rice mills, anywhere in the State, whether engaged in hulling Government stocks or hulling private paddy for cooly, are controlled by this Order. Licences issued under this Order have to be renewed year after year. A licence fee of Rs. 24 is levied for every licence and every renewal thereof. The licensee will have to deposit with the District

Collector such sum as may be specified by the latter for due performance by the former of the duties as a licensee under this Order. The District Collector has power to order the forfeiture of the deposit mentioned above either in whole or in part, for breach of any of the provisions of this Order or any of the conditions of the licence, without prejudice to any other action that may be taken against the licensee. The Commissioner of Civil Supplies or any other officer authorised by him, can suspend or cancel the licence, for contravention of any of the provisions of the Order or any of the conditions of the licence.

SALT PRICE CONTROL ORDER, 1947.

This Order specifies the maximum ex-factory wholesale price of salt per imperial maund (exclusive of the cost of the gunny and cess) for each of the salt-producing districts of the State. The price varies between 12 annas to

15 annas per imperial maund. The Collectors of the districts have been empowered by the Central Government to fix the wholesale and retail prices of salt for each consuming area, within their respective jurisdictions, subject to any directions issued by the State Government. The wholesale price fixed for each consuming area includes the ex-factory price, cost of the gunny, transport charges, handling charges and wholesaler's profits of 6½ per cent. The retail price for each consuming area is fixed suitably on the basis of wholesale price fixed for that area. No producer, wholesaler or retailer, should sell salt at a price exceeding the notified price. Failure to comply with any of the instructions will render a dealer punishable in a Court of law.

Prosecutions for the infringement of the conditions of this Order should be launched only with the previous sanction of the Collector concerned.

MADRAS BANANAS

A MONOGRAPH

BY

K. CHERIAN JACOB, L.Ag., F.L.S.
(formerly of the Madras Agricultural Service), Coimbatore

Pages xii + 228

[Price, Rs. 7-6-0

84 illustrations

Contents

History and area; nomenclature; description; origin of varieties; names of varieties; commercial varieties in Madras State; cultural practices; banana products and dietetics; analysis of the fruits, and six appendices, bibliography and index

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CONTROL ORDERS

30

MADRAS INFORMATION

Development Department THE COTTON CONTROL, ORDER, 1950.

This Order provides control over contracts relating to sale or purchase of cotton and oversale of cotton to specified persons at specified prices.

THE MADRAS DRUGS (CONTROL) ACT, 1949.

In order to ensure that essential drugs continue to be sold at reasonable prices even after devaluation, the Madras Drugs Control Act, 1949, was passed by the Government. The Act provides for the control of the sale, supply and distribution of drugs in the Madras State.

Rural Welfare Department THE MADRAS KHADI (DEVELOPMENT) ORDER, 1949.

The provisions of the Order prohibit a person to carry on business as a producer or dealer of hand-spun yarn and Khadi in the State of Madras, except under and in accordance with the terms and conditions of a licence issued to him for the purpose.

Further, the Order states that no person who is a producer or a dealer in mill-made yarn or cloth woven out of such mill-made yarn shall carry on

the business of a producer or a dealer in hand-spun yarn or Khadi. No hawker shall be licensed to deal in hand-spun yarn or khadi. The sale price of Khadi should not exceed the aggregate of the cost of the production of the cloth plus 15-5/8 per cent thereof.

Public Department RESETTLEMENT OF RELEASED ARMY PERSONNEL.

An Order, dated 12th April 1951, seeks to implement the Central Government suggestion that demobilised military personnel should be given every preference in all avenues of service. In every case where an ex-soldier is found *prima facie* suitable for employment under this Government, the relaxation of technical restrictions including age bar will be considered.

Public Works Department THE MADRAS BUILDINGS (LEASE AND RENT CONTROL) ACT, 1949.

This Act seeks to regulate the leasing of residential and non-residential buildings and to control the rent for such buildings and to prevent unreasonable eviction of tenants therefrom in the State of Madras, and applies to the City of Madras, all Municipalities within the State, and such other areas

as may be notified in the Gazette by the Government of Madras from time to time.

To remove certain practical difficulties which were experienced in administering the Act, the Act has been amended in certain respects. The amendments have come into force from May 1951. The important amendments that have been made have been explained in Press Note No. 71, P.W. (I. & P.), dated May 1951.

Whereas Section 6-B (1) of the Madras Buildings (Lease and Rent Control) Act, 1949, as amended by Act VIII of 1951, provides for the deposit of rent when the address of the landlord or local agent is not known and when the owner is under dispute, there is no provision in the Act to deposit the rents of buildings in cases where the addresses of the landlords are known but they refuse wilfully to receive the rent. Under section 6-A (4) of the Act, the tenant is bound to continue to remit the rent to the landlord by money order after deducting the money order commission. But if the rent so remitted by money order is consistently refused by the landlord and the money is thus returned to the tenant, it will accumulate in the hands of the tenant with the possible risk of his not being able to pay the amount in lump sum when demanded by the landlord. The Government who are the statutory tenants of the building are liable for payment of rent to the landlord. It is, therefore, in the interest of the Government to see that the refused rent which is returned to the tenant is caused to be deposited by him so as to be available for payment to the landlord whenever he demands it. Therefore the amounts returned to the tenant on the refusal of the money orders should be caused to be deposited by the tenant to the credit of the Government in the Reserve Bank or the Treasury under "Revenue Deposits."

By G.O. No. 1600, dated 16th June 1952, the following amendments have been issued to the Act :-

1. In sub-rule (3) for rule 6 of the words "at 8 annas" the words "at Re. 1 and annas 7" are substituted.
2. In sub-rule (2) of rule 22, for the words "a fee of annas eight" the words "a fee of Rupee one and annas seven" are substituted.

(Continued on page 32)

The Indian Navy Helps Scientific Research

An example of the Indian Navy's help to civilian scientists in carrying out research work at sea comes from the Bay of Bengal.

A party of scientists from the Andhra University's Department of Oceanography recently cruised in the Bay of Bengal on board INS BENGAL to collect valuable data for the study of water movements, marine life and character of the sea-bed.

Among the scientists on board were Shri P. N. Ganapathy (Zoology), Professor C. Mahadevan (Geology) and Professor E. C. La Fond who is an expert in Oceanography.

The variations of temperature and salinity of the sea water at different depths were measured in selected positions by accurate instruments. Together with this,

samples of 'plankton', i.e. the minutest sea organisms on which fish live, were taken from different depths up to half-a-mile below the surface by the use of special nets.

This data, when analysed, can be used to determine the location of different varieties of fish in the sea and their likely movements, and should prove of immense value in promoting deep sea fishing along the Indian coasts.

Samples of mud, sand and shells which comprise the ocean bed were also taken for the use of Geologists in determining sedimentation and possible mineral resources.

The scientists find that, with the facilities for handling their equipment and for accurate navigation which are available on a warship, they can achieve much more than would be possible in other vessels.

NEWS AND NOTES

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219 MADRAS INFORMATION

Substitute for Mulberry

By

Sri N. K. Gururajan,
Sri K. N. Venkatesan

of

Sericultural Research Station,
Kollegal.

Besides mulberry leaves a few substitutes have been found for feeding domesticated silkworms. They are leaves of *Cudrania triloba*, *Cudrania Javanensis*, *Maclura aurentiaca* (osage orange) and *Latuca Sativa* of which *Cudrania triloba* is used for feeding early stage of silkworms reared in China and in Kyushu Province in Japan (Tanka 1942).

Since much difficulty was felt on the clonal propagation of this hardwood tree, experiments were conducted with Indol acetic acid, Indol butric acid and also other horticultural hormone products like 'Seradix' to induce root growth in the planted cuttings. As these treatments were found unsuccessful in inducing root growth, trials on root grafting 'in situ' with mulberry as root stock and *Cudrania triloba* as scion were undertaken with encouraging results.

Though *Morus alba* (a diploid) and *Cudrania triloba* (a natural tetraploid) belong to two different genera in Moraceae, successful root grafts have been prepared which is the best method of propagating this natural tetraploid (Darlington and Janaki Ammal, 1945). Such intergeneric grafts have been produced in the case of *Achras sapota* over the root stock of *Bassia latifolia*. Literature cited—

1. Dr. Tanaka, 1942—*Sericulture in Japanese*, 451-455.
2. Darlington, C. D. and E. Janaki Ammal (1945)—*Chromosome Atlas of Cultivated plants*—186.

Improved Cultivation Training for Todas

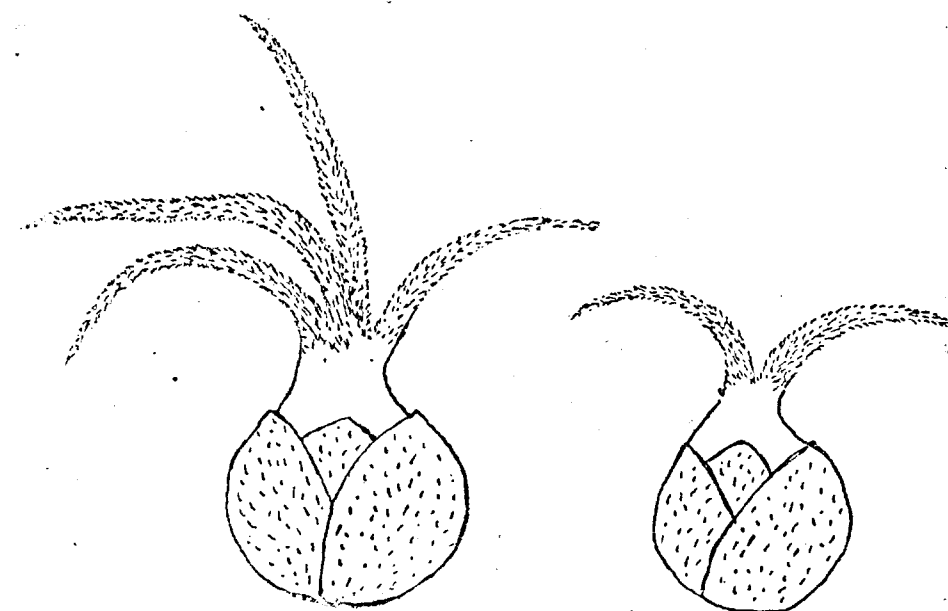
The Government have sanctioned the continuance of the scheme, sanctioned in June 3, 1952, for creating an agricultural bias in the Todas of a few selected "Munds" in the Nilgiris district and for teaching improved methods of cultivation to them, for a period of one year from May 1, 1953.

Diploma Course in Public Health Nursing

A new Diploma course in Public Health Nursing commenced at the All-India Institute of Hygiene and Public Health, Calcutta on June 1, 1953. The course has been started as part of the Maternal and Child Health Project on which the Government of India, the World Health Organisation and the UNICEF are taking concerted action.

The course will be for one year with not less than nine months whole time study. It is designed to prepare certificated nurses for any phase of community nursing service including

staff positions with public health agencies. Practical and theoretical training will be given in public health administration and preventive medicine, nutrition and health, mental health, health education, social welfare and training of personnel. Practical training will be given in the rural and urban practice fields of the Institute of Hygiene and at the medical college group of hospitals, Calcutta. It will also include attendance at the infectious diseases hospital at Calcutta and field trips to departments of health, industrial plants, social service agencies, etc.



A Flower with four Stigmas in Morus

By Sri N. K. Gururajan, Sri K. N. Venkatesan
of Sericultural Research Station, Kollegal.

Among the many cultivated species of *Morus*, the leaves of *Morus alba* and *Morus indica* form the staple food of domesticated silkworms. They are grown mostly as bushes and rarely as trees. They are dioecious but occasionally monocious and tetramerous in their floral parts. In a normal male flower there are four perianth lobes with four stamens and a pistillode. In a normal female flower, the ovary is superior with no style but there are two stigmatic lobes. *Morus alba* and *Morus indica* which is a variety of *Morus alba* are therefore classified as *Macromorus* (absence of style) according to Dr. Hotta (1939). The ovary is unilocular with a single pendulous anatropous ovule.

Recently in one of the female flowers of an inflorescence in *Morus alba*, four stigmatic lobes were seen. There was no significant difference between the flowers of a normal type with a bifid stigma and this unusual type with four stigma as in the sketch. On dissection two ovules were seen in the unilocular ovary hanging down at the tip of the pendulous placenta. It could therefore be inferred that this is only a case of fusion of two carpels. Such an occurrence has not been reported.

Literature cited—

Dr. Hotta. *Contribution to the knowledge of the Systematics of Morus in Japan*. Transactions of the Sapporo Natural History Society, Vol. XVI, Part I, 1939 (22-23).

Educational Publication

Education in 1949-50

A volume entitled *Education in the States of the Indian Union, 1949-50*, a Statistical Survey has just been published by the Ministry of Education.

The publication gives information relating to the number of educational institutions, their classification in terms of management, by the Government, local bodies or aided and unaided private bodies, the expenditure on education by various agencies, statistics of students and teachers and the teacher-pupil ratio for Part A, B and C States.

The percentage increase in the case of all these figures over the preceding year has also been indicated in the publication which also carries four charts showing the cost per capita on education, the percentage of trained teachers in schools, the system of school classes, the number of institutions, enrolment, and expenditure for all the States of the Union.

New T.B. Journal

The Tuberculosis Association of India will be shortly publishing a new magazine, *The Indian Journal of Tuberculosis*. The Journal will be a quarterly.

Dr. P. V. Benjamin, Technical Adviser to the Tuberculosis Association of India will be the Editor of the Journal. Dr. P. K. Sen, Professor of Medicine (Tuberculosis), Government Medical College, Calcutta, and Dr. T. J. Joseph, Medical Superintendent, Lady Linlithgow Sanatorium, Kasuali, will be the Associate Editors. Sri B. M. Cariappa, Secretary of the Tuberculosis Association has already filed the declaration as the Printer and Publisher.

The need for a journal of this kind was felt for a long time by workers in the field. The proposed Journal will contain articles from experts on the various aspects of tuberculosis and will be of special interest to the medical profession and to tuberculosis workers.

Government College Magazine

GOVERNMENT COLLEGE, MERCARA, COORG

This annual number of the College magazine brought out by the Government College, Mercara, contains a variety of readable articles and poems contributed mainly by lecturers and students. The magazine opens with the inaugural address at the College Union delivered by Lieut. Col. D. S. Bedi, I.P.S., Chief Commissioner of Coorg and is followed by a brilliant and thought-provoking article. *This curse of Fabel* from the pen of Sri B. S. Kushalappa, Speaker of the Coorg Legislative Assembly, under whose editorship the first issue of this magazine appeared.

Among other lucubrations of enjoyable reading, mention may be made of the poem entitled *Family Pride* written by Sri K. P. A. Pillai, the present Editor, *Adhayana Alocha* (Kannada) by Sri K. R. Udupa and *Raja Seat* (Hindi) by A. L. Abdul Sattar.

The journal is neatly illustrated and handsomely got up.

—TIRUMALESH

Higher Education in India

Institutions for Higher Education in India just published by the Central Ministry of Education gives a complete list of universities and other institutions for higher education, bringing up the data to March 31, 1953.

The Universities have been classified according to whether they are residential, unitary or teaching and affiliating. Constituent and affiliated colleges as well as teaching departments have been given for each University and also have been classified according to the type.

The volume also lists the scientific research institutions and laboratories as well as the humanistic institutions in the country. Institutions for higher education like the Indian Schools of Mines, Indian Institute of Science, Bangalore, etc., not affiliated to universities have also been listed.

(Continued from page 30)

By an amendment issued in G.O. No. 146, Public (General), dated 24th January 1952, the following note is added:

Note.—The Reserve Bank or the treasury will not receive the deposit unless the Controller or the appellate authority, as the case may be, or any person authorised by such Controller of Appellate authority in this behalf, certifies on the chalan accompanying the deposit that the deposit may be received.

CEMENT CONTROL ORDER, 1949

This order controls the sale of cement.

By an amendment issued on 3rd April 1951, licensed cement factories are authorised to sell up to one wagon load (not exceeding 25 tons) direct to each individual consumer without a permit, such sales not to exceed 20 per cent of their monthly production.

Another amendment issued on 3rd April 1951 requires licensees to submit particulars of such free sales of cement. Licensees shall not default in selling cement to permit holders.

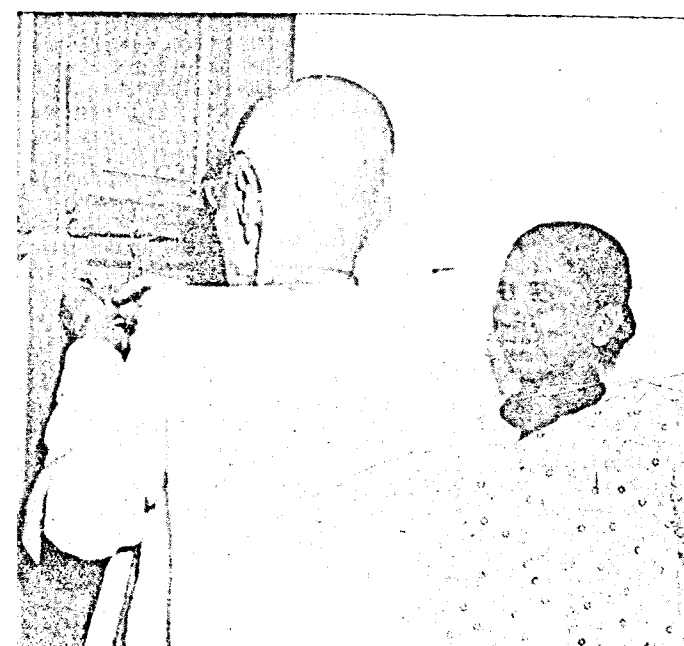
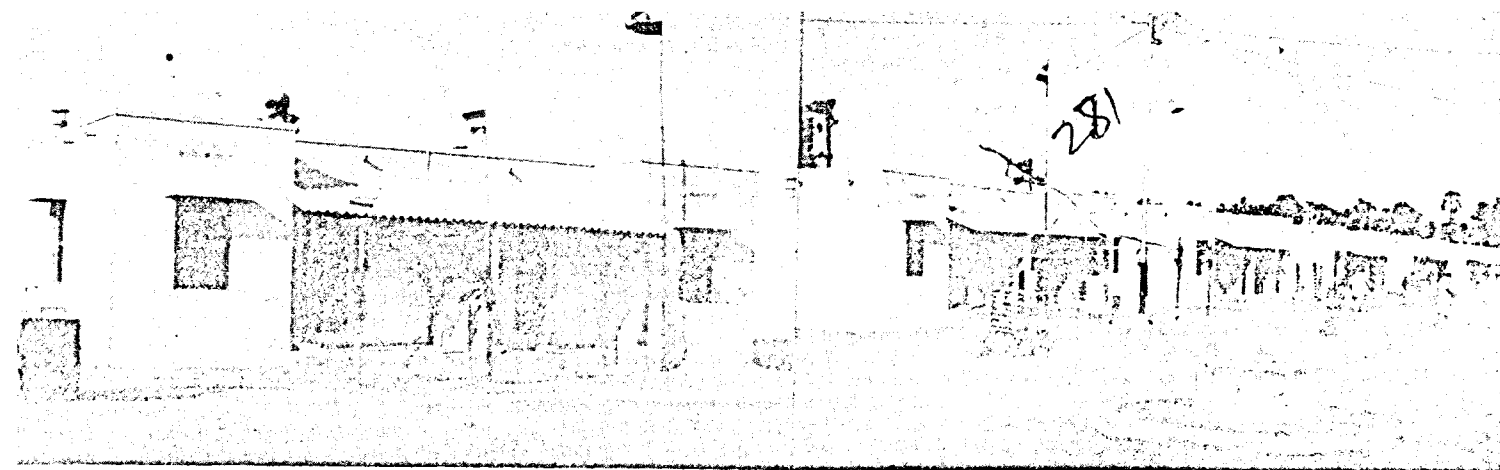
Amendments issued to the cement Control Order on 30th May 1951 provide that:

The price of all portland cement produced in India, exclusive of the cost of containers, if any, shall not exceed Rs. 71 per ton; in full wagon loads, f.o.r. destination.

The actual cost of gunny bags, subject to a maximum of Rs. 26 per ton of cement, if supplied wholly in new gunnies, may be charged, in addition to the price of the cement specified above.

The price leviable for the cost of packing for supplies in paper bags or old gunny bags, which may be settled between the purchaser and the supplier, shall not exceed Rs. 26 per ton of cement.

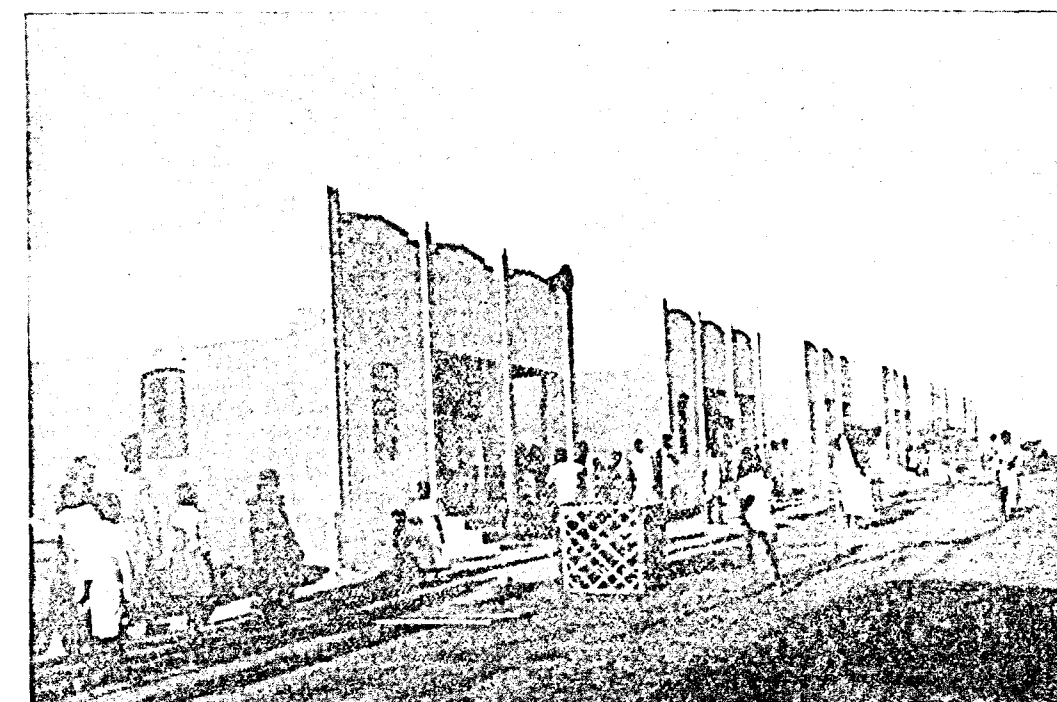
An amendment issued on 1st November 1951 provides further that an insurance fee of Rs. 0-10-0 (annas ten) per ton may be collected by the supplier when the cement is despatched in open wagons with the concurrence of the purchaser.



HOUSING COLONIES

FOR WEAVERS: The Chief Minister declared open recently a Weavers' Colony at Tiruchengode. The Government have given a loan of Rs. 90,000 for the construction of 50 houses, out of the 150 planned for the Colony. Twenty houses have so far been completed.

SAMUEL PURAM: A new Colony of the houses, north of Buckle Channel at Tuticorin, was recently declared open by the Chief Minister. The Samuelpuram Colony cost Rs. 2.24 lakhs, including the cost of 130 house-sites, roads, park, electrification of streets, and furniture. Under the housing scheme a worker can become the owner of a house in 25 years.



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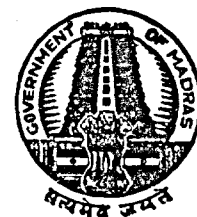
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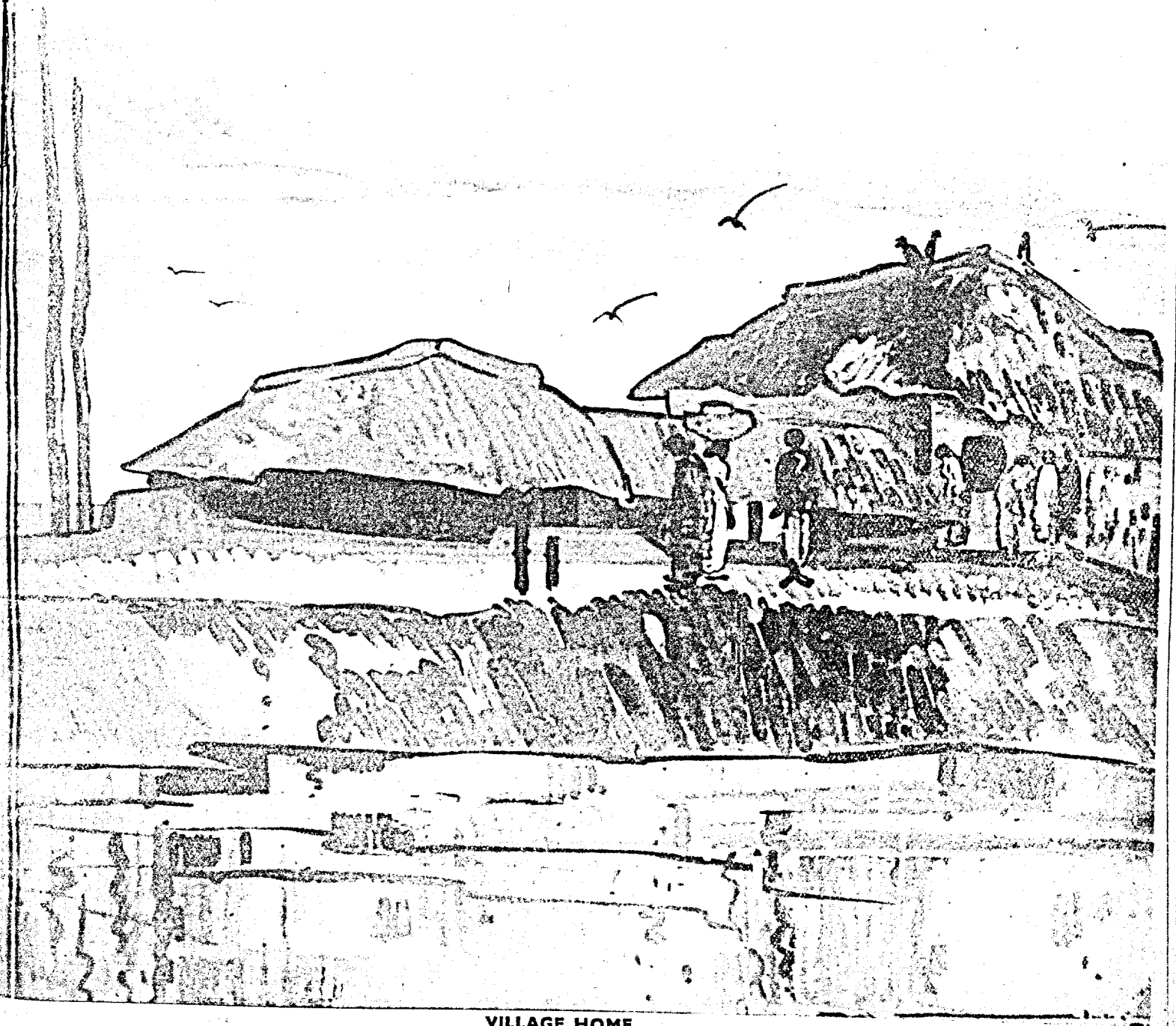
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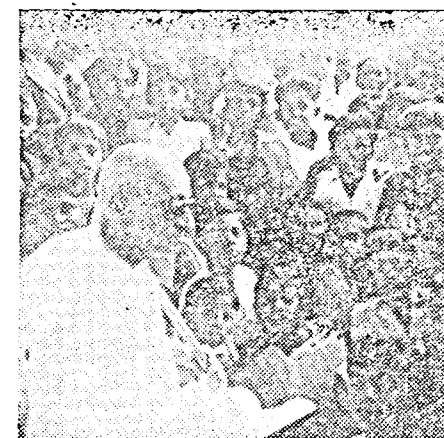
"Harvey", Madurai.

EDUCATION

Children will be Better Trained

Chief Minister Explains Merits of New Scheme

Children taught under the new elementary education scheme will be better trained than those who went through the old system of elementary education, and would turn out to be better engineers, technicians and scientists for that training, declared Sri L. Rajagopalachari, Chief Minister, speaking at a symposium under the auspices of the Teacher's Guild on 'How to implement the new elementary education scheme.' In a two-hour speech the Chief Minister explained the salient features of the scheme and answered at length the criticisms voiced by members of the teaching profession who spoke on the occasion.



WITH THE CHILDREN: The Chief Minister has a word with the children who came to see him off at the Tenkasi Junction.

Sri Rajagopalachari, addressing the gathering, thanked the President and Prof. Venkatarangiah for their critical observations and said that many of the things mentioned by them were quite correct but "everything depends on the emphasis you lay on any particular matter". But, he added, there was no great point in carrying on a controversy now, when they had to bend their energies on finding out what to do to carry out the scheme, rather than carrying on an academic discussion as to what was right or not right in it. "Doubt springs eternal in human breast", as someone said, and Prof. Venkatarangiah had proved that proposition. Doubts persist till the event proved itself. He was sure the same would be the case in regard to the doubts entertained about the new scheme too. He was not in the least disturbed by these doubts and fears expressed because they had anticipated the same.

The President of the Guild had referred to certain discussions on matters relating to education in which he and others had participated in 1937. If, even in 1937, he had discussed the matter with them, it showed clearly he was not very hasty in thinking of the scheme now. But, he would like to carry them back a little farther and carry "the battle a little more vigorously." Fifty years ago, when he was practising at the Bar in Salem—he was not then in politics—he was invited to speak on "How to employ leisure hours". He read a brief paper

in which he spoke of a number of things, one of which was that school children should not be given home work to do during their non-school hours. A school child having to do home work felt as miserable as an adult labouring under a heavy burden of debt. It was wrong to bring up that psychology in a child.

Home Work

One of the principal features of the new elementary education scheme, Sri Rajagopalachari said, was not to give home exercises to children but leave them absolutely free during the non-school hours. If a teacher gave home work to the child under the new scheme, he ruined the whole scheme of work. That would, he said, amount "to treason against the scheme", and an act of "complete sabotage of the scheme", besides the great harm done to the child. Parents engaged private tutors for their children, who kept the child busy with lessons and work the moment he returned from school, not only torturing the child, but also leaving more home work for the child to do.

It showed, he said, how "our brains have been demoralised by the competitive system of education and the desire for academic results." Suicides, murders, thefts, and lies—all resulted from such competitive system. He could give any number of incidents

from his own experience of the injurious results of "this competitive system."

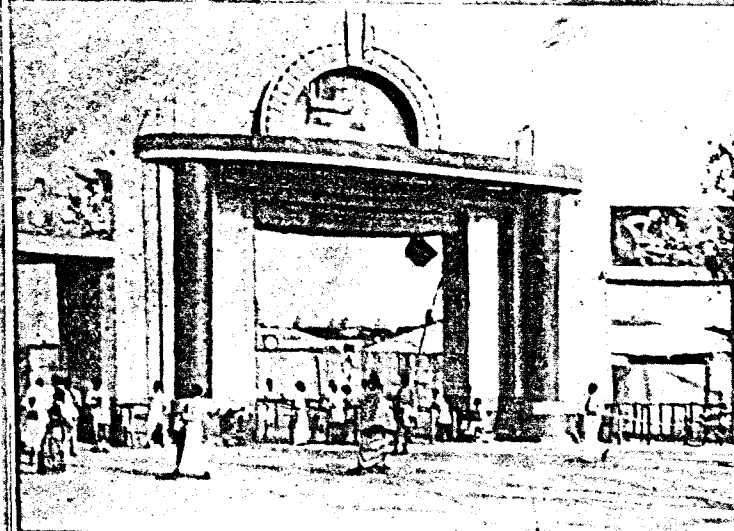
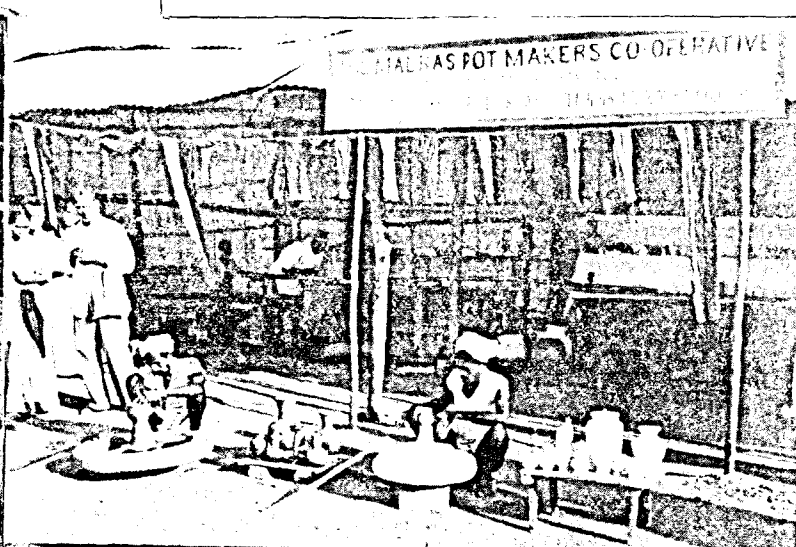
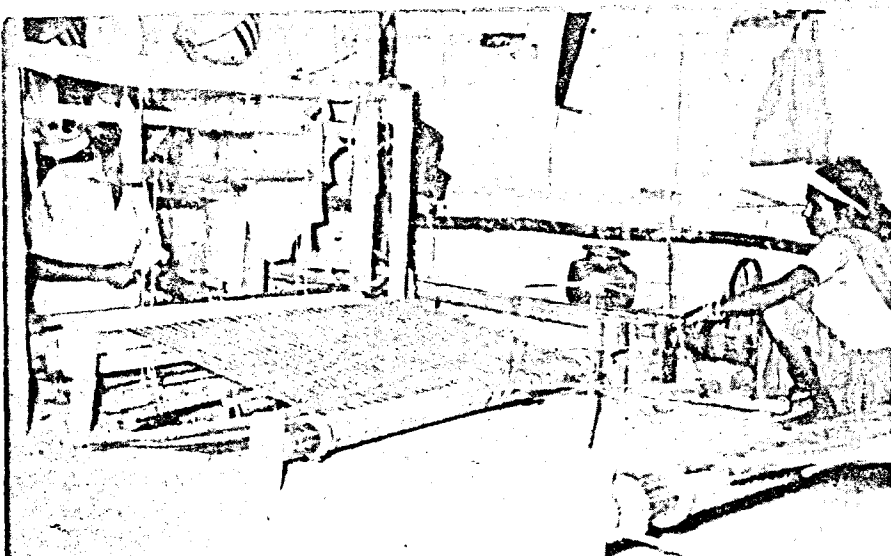
Not a Hasty Measure

He had stated 50 years ago, Rajaji said, that boys should be taken by the teachers in groups to the village potter, smith, barber or dhoby and made to see these artisans at work and understand how they did their work. He had himself sat for hours watching how the potter made his clay, turned the wheel, made the earthen vessel, or the smith beat red-hot iron into shape, or fitted the iron tyre on the cart wheel; he considered that as good an education as mere three R's learnt during long hours at school. When he read that paper, there were a number of educational experts including an Inspector of Schools, Mr. Kershaw, and they all praised the ideas he had put forward. He got an invitation from Mr. Fraser, who was editing an educational journal in Bombay, to contribute to the journal and he did so, stressing the advantage of taking children to watch craftsmen at work and that it was more important than even what was taught at school. Whatever the defects or merits of the scheme, he would claim that it was not done in haste.

The President of the Guild had said that though he might have been thinking of this scheme for long, he should have given notice of it to teachers and introduced it slowly. Sri Rajagopalachari said that he agreed that that could have been done; but there was no time to do so, in these days of hurry. Further, more thinking did not necessarily mean more wisdom. The amount of wisdom attained was not always in direct proportion to the time spent on thinking and the two were often totally different. As against this, he would mention that some who had spoken on the scheme and supported it, claimed that it was not any new or extraordinary scheme, or even a scheme of Rajagopalachari, but it was an old one, a teacher's scheme and that more than one teacher claimed to be its author. He had no hesitation in saying, Sri Rajagopalachari continued, that this was no new scheme. Teachers had already suffered under the old

HANDLOOM AND COTTAGE INDUSTRIES

At the All-India Handloom and Cottage Industries Exhibition held on the Island Grounds, Madras City, many stalls demonstrated the actual processes in cottage industries.



Pictures show handloom weaving, boiler and bucket making, pottery, bee-keeping and clay sculpture.

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"WE SEEK TO SERVE AND NOT TO COMPETE"

August 1953

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COVER PAGE: "Village Home" by Anjolie Dev (12), Lovedale, The Nilgiris.

scheme but they took it for granted. Otherwise they all saw that there was need for a change.

Natural Urge to Learn

Critics said that children were too tender to be made to learn some of the things proposed at the age of six to eleven. Sri Rajagopalachari contended that there was no point in this objection, as children were now made to learn and were considered good enough to learn generalised mathematics and abstract problems in mathematics at this age, as an intellectual training and discipline. Between the ages of six and eleven, children could learn many things, and it was wrong to think that generalised mathematics could be learnt but not some craft. The child had a natural urge to handle, break or make things; sometimes it did this fruitlessly, sometimes correctly.

The only difficulty came when they were made to learn things which were wrong instead of things for which they were fit. If children between the ages of six and eleven could be drilled into learning generalised mathematics or syntax, articulation and style of writing, they could learn other things as easily, or develop a considerable amount of aptitude for manual work. They did this by themselves when left free; only elders looked on this activity as 'mischief.'

Gandhiji's Views

Sri Rajagopalachari said he had made enquiries as to what exactly was taught to school children between the ages of six and eleven. He obtained that information about what was taught in the course of these five years. Cicero once said that the speed of a horse was not the fault of the horse but of the horseman. What now took five years to teach could, under the new scheme, be taught in two years, between the ages of nine and eleven, if only the child was left free in the earlier years to do what it desired. If they left the child free in the earlier years, he would later learn things more quickly than would be the case otherwise. That was what Mahatma Gandhi had said on one occasion when they were discussing things relating to the question of teaching children.

Some critics asked, "What craft can boys of six to eleven learn? It cannot be anything useful." It was not intended, Sri Rajagopalachari said, that the boys should learn a craft. In this connection, the word used,

"apprenticeship", was rather over-descriptive and rigid. It was not the appropriate expression. It was not apprenticeship in its rigid narrow sense that was meant; it was just "the habit of working" that was intended to be cultivated. Nor was it intended that the boy should be made to learn "dignity of labour." It was only intended that he should know something which would inculcate in him a respect for the work and those at it. At present, every boy put to school considered himself superior and different from his cousin or another boy who did not attend school but worked on a farm or in a smithy.

Respect for Work

"If this scheme is worked properly and school teachers co-operate", he said, "boys will be made to respect the farmer, the smith, the potter or the wheelwright, and made to behave well towards them and respect men who maintained society by manual labour." It was a disgrace that any section of people should look down on men who worked physically and by their bodily energy produced things which sustained life in the country. Even if boys did not learn anything else, if they learnt to respect the artisans and other producers, that would be a great gain.

Many people imagined that all our industries and village crafts were gone and it was no good thinking of those village industries now. He would claim that despite their weakening as compared with the past, these village industries were still there and it was these industries that sustained life in the country still, much more than the other industries. It would be folly for them not to know about these industries, on which life in this country still depended; as for instance, paddy cultivation, production of oil, carpentry, brick industry, etc. Comparatively, their money value might be low but their vital part in sustaining the economy of the country could not be ignored. They still gave life to the country and it was his hope and the hope of those who thought with him that these industries would be revived soon. He would urge Prof. Venkatarangiah not to give up hopes in this connection.

Occupational Touch

Criticising the new scheme for the reason that the industries were not live enough was, Rajaji said, totally wrong. Under the present system of education,

children were dissociated from the occupations of their families and they lost the habit of work as a result. It was not a case of an honourable change of profession like a doctor's son becoming an engineer; it was a case of complete divorce from work as such and shunning all manual work and occupations involving manual work, and changing over to occupations which involved no manual labour. Under the new system, there would be no such divorce; it would keep up contact with the work of the family, or some other work. "Let all children go to school; but let them not get out of touch with the family or other occupation—that is all we say. That was why the time was divided between the three R's and the occupational touch that we want to maintain," he said.

While Prof. Venkatarangiah was ready to accept the new scheme from the point of view of its helping universal elementary education as envisaged in the Constitution, Sri Rajagopalachari said, he was not himself "such a full believer in universal compulsory elementary three R's education." He would say it might be good; it would not be bad if it could be imparted without detriment to more important things. But he firmly believed that much less time was necessary to give a three R's education than was now devoted to it. Let children, therefore, spend their non-school time in touch with the occupations on which the community still depended.

Better Training

"I would claim", he said, "that if only this scheme is given full and proper trial, after six years, the children who have gone through this type of education,—it is hardly worthy of being called a new scheme; it is only a change in routine—will be more intelligent but possess the same amount of three R's education and it will be more easy for them to join engineering, technical or scientific schools and colleges. They would be better boys in the engineering and science courses if between six and eleven, they follow this type of education. I am prepared to say that Committees of Admission would find them better boys to select than others who have not had this training. If I have the power, I would suggest that a boy who can prove that he had gone through this scheme of training between six and eleven years,

should be assumed to be a better boy and given a privilege in admission for that reason, other things being equal, because on merits he will be a better boy."

Even if nothing was done during the off-time by boys, the fact that they were let free was by itself a thing of great importance, Sri Rajagopalachari said. The amount of joy a child felt when leaving school, the reinvigorated energy with which he came again after such freedom, would be a great gain. Those who saw how happy a child was on leaving the school, would realise that there was something wrong with the system which made the child rejoice at this freedom. The mere fact of release from some discipline would not adequately explain this joy.

Teaching at Home

As for the standard of instruction, Sri Rajagopalachari said that even with two and a half hours a day, the child could learn the three R's as well as it did now with five hours. In fact, children learnt more at home and less at school in the primary stage, provided the parents or brothers were educated. In fact, if he had his way and if he was still allowed to "meddle in these things some years hence", he would say that admission to primary schools be confined to children of only illiterate parents and that literate parents had no right to ask for seats for their children in primary schools. As for criticism on the score of "dignity of labour" being taught to tender children, he would say it was not the philosophical doctrine that was sought to be taught, as an effort to create a habit of work at a stage when habits were easily formed and aptitudes could easily be developed.

The Director of Public Instruction had given them figures which showed that of about 26,681 elementary schools, boys in 15,808 schools belonged to occupational families, Sri Rajagopalachari said. People belonging to Brahmin families might imagine that most boys had no occupational families to claim. Of the 1,678,000 boys in elementary schools, 1,489,000 belonged to occupational families and only about 188,000 boys had to be provided with some place where they could see occupational work done. This, he considered, was a very hopeful state of affairs. There was no difficulty in finding provision for them of the type envisaged. There was nothing impracticable in this plan.

But unless men put their hearts into it, even most practicable things would become impracticable. Our nation has no hope, he said, unless our boys get the habit of manual work; we will be ruined and nowhere, otherwise. "What is the meaning of the Five-Year Plan, U.S. Aid, and so on", he asked, "unless we are going to pay back the debt by all our citizens learning well to use their hands in productive work, and thus make up for what we now borrow?"

Attendance at Schools

It was not simply to meet the requirements of the Constitution regarding universal elementary education that this scheme was being introduced, though that objective was good in itself to fulfil. It was to achieve "real education" for the boys without deterioration of other things they had to learn. That, he said, was the essential principle of the scheme. "I expect", he said, "soon an increased attendance in schools. In the beginning, these controversies have an adverse effect. But, in the net result, we are bound to have increased attendance. The average of teaching strength now is three teachers for five classes everywhere. It is a very unhealthy system. If nothing else, this new system provides that the school can be split up and proper attention given to all the classes by the teachers without their having to engage two classes at the same time. This *sathavadanam*, enforced under the present system, is nothing less than a fraud.

"Apart from anything else, I would claim two things as welcome; on the whole, boys who were held back by parents on account of poverty and family conditions would now go to school and parents would now be induced to send the boys to school; and secondly, schools will have a teacher in charge of each class. A fairer distribution of teachers and classes and a larger attendance and strength at schools, are quite enough to recommend the new scheme, even if there is nothing else in it; but I claim there is lot more in it."

Some people said that if the hours were reduced, boys would become truant and idlers. That, he said, was far-fetched. Fewer hours would be welcomed like land revenue remission by ryots, he said. The children would spend their off-hours in play and they would learn a lot through play. About their being taken to places of work,

two views were expressed. Firstly, that it was harsh on children of tender age. The children were not apprenticed or expected to produce anything. They were expected to "play at work," and learn during that play. Another criticism was that this method was wrong and would make children idle and truant. This was not correct. In the olden days, girls of ten and eleven were married and sent to live with their husbands. They were considered good enough to go and live in a strange house. Why should they think that between six and eleven, children were not good enough to go and watch artisans and work and learn thereby? "I hope," he said in conclusion, "you will give your full support. I am very serious about it. Let me frankly tell you that of the many things I have attempted to do in my life, I consider this the most important."

Relief Measures Sanctioned in Madurai District

The Government have directed that 54 villages in Dindigul Taluk, 26 villages in Palni Taluk, 43 villages in Nilakottai Taluk, 53 villages in Tirumangalam Taluk, and 21 villages in Periakulam Taluk in Madurai District, be granted special wet and dry remissions.

Wet lands: (1) Full remission on wet lands with an outturn of four annas and below. (2) No remission on wet lands with an outturn exceeding four annas.

Dry lands: (a) *Food crops:* (Cereals and Pulses) (i) Full remission for dry lands grown with food crops with an outturn of four annas and below; (ii) No remission for dry lands grown with food crops with an outturn exceeding four annas; (b) *Non-Food crops:* (i) Full remission for lands grown with crops with an outturn of below four annas; (ii) No remission for dry lands grown with non-food crops and with an outturn of four annas and above.

Relief Measures in Coimbatore

The Government have directed that two Agricultural Departmental tractor trailer tankers be sent to Coimbatore District for distributing drinking water in the scarcity areas for a further period till September 30, 1953 or till the drinking water position in the scarcity areas of Coimbatore District improves, whichever is earlier.

The Sixth Year of Freedom

The sixth year of freedom 1952-53 was a historic year in more than one sense. It saw the beginning of the Five-Year Plan designed to make the country a land of plenty. For the second terms of five years, since Independence, the Congress Ministry assumed office, for another term of service in the cause of the Nation. The historic decision to constitute the Telugu Districts of this State into an Andhra State was also taken up during this year.

To the citizen of this State, the year has an added significance for the political developments in the wake of the general elections, gave the State the benefit of the leadership of one of the greatest elder statesmen of India, Sri C. Rajagopalachari. The 15-member Cabinet under his leadership took up office on April 10, 1952. To start with the Ministry had problems almost on all fronts to tackle. The problems of chronic food shortage and soaring prices were clamouring for immediate settlement.

The Betrayal of Nature

The feeling of relief that came in the wake of the untimely but welcome rains in the beginning of the year

under review, in the Rayalaseema Districts and in the Madras City, gave place to one of sorrow at the havoc caused by a cyclone of unprecedented violence in the Tanjore and Tiruchirappalli Districts. Standing crops of paddy, banana, coconut groves and sugarcane suffered considerably, affecting vitally the already deteriorating food situation.

The Government rushed in aid without delay to the affected areas. Compassionate grants were sanctioned to families that had lost their breadwinners; remissions to the tune of nearly Rs. 8 lakhs were granted in land revenue from the affected areas. So far a sum of Rs. 18 lakhs has been spent on various relief works in the cyclone-affected areas in Tanjore and Tiruchirappalli Districts. A cyclone relief fund was organised and a sum of Rs. 6.18 lakhs has so far been donated by the public.

Rains in Rayalaseema brought some relief, but they were not sufficient to keep off those tracts from the grip of famine. The central districts of Coimbatore, Salem, North Arcot, South Arcot and Chingleput were also affected by famine.

The foremost step the Government took towards alleviating the distress was to provide employment to those thrown out of their agricultural occupations by the ravages of unkind nature. Repair works to irrigation tanks were undertaken and employment provided. Every day the Government spend Rs. 66,000 on an average for providing employment for 4.56 lakhs persons. Four lakhs of old and infirm people, expectant mothers and disabled persons are fed at 725 gruel centres opened in the famine areas of the State. Collections to the State Famine Relief Fund amounted to about Rs. 10 lakhs.

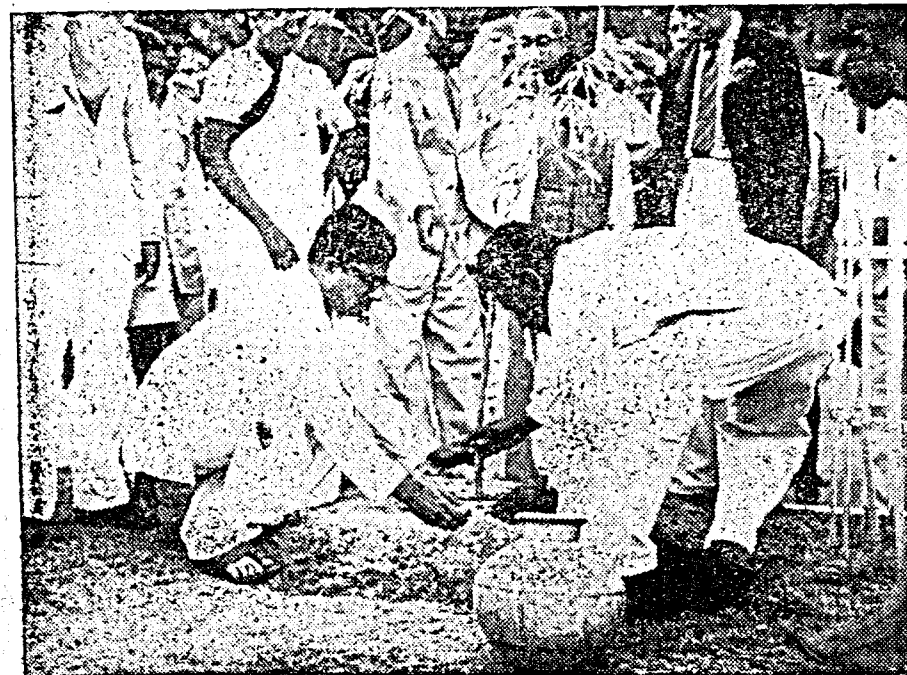
Food Production

It is not surprising therefore that with these adverse seasonal conditions and the havoc caused by cyclone affecting the most fertile areas of the State, the food situation had a serious setback. The need of the hour was more production. It was found that continuation of statutory rationing had a psychological reaction in the minds of the producers, making them indifferent to and negligent in increased food production.

On June 6, 1952, hardly two months after taking over office, the Chief Minister announced the decontrol of foodgrains. This policy meant giving up statutory rationing in all areas and giving up intensive procurement schemes. The State was divided into six zones, five of them being self-sufficient units in food production. In the sixth zone comprising Malabar, the Nilgiris and Hosdurg Sub-taluk of South Kanara, informal rationing was continued and the supply for this zone was met from the imports into the State arranged through the Government of India.

To meet the needs of the people, until normal trade channels were able to cope up with the public demands, ration shops were converted into fair price shops, for maintaining which a scheme of levy was introduced to procure rice from the surplus districts in the State.

Increased efforts were taken to bring in more areas under cultivation; 514,252 acres in Tungabhadra area and 475 acres in Lower Bhavani area had been reclaimed by tractors and



VANAMAHOTSAVA: Sri C. Subramaniam, Minister for Finance, plants a sapling to inaugurate the Vanamahotsava Week, at the People's Park, Madras City.

bulldozers; 58,000 acres of cultivable waste land have been localised by agricultural staff in Nellore, Salem and Ramanathapuram Districts.

New Deal for Tanjore Ryots

On August 23, 1952, the Madras Government took a momentous step towards relieving the mounting agrarian tension in Tanjore District. The Governor of Madras promulgated an Ordinance to provide for the improvement of agrarian conditions in Tanjore District, fixing the rents payable by tenants to landowners and the wages payable by landowners to pannaiyals or farm labourers.

The Ordinance, which was later passed by the Legislature into an Act, provided a new deal to the ryots and welcomed by all parties concerned, the tenants and the pannaiyals and several landowners. The Ordinance was later extended to Chidambaram Taluk.

Water for Thirsty Fields

Irrigation is the life blood of agriculture. Increasing efforts were

taken during the six years since Independence to bring in more areas under irrigation by launching big irrigation schemes and carrying out repairs to tanks and other reservoirs.

Owing to financial stringency the Government restricted policy in this field to the completion of the irrigation schemes taken up, before embarking on new ones. Government had to slow down the progress of some of the irrigation and power schemes throughout the State. The additional loan advanced by the Government of India helped the Government to continue, according to schedule, works at the Tungabhadra and Lower Bhavani Projects. The Projects will be completed by the end of this year. Government maintained also according to schedule the works at the Malampuzha Project site.

Plans for Power Production

Financial stringency also affected the working of the power projects in the State. Government faced with limited finances had to be content with keeping up the progress of construction

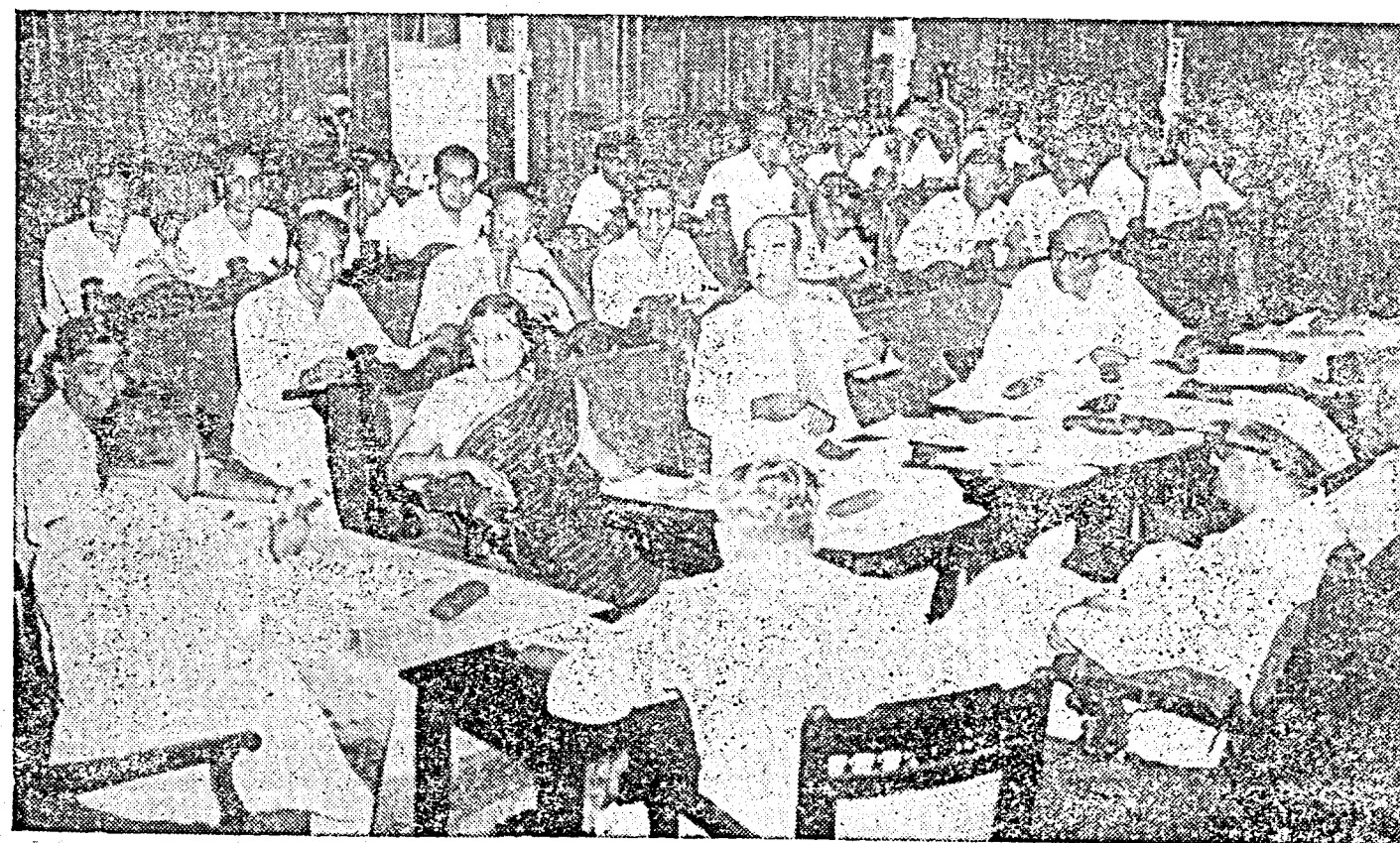
of the generating stations while schemes for the extension of electrical power to villages and towns have had to be slowed down.

The year 1952-53 saw the completion of the Moyar Hydro Power Station installed with a capacity of 36,000 K.W. for the utilisation of the tail waters of the Pykara System. The progress of works in the Machkund Hydro-electric Project has been satisfactory and an amount of Rs. 2.16 crores has been spent on that amount. The power tunnel has been completed and the first set of turbines will go into operation in 1954.

New Education

A glance at the Budget figures for the past six years would indicate a phenomenal rise in expenditure on education in the post-Independence era. The expenditure on Education which was only Rs. 459.72 lakhs in 1944-45 rose to Rs. 11,79.67 lakhs in 1952-53.

This year the Government introduced the new elementary education



PROJECT OFFICERS MEET: A conference of Project Executive officers of the Community Projects Programme was held recently at the Secretariat, Fort St. George. Sri T. S. Ramachandran, I.C.S., Director of Community Projects, presided over the conference.

scheme for rural areas, whereby the following educational principles are sought to be implemented; only three hours of daily classroom study; children should do simple manual labour and learn the dignity of work; children should help their parents in their work wherever possible.

Other important measures taken by Government during the year 1952-53 is the drawing up of two schemes; the first providing Rs. 5 lakhs for enabling the opening up of new schools in school-less centres with a population of 1,000 to 2,000, and the second introducing the shift system in Board schools.

There are over 39,000 primary schools scattered over the length and breadth of the State imparting instructions to 27 lakhs of boys and 15 lakhs of girls. Over six lakhs of boys and a lakh of girls are studying in the 318 boys secondary schools and 265 girls schools. The policy of the Government in the field of elementary education is to encourage Basic education. The most outstanding amongst the measures introduced by Government, which directly benefitted a large section of the community is the grant of educational concessions to the sons and daughters of all non-gazetted employees of the State Government, employees of local bodies drawing pay not exceeding Rs. 300 per mensem and all teachers employed in aided schools.

Four new colleges for Arts and Sciences were opened during the year under review, bringing up the total number of colleges affiliated to the three Universities of the State to 65 for boys and 12 for girls.

Introduced in 1948, the Scheme of Social Education (Adult Education) is very popular today. In the State 2,600 Adult Literacy Schools functioned during 1952-53. Literacy tests are conducted and certificates are awarded.

Health

Among the notable achievements made in the field of health and medicine during the year under review, may be mentioned the upgrading of the following departments in the State Hospitals, preparatory to the establishment of an All-India Medical Institute for Research and Post-Graduate Training: Venereal Diseases Department of the General Hospital, Anatomy Departments of the Stanley Hospital, Obstetrics and Gynaecology Department



COMMUNITY PROJECT: Villagers at work on the Yekkar-Niddodi Road in the South Kanara Community Project Area.

of the Government Hospital for Women and Children, Madras.

The Government have agreed to participate in the National Malarial Control Programme formulated by the Government of India.

Industrial Progress

Industrialisation in this State has made much headway in the post-Independence era. Owing to the untiring efforts of the State Government, a number of large-scale, small-scale and cottage industries have sprung up. Two out of the five manufacturing automobile plants are established in Madras.

The State is a pioneer in the production of component parts like pistons, wheels and diesel engines.

The Nation's only ship building yard is located in Visakhapatnam in Andhra.

The capacity of cement factories in the State is a little less than a third of the total capacity of the country.

The State has a cycle manufacturing plant which has a producing capacity of about 3,000 cycles a year out of India's total production of 13,153 cycles. Out of 26 million boxes of matches made in this country, eight millions are made in this State.

At the Government Silk Filature, Kollegal, where only raw silk was hitherto manufactured, a twisting plant has been erected for the production of twisted yarn.

The construction of the Government Hydrogenation Factory, Kozhikode, has been completed and it is expected to go into production shortly.

A sum of Rs. 87,000 has been sanctioned as State Aid during 1952-53

to six private industries under the Madras State Aid to Industries Act.

A thorough investigation was made in 1943-46 by the Geological Survey of India and the Mining Engineer revealed the existence of large deposits of lignite, estimated to be in the vicinity of 2,000 million tons, over an area of 100 square miles in and around Neyveli in South Arcot District.

Various tests conducted in the samples of lignite have shown that the South Arcot lignite when processed is equal to first grade coal and can be used for generation of power.

To determine the actual difficulties that might be encountered in large-scale mining, a pilot quarry at an estimated cost of Rs. 99 lakhs has been established. The experimental quarrying project was inaugurated on March 5, 1953.

Welfare of the Workers

The policy of Government in the field of labour is to encourage internal settlement of disputes between workers and the employers. When conciliation has failed and further action is considered necessary, the disputes are referred by Government to an Industrial Tribunal for Adjudication. There are four Industrial Tribunals functioning in the State.

The Labour Department investigated 7,868 complaints during the year 1952. Of these 2,729 related to demands for reinstatement of discharged or retrenched workers, 1,301 related to increase in rates of wages and 662 relates to bonus.

There were 260 strikes and lockouts resulting in the loss of 400,230 of man-days; 131 of 260 disputes were amicably settled by the Conciliation Officers of the Labour Department. One hundred and twenty-six industrial disputes were referred to the Industrial Tribunals for adjudication.

The concessions granted to the Government Bus Transport workers in Madras City is the foremost among the beneficial measures undertaken during the year 1952 by the Government for the amelioration of the working classes. The concessions include payment of gratuity to workers on retirement and extra emolument for night duty work.

New Life in the Villages

The six-year old Rural Welfare Scheme of the Madras Government,

an attempt to educate the villagers in the art of self-help, is in operation in 108 firkas, including 24 new firkas to which the scheme was extended during the year 1952-53.

The aim of the scheme is to make each selected firka a self-sufficient, self-contained and fully developed unit in which the individual villagers will have the opportunity to develop both as an individual and as a unit of a well integrated society.

Community Projects

There is yet another scheme in operation in some of the villages of the State. That scheme—Community Projects—has been made possible by the Indo-U.S. Technical Co-operation Agreement. The purpose of the Community Project is "to promote the pre-requisite for additional productivity such as to cater for all the basic elements of rural life." Six areas have been selected in the Madras State and the Projects scheme was inaugurated in October 1952: K. C. Canal areas in Cuddapah and Kurnool Districts; Lower Bhavani Project area in Coimbatore and Tiruchirappalli Districts, Malampuzha Projects area in Palghat Taluk of Malabar District, four taluks in East and West Godavari Districts, Periyar Project area in Madurai District and three taluks in South Kanara District.

Each Project area consists of about 300 villages with a population of two lakhs divided into three development blocks of roughly 100 villages each. The development of the first block has been taken up and those of the other two will be taken up in succeeding years.

Development of Khadi

The Madras Government can justly claim to have been the first State to take active measures for developing Khadi. It was the first Congress Ministry in 1939, which took some active steps in the promotion of Khadi. But the first comprehensive scheme to develop Khadi directly through Government agency was formulated and given effect to in 1946 and ever since Khadi development is one of the important programmes which the Government pursue tirelessly.

The Khadi Development Scheme consists of two parts—Intensive and Extensive.

The Intensive part of the scheme was started with seven Intensive Khadi centres and four more centres have



JOINT SERVICE: Villagers and Social Service League, St. Aloysius College, Mangalore, working in the South Kanara Community Project area on the Navor-Sarpady Road.

since been opened. In these centres, Government provide all the facilities necessary for the villagers to produce and use their own Khadi.

The Extensive part of the Khadi Development Scheme is intended for

areas where Khadi has taken no root already. The intention of the Government is to pave the way in these areas for the extension of the Intensive Khadi Scheme.

In 1952-53, 51,466 families were engaged in the 11 Intensive firkas in spinning and 2,445 families in weaving. The production of yarn in 1952-53 in the Intensive centres was 1,696,573 yards and Khadi was 1,269,462 square yards. Expenditure on Khadi Development Schemes in 1952-53 was Rs. 39,01,084.

Womens' Welfare

No plan for advancement will bear fruit, which does not take into account the home, where the seed for communal living is first sown. Madras was perhaps the first and only State to constitute a separate department—the first of its kind in this country—for the advancement of women, and

Madras Loan Oversubscribed

The Government wish to place on record their gratification at the encouraging response from the general public, to the recent issue of the Four Per Cent 1963 Loan.

A special feature of the loan was that subscribers were given the option of earmarking subscriptions for utilisation in the Andhra State and the Residuary Madras State, to be constituted on October 1, 1953. The Andhra target was fixed at Rs. 2 crores and the target for the Residuary Madras State at Rs. 3 crores. Out of the total collections a sum of Rs. 142 lakhs, representing the maturing loan due for repayment on September 15, 1953, is to be deducted and the balance is to be placed at the disposal of the two new States in the ratio of earmarking by subscribers. The necessary legal provisions to ensure this distribution have been embodied in the Andhra State Bill now before the Legislature.

Even though the loan was expected to be kept open till July 31, 1953, it was materially oversubscribed by Saturday the 19th, i.e., the 4th day after opening. It was therefore decided to close the loan in advance of the notified date and it was accordingly closed on July 23, 1953, after due notification.

The total amount subscribed is Rs. 10,81,22,900 made up of Andhra, Rs. 3,07,05,200 and Residuary, Rs. 7,74,17,700.

A good portion of the loan amount has come from agriculturists and other small investors who are not accustomed to deposit their savings in Government bonds. The terms of the loan being favourable, the Government feel that those subscribers and other institutional investors, may not desire to have refund of excess subscriptions after proportionate allotment. In view of this fact and the need for more funds for the quick implementation of the National Plan, the Government have decided, in modification of the original notification, to accept subscriptions in full.

to encourage them to take an active part in the life of the community.

This object is achieved by a general plan of work which consists of

(1) One hundred and fifty-two Community Centres where 16,763 women and children gather after their household duties and engage themselves in reading, discussing family problems or receiving instruction in some useful craft;

(2) Two Service Homes for 200 deserted wives and destitute women, who are given general education and training in useful occupation, and

(3) Two Training Institutes where welfare workers are given proper training.

Welfare of the Harijans

Untouchability has been for ages, a great social evil in this country. Madras State was again the first to introduce as early as 1937 the first Temple Entry Act. After the attainment of Independence and assumption of responsibility by the people's representatives, the Government passed further legislative enactments removing all social disabilities of Harijans. A separate department has been functioning in the State for looking after Harijan welfare which includes:—Provision of house-sites to poor Harijans

either wholly or partly free, maintenance of schools, grant of scholarships, stipends, boarding grants, grants for the purchase of books, slates and clothing, provision of wells, tanks for the supply of drinking water, provision of sanitary amenities, pathways, street lighting and burning or burial grounds, grants to private bodies engaged in social and economic uplift of the eligible communities and assignment or lease of land for cultivation. The total expenditure on the various ameliorative measures undertaken by Government, for the year 1952-53, was Rs. 124.64 lakhs.

Co-operative Movement

The Co-operative movement came into existence in this State nearly half a century ago, primarily to relieve the indebtedness of the rural folk—agriculturists, artisans and traders. For a long time it remained a credit movement. In recent years it has undertaken a variety of functions in addition to the supply of credit, and today it occupies the proud position of being able to cater to the needs of the people in the villages and in the towns.

There are nearly 26,000 co-operative societies in the State with a membership of nearly 37 lakhs. The working capital of these societies is over Rs. 95 crores—a sum which exceeds even the revenues of the State.

The primary unit in the co-operative structure is the village credit society. On June 30, 1952, there were 16,727 rural credit societies with a membership of 14.63 lakhs and share capital of Rs. 193.22 lakhs. Rs. 7.33 crores were issued as loans at a rate of interest of 6½ per cent, the lowest in the whole of India. The rural credit societies covered 68.46 per cent of the villages and served 20.11 per cent of the population at the end of 1952.

Besides rural credit societies, there are other types of co-operative organisations for credit purposes—the Madras Central Land Mortgage Bank, the Madras State Co-operative Bank, and Central Co-operative Banks.

Government continued to utilise the services of the Co-operatives for procurement operations and distribution of foodgrains during the year 1952-53.

House building societies of different types tackled the problem of relieving congestion.

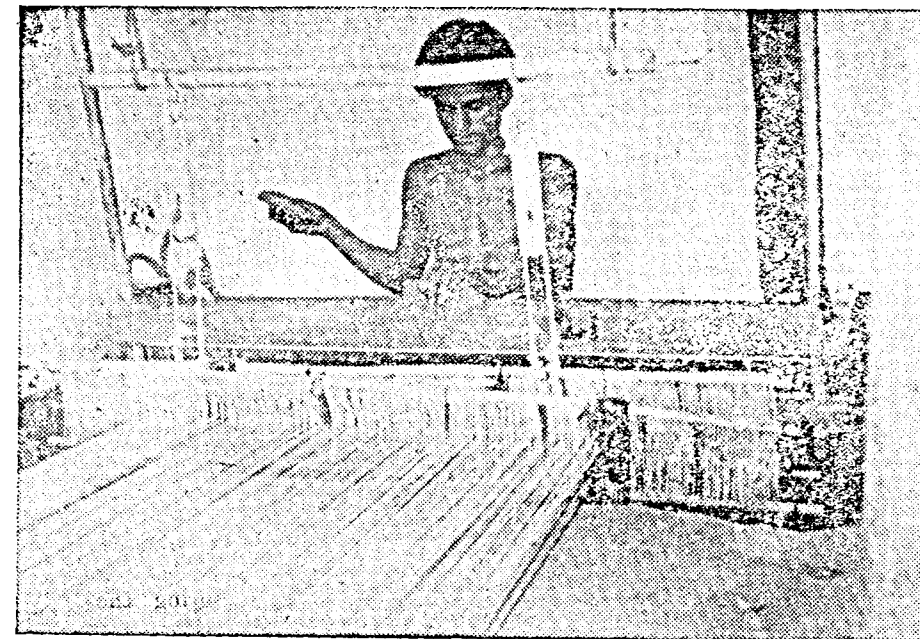
Forty-two Rural Housing Societies were formed under the Rural Housing Schemes to provide better housing conditions in villages. Government granted loans to the extent of Rs. 1.83 lakhs and 17 were completed and 25 houses were under construction.

The work of rehabilitation of ex-toddy tappers through the formation of palm jaggery and other types of societies was continued with satisfactory results. The 2,116 palm jaggery societies formed provided employment to 1.58 lakhs of ex-tappers, and the total production of these societies was 20.28 lakhs of maunds valued at Rs. 66.86 lakhs.

Five Years of Prohibition

Madras was the first State to introduce total prohibition. Five years of successful implementation of this social reform have disproved the arguments of anti-prohibitionists that this reform would interfere with the personal liberty of the people, and that this would be a miserable failure and an impracticable socio-political fad.

Though the loss of revenue incurred by Government is Rs. 17 crores, the indirect monetary gain by way of national wealth saved by the poor people is nearly Rs. 70 to Rs. 80 crores. Economically whole families of



AT THE LOOM: A member of the Vellarivalli Harijan Carpet Weavers' Co-operative Society works at his loom.

ex-addicts have benefited enormously by this measure. Their conditions have improved and many of them are free from debt and have acquired land, jewellery and other useful things.

Separation of the Judiciary

Separation of the Judiciary from the Executive is one of the Directive Principles of the Constitution.

The credit of having introduced the scheme long before its inclusion as a Directive Principle in the Constitution goes to Madras. This great reform in the field of judiciary was introduced in the State in October 1949, in the districts of Chingleput and North Arcot and subsequently extended to 14 more districts.

Handloom Industry

The plight of the handloom weavers caused grave anxiety to the Government during the year under review. One out of every 13 of the State population is a handloom weaver. It is estimated that over 27.5 lakhs of persons subsist on this cottage industry. In recent times due to a number of extraneous factors, chief among them being lack of yarn supply, large numbers of looms became idle and thousands of weavers were put out of employment. Hence distress among them had to be viewed seriously.

The Government sanctioned a scheme called "Relief Scheme" to mitigate

continued employment and also affords them relief from the burden of marketing cloth as far as possible.

The Government have moved the Government of India to reserve bordered dhoties and coloured sarrees for handlooms with a view to provide adequate relief to handloom weavers. On this representation the Government of India besides virtually reserving the production of coloured sarrees to handlooms, have also issued orders restricting the production of dhoties by mills to 60 per cent of their monthly average production during the period from April 1951 to March 1953.

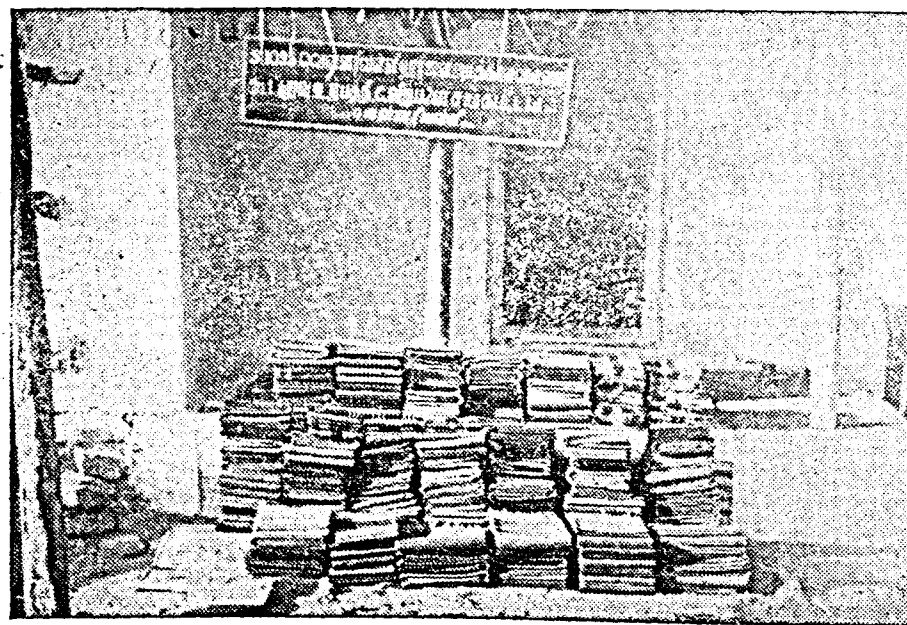
Five-Year Plan

The Five-Year Plan involves an expenditure of Rs. 2,069 crores of which the share of Madras State is Rs. 140.84 crores. The Madras Plan is largely an agricultural plan, the expenditure on agriculture, irrigation and electricity being of the order of Rs. 100 crores.

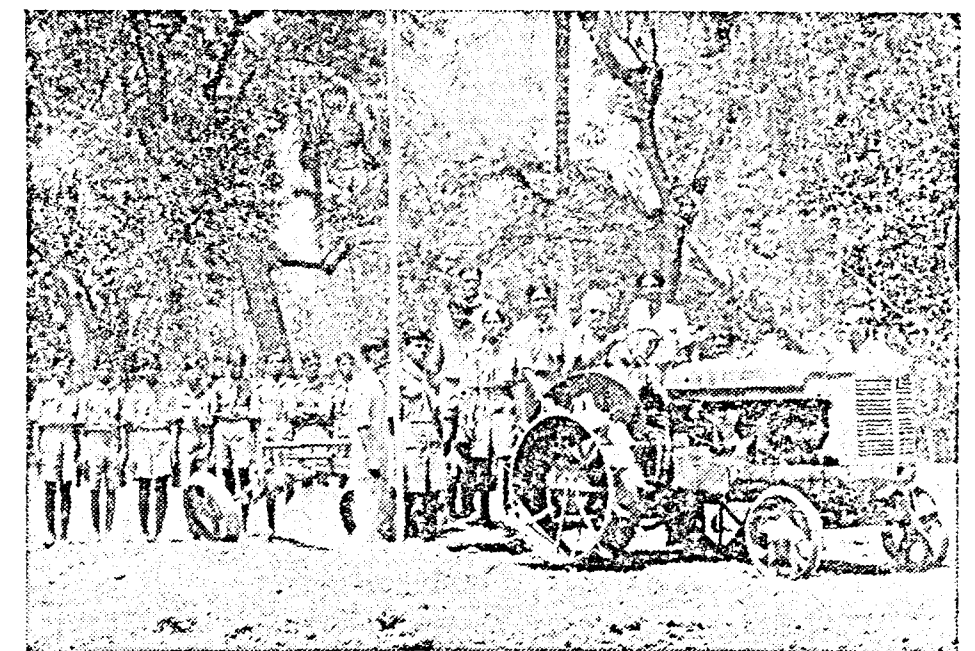
A significant feature of the Madras Plan is that it provides only for the continuation of the many schemes of development already underway.

Out of an expenditure of Rs. 420.08 lakhs programmed for in Agriculture during the year 1951-52, only an

(continued on page 15)



CARPET WEAVERS' CO-OP: Samples of jamakkams manufactured and marketed by the Vellarivalli Harijan Carpet Weavers' Co-operative Society in Salem District.



TRACTOR TRAINING: A demonstration of tractor ploughing was given to the trainees of Bollavaram Camp, organized by the Rural Welfare Officer, Kurnool.

IRRIGATION

14

MADRAS INFORMATION

commence excavations for foundations for masonry dam, as soon as the monsoons were over.

The Masonry Dam is designed as a gravity dam incorporating all the modern features. The dam will be 204 feet high over the deepest foundation level to the top of the dam and 140 feet above river bed level.

The dam is of stone masonry, with front and rear faces built of coursed rubble masonry first sort and a heartening in between of random rubble masonry in cement mortar of specified proportions.

Sluices

The dam has nine sluices 6 feet by 10 feet for passing the required discharge along the existing river course. There will be four penstock pipes with an ultimate generating capacity of 10,000 kilowatts for generating power at a later stage. There are five high level sluices of size 6 feet by 10 feet for supply of water for a new area of 207,000 acres, mostly in the Coimbatore District.

Spillway

In the river portion to the Masonry Dam, an ogee type of spillway of length 396 feet is provided to discharge a flood of 122,000 cusecs. This, together with the river sluices, will permit a discharge of 156,700 cusecs. The top of the spillway will be provided with nine radial gates of 36 feet by 20 feet with the full reservoir levels at the top of the shutters.

Earth Dam

The Earth Dam is of zoned type with a central impervious zone, enveloped by semi-pervious zones. In order to minimise the seepage of water through the junction between the original ground and the earth dam and to ensure proper key between the embankment and the foundation, the usual precautions of adopting a cut-off-trench with one or two cut-off-walls, a grout curtain below each of the cut-off-walls and a filter with graded materials in the rear portion of the dam have all been taken. Consolidation with optimum moisture content has been done to get a well compacted dam.

An up-to-date laboratory to carry out the various tests in soils used on the embankment and also the cement mortar and concrete used on the

Masonry Dam, has been put up at site and is of great help in controlling and maintaining the quality of work on both Earth and Masonry Dams, and also for effecting economies in the use of construction materials.

Most of the staff had not the practical experience of the construction of an Earth Dam using modern machinery. In order that the staff might gain experience in this work, a beginning was made in the formation of the Earth Dam at the extreme flanks where the height of the bund is small.

Area Submerged

The one peculiar feature of this Project is that the length of the dam is great for storage held, as better sites are not available; but it is fortunate that the area to be submerged is mostly reserve forests. The number of people that have been displaced does not exceed 1,000 families. All the private owned lands and houses in the reservoir bed have been acquired after paying the full present market rates plus 15 per cent solatium of the cost to cover compulsory acquisition.

In addition, with the modern conception of the State as a Welfare State, the people who are displaced have been given free sites to build houses, and land up to five acres to each family free of cost, to enable them to earn their livelihood. The Government have also given them the movable building-materials on their old buildings at 25 per cent of the cost. The transport of the materials is being done by Government, free of cost to the people. The old villages had developed in the course of years in a haphazard way. But when the people were rehabilitated in a new area, well-planned villages have been formed and it is now a pleasant sight to see these new villages laid out and developed neatly.

Labour Force

In carrying out a Project of this size, a labour force 20,000 strong is needed for the job. The welfare of the labourers is kept in view and they are given all the amenities necessary such as fair-price depots, cafeterias, shops, hospital, picture house, school for education of children, parks, etc.

On festive days, such as Puja Holidays, Pongal Holidays and Republic Day, sports and other entertainments are provided for the labourers.

A school with three classes was first started for the benefit of the children of the staff and labour, and within a year it has grown to six classes and has seven classes at present.

The machines at work on the Earth Dam are working in South India for the first time. So, the Project works have attracted a very large number of visitors from far and near. During the Bennari Mariamman Temple Festival, and the Karamadai Car Festival, the visitors to this Project often number 30,000 per day. A steady stream of distinguished visitors from all parts of India have also inspected the works.

For the benefit of the visitors who may come to the Project, an information office is built at the entrance to the Camp where all details, technical and non-technical, about the dam are exhibited on charts, photographs and models. The camp is also fully connected with an internal telephone system.

Canals

A canal, capable of discharging 2,300 cusecs, at full supply level, takes off from the dam on the right flank. The sill of the canal sluices is at R.L. 840.00. The canal will be 121 miles 6 furlongs long, with a network of branch canals and distributaries to a length of 500 miles. This canal will bring under irrigation 207,000 acres of land lying in four taluks, namely, Gobichettipalayam, Bhavani, Erode and Dharapuram. The irrigation will be the dry crops, cotton and millets in rotation.

The normal bed width of the main canal is 111 feet with a depth of flow of 8.6 feet. Being a contour canal, it irrigates only on one side, and intercepts a number of natural drainages, etc. Hence, 152 drainage culverts, 25 aqueducts, four syphons and one super-passage had to be built. There are besides about 100 bridges and a number of sluices.

Though the present age is one which is noted for its craze for machines, the Project is carried out by using labour and machinery in proper proportions, work done by machines being such that cannot be economically carried out by manual labour. Thus, a happy balance between man and machine has been effected, and full scope given for employing all the labour available for work for which it is particularly suited.

CULTURE

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MADRAS INFORMATION

International Children's Art Exhibition

An exhibition of children's drawings and paintings, entered for the fourth international competition in Children's Art conducted by *Shankar's Weekly* was inaugurated by the Chief Minister Sri C. Rajagopalachari, on July 3, 1953, at the Government Museum Centenary Exhibition Hall. The exhibition was open to the public from July 3 to July 7, both days inclusive.

For the fourth year in succession, *Shankar's weekly* conducted an international competition in children's drawings and paintings in December 1952. Children from 35 countries including Afghanistan, Argentina, Australia, Austria, Belgium, Burma, Canada, Ceylon, Chile, Czechoslovakia, Denmark, East Africa, Egypt, Eire, Ethiopia, Finland, Fiji, Germany, Holland, Pakistan, Singapore, South Africa, Switzerland, Syria, Turkey, United Kingdom, United States of America, Union of Soviet Socialist Republic and Yugoslavia participated; 13,000 entries were received. The competitors' age ranged from 3½ to 16 years.

The entries were judged by a Committee with General Cariappa as Chairman and 290 prizes were awarded.

Among the foreign countries that participated, Japan won the largest number of prizes.

A select number of paintings from the entries were on display at the Government Museum Centenary Exhibition Hall. The paintings unfold the wide range of interests the children of different countries of various age groups have.

Entries from Turkey were the most impressive in point of size and theme, those from Eire, United Kingdom and the United States of America excelled in colour work, and those from Argentina, Hungary, Czechoslovakia and Finland displayed fine technique; versatility of themes marked the entries from Indian children.

List of Madrassi Prize winners.

Below 5 years. (1) D. T. Roop Lekha, (2) Chamkur Sri Devi.

Age 7-8: Chandra Mohan, O. T. Sreelekha, Terena Rodrigues.

Consolation Prizewinners in Madras (Drawings).

Below 5: Girija Shanker, Usha, Kumar, Sreekant, Leela Cooper.

Age 5-6: K. Anand Kumar, P. Pushpa, N. Dhanalakshmi, Rugmini R. Nayar, M. Shanta Kumari, Santha Sankari, Chitra Rekha, R. Vasanthi, V. Vikram, R. Jayanti, S. Srikanth, Usha Devi, P. Sudha, Usha.

Age 6-7: Chandra Kumari, Vijay Raghavan, P. N. Aruna, R. Nirmala, N. A. Lakshmi.

Age 7-8: P. Geetha Menon, Leela Raghavan, R. Krishnamurthi, O. T. Jayachandran, S. Vijaya Sarathy, V. Muralidharan, R. Girija, R. Lakshmi,

Rajendra Prasad, K. A. Uma.

Some of the Pictures.

1. *Dancing with tune*—Chamkur Sri Devi, Madras (3½).

2. *Cat and Dog*—M. Mukundar (8) Cannanore.

3. *Village Home*—Anjolie Dev (12) Lovedale, Nilgiris.

4. *In the Church*—Sointu Raunio (15) Turku (Finland) The President's Gold Medal was awarded for this picture, considered best among the entries to the *Shankar's Weekly* Fourth International Children's Art Exhibition.

5. *Father goes to Office*—S. Indhirani (8) Madras.

Carpet Weavers' Co-operative Society

Under the Prohibition-Amelioration scheme a carpet weavers co-operative society was organised for the benefit of the Harijans at Vellarivalli in the Salem District. The society was registered on 27th February 1951 and it started work on 4th March 1951 with 40 members on its rolls and a paid-up share capital of Rs. 400. Each of the members has been provided with a loom. Training in carpet weaving was also given. The members were taken on study tours to adjoining carpet weaving centres like Bhavani and other places. The society has employed a weaving maistry to impart training to the members of the society who are new to the industry.

The society is engaged in the manufacture of carpets and easy-chair canvas. It purchased raw materials

for Rs. 3,712 up to the end of April 1953 and converted them into finished goods worth Rs. 5,683. The sales effected amounted to Rs. 3,951. At the end of April 1953, the society had a stock of finished goods worth Rs. 1,732. The society is making a steady progress.

Government sanctioned to the society a subsidy of Rs. 1,000 and a loan of Rs. 1,000 repayable in five years to meet the cost of the looms and also the free services of a Junior Inspector to work as the Secretary of the society. They also sanctioned a subsidy of Rs. 480 to meet the pay of the weaving maistry, employed by the society, for a period of one year. The formation of a carpet weavers co-operative society has contributed in a large measure to improve the economic condition of the Harijans of Vellarivalli.

The Sixth Year of Freedom

(continued from page 11)

amount of Rs. 276 lakhs was spent. Although good progress was made on Research, Land Development and Reclamation, Minor Irrigation and Manures and Fertilisers, the entire amount allotted could not be spent because of the non-receipt of equipment, non-availability of plant and adverse seasonal conditions.

The Programme lays down definite plans for improving rural communications and water-supply, organising co-operative societies, introducing better methods of sanitation, agriculture,

animal husbandry, irrigation and development of Khadi and cottage industries.

Other lines of work include opening of elementary, night and Basic schools; organisation of reading rooms and libraries; opening of primary health centres, dispensaries, maternity and child welfare centres, construction of bathrooms and latrines and starting of leprosy clinics.

In the face of severe trial and tribulations during the past six years, Madras has stood up with courage and managed its affairs as well as it could.

The Lower Bhavani Project

The Lower Bhavani Project as the name implies, is a Project to harness the waters of the River Bhavani in the lower reaches of the river.

The Bhavani is a tributary of the Cauvery and has a major portion of its course in the Coimbatore District, Madras State. It drains a catchment of 2,376 square miles. The Bhavani which comes under the influence of both the South-West and North-East Monsoons, carries ordinarily heavy freshes of the order of 50,000 cusecs and more. These freshes last only for a few days. At other times, the flow is barely sufficient for the old irrigation of 39,000 acres developed under two ancient anicuts on the river below the dam. The present scheme is to dam the river about ten miles upstream of Satyamangalam, where the catchment is 1,621.5 square miles and store the floods and utilise the stored water as and when required.

The Dam is 28,862 feet long, of which 1,523 feet is of stone masonry in cement mortar and the rest an Earth Dam of the most modern type. A canal about 121 miles long for irrigation of a new area of 207,000 acres takes off on the right flank.

Cost of the Project

The execution of this Project was sanctioned late in 1947, for Rs. 7 crores. The Government later wanted the Canal to be extended to serve a famine-affected area in Dharapuram Taluk at an additional cost of Rs. 120 lakhs. Power penstocks for about 10,000 K.W. and other miscellaneous additions costing Rs. 10 lakhs were also sanctioned, making a total of Rs. 8.3 crores.

The Project is expected to be completed at a cost of about Rs. 9.3 crores due mainly to an excess of about Rs. 70 lakhs in the land acquisition

charges and to deeper foundations found necessary during execution. Large economies have been effected on the work both in design and working costs in spite of the rise in price since 1946 when the estimate was prepared. The establishment cost has been as low as three per cent of the outlay on works only.

A start was made with preliminaries early in 1948 and lands were acquired for laying out a camp to house all the staff and the labourers required for the construction. The actual work was started only after October 1948.

Camps

A modern camp, incorporating all the latest ideas in town planning, was laid out just near the dam site. The camp consisted of necessary quarters both for the staff as well as for the workmen, offices, Post and Telegraph Office, Police station, Treasury,

Lower Bhavani Project at a Glance

Storage work:

Length in feet	{ Masonry .. 1,523
	{ Earth .. 27,339
Height above bed in feet	.. 140
Dam Volume in M.C.F.T.	{ Masonry .. 14
	{ Earth .. 161
F.R.L.	.. + 915.0
M.W.L.	.. + 920.0
Capacity at M.W.L. M.C.F.T.	.. 32,800
Water-spread	.. 30 square miles
Power installed	.. 10,000 K. WATTS (Seasonal)
Cost in crores	.. Rs. 5.3

Salient features:

Length	.. 121 miles	.. Discharge 2,300 cusecs
Area	.. 207,000 acres, first crop	} Cost Rs. 4.0 crores
	103,000 acres, second crop	
Yield	.. 130,000 tons of food crop	
	50,000 tons of cotton	

foodgrains required, with the Executive Engineer as the Executive head of the Colony.

There is a Health Officer with the necessary staff to look after the health of the Camp and the environmental hygiene. There is a full-time Medical Officer in charge of the Hospital with in-patient and maternity wards.

Market Conditions

At the time the Project was started, the market conditions were unsteady with heavy fluctuations and continually rising spiral of cost of materials and labour. So, contractors quoted high rates and it seemed uneconomical from the standpoint of the Government to adopt this method. It would have meant the revision of estimates considerably over the originally sanctioned estimate.

So, with the approval of the Government, the Department itself took over the construction. It had to import and collect the labour at the site, employ them on job-work, measure the works, prepare bills, make weekly payments to labourers, and to look to all other requirements of the labour imported from various distant places.

Method of Execution

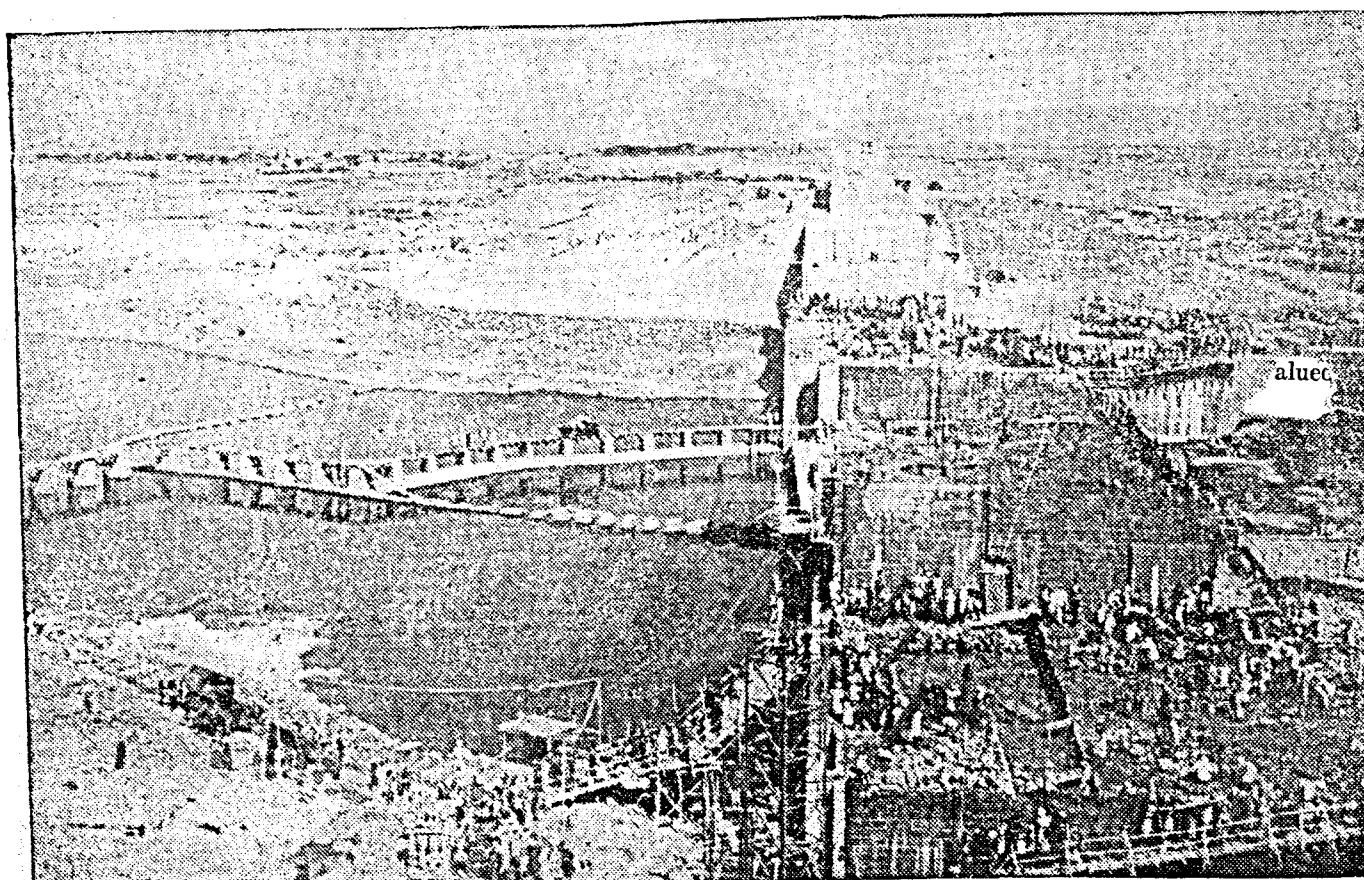
Thus, the execution of the work has been planned and executed on the basis of job-work, i.e., on numerous small jobs on task-rate system, with

headmen of labour gangs functioning as job-workers and occasionally on daily wage system. Both the job workers and the departmental labourers have been paid regularly every week. The departmental work or daily wage system was limited to the minimum and was confined only to those items, where the workers are not susceptible of definite measurements, such as dewatering foundations, cleaning masonry and the like. The net result has been that the contractors' profit has been eliminated. A high quality of work has been maintained throughout and the cost kept down, by this means.

The estimates for the Project were prepared in 1946 with then prevailing rates. Now, the Project is nearing completion, and it is expected that the Project will be completed without a revised estimate, in spite of the excess in quantity of work due to deeper foundations up to 40 feet in masonry portion and costs of most of the articles and labour having gone up considerably since 1946. The dam can also be made to hold more water as the F.R.L. has been raised by five feet.

Masonry Dam

During the dry months of 1949, the diversion works, namely construction of coffer dam, etc., were started and completed before the South-West Monsoon floods. This made it possible to



LOWER BHAVANI PROJECT: A view of the Masonry Dam in Progress as seen from Right Flank.

A bridge across the Bhavani was first constructed just below the dam site to facilitate movement of men and materials to the other side of the river. This was officially opened on 28th August 1949.

Workshops and Stores

In order to meet the day-to-day requirements of repairs and maintenance to machines and other accessories, a workshop, with the required machine tools, was erected.

For the successful and expeditious completion of the Project, the life-line is the supply of materials for construction. So, a central stores was organised, stocking all construction materials required for the work. For this purpose, approval was obtained to purchase and stock stores up to a limit of Rs. 25 lakhs.

The preliminary works took nearly a year, and from then on, the Camp had a population of 30,000 people—workers and their dependents—and the place began to hum with life and activity.

As a population of over 30,000 at the dam works had to be looked after and fed and kept free from disease, etc., the Headworks Colony was constituted as a separate area by the Civil Supplies Department and supplied with the

Barren Tract To Bounteous Farm

Three miles from the busy town of Chingleput, at the foot of a tiny hillock, the verdant 200 acre-paddy fields of the Athur Farm provide a sequestered cool retreat amidst the barren tracts one comes across while journeying to Kancheepuram from Chingleput. Six years ago, this beauty spot had not come into existence and the entire land was undistinguishable from the other desolate and forsaken soil; but today the land has become a haven of agriculturists, for this farm, owned by a Madras advocate, has set up standards in agricultural farming worthy of emulation by others.

The Athur Farm is half a mile off Reddipalayam railway station, on the Chingleput-Arkonam branch of the Southern Railway. A winding cart-track running along the undulated ground takes us to the farmhouse. The jeep—the wonder vehicle of this century—can negotiate the road with ease.

The Early Beginnings

When Sri Srinivasa Iyer, the owner of the land, bought 20 acres in Athur and visited it in early 1947, disappointment awaited him. For, as far as his eyes could see, the dry land stretched out covered with shrubs looking as though a thorny carpet was spread over the area. In the little dilapidated building which now serves as his farmhouse, reptiles and grasshoppers shared his company during the night he stayed there. He went about and saw famished farmers in hovels. There was a lake near his farm, but without even a semblance of water, for 1947 was the first of the series of years that the monsoon had betrayed us.

Sri K. Srinivasa Iyer belongs to a family of landholders and so the farmer's instinct in him and the experience he had gained in his brothers' farms at Tiruchirappalli and Panaiyur, which he used to visit during the summer recess of the Madras High Court, made him realize that unless he abandoned archaic and time-worn agricultural practices and resorted to scientific methods, nothing much could be achieved.

He bought a tractor, but soon discovered that an area of 20 acres was not a good economic proposition.

He slowly acquired more land and was soon able to form a contiguous area of 200 acres. He put the tractor to full use in reclaiming the lands.

Modern Methods for More Production

Sri Iyer then commenced a study of the agricultural practices of the district. Though rains never came, yet even the sporadic showers indicated the trend of the seasons and this helped him a great deal in preparing his land for sowing. He has prepared an up-to-date chart, of the rainfall during these seven years in that place.

"Agriculture, in these uncertain conditions of the monsoon, is a gamble. I fell a prey to this gamble and in the days of my farm work, lost even the seeds sown. But experience and study of the rainfall and seasonal conditions has enabled me to plan my sowing and transplantation", declared Sri Srinivasa Iyer.

Cut in Electricity

Sri Iyer dug seven wells and installed pumpsets. Luckily, there was power in the village and six of his wells are worked by power sets. He used to work these sets for even 24 hours formerly. But now he could not do it. After seven years of failure in monsoon, his wells did not have much water. "Each well used to give me enough water to irrigate over 40 acres, if worked for 24 hours, but now there is hardly sufficient water in them to irrigate 10 acres. Added to the misery, has come the cut in power. This cut in electricity has put a heavy strain on us. We are not able to pump out even that small quantity of water available in the wells."

Judicious Selection of Seeds

Next in importance to water, comes the selection of good seeds for sowing. Sri Srinivasa Iyer complimented the Government for running such excellent research centres all over the State. He never misses experimenting on his farm with new strains evolved in the agricultural research stations. He has tried a large number of strains and has pitched upon as best CO 13, ADT 20, PLR 2, SLO 16 for short-term crops, CO 18, AST 1, BIM 3, AST 5, CO 5, GB 24, TKM 3 for medium-term crops and CO 19 and MTU 19 for

long-term crops. After experimenting with these varieties, he raises his own seeds and uses them.

By a judicious planning of the time of sowing, transplanting these short-term and long-term crops, he is able to harvest a crop every month. He does not store them in his farm. After distributing the wages, which incidentally is in kind to his workers, he markets the rest.

Happy Band of Loyal Workers

The evolution of this monthly calendar is more for providing his hundred workers with work throughout the year. His workers form a happy band. Some of them stay within the colony he has provided, and others live outside.

Speaking about his workers, Sri Iyer said: "I do not engage casual servants. They are neither loyal nor sincere in their work. They don't have any attachment to the farm and its prosperity. If at any time, I engage them, I don't mix them up with my workers, who are mostly drawn from the neighbouring villages.

"All my men are 'permanent' here. They start their work by 5-30 a.m. getting their timing from the time-siren installed in the farm, and continue till midday, when they are served with *kuzhu* (ragi and rice porridge) from the worker's mess. There are two such messes at the two extreme ends of this farm. They commence their work at 1-30 p.m. and continue till 6-30 p.m."

The workers are paid in kind. Besides the midday kanjee, each worker gets as a month's wage from 40 to 80 Madras measures of paddy. Continued, sincere and meritorious service is a passport for the higher wage of 80 measures of paddy. Women workers, who start work only at 8-30 a.m. daily, get as wages 12 measures of paddy and in addition a bonus of 7½ per cent of the gross annual product. A moiety of the bonus is also shared by men workers. The workers get free housing facilities and free kerosene and salt. They are also given free clothing.

The farm house

The workers are always in contact with the farm house—an evidence of the resourcefulness of Sri Srinivasa Iyer. An internal telephone system



ART AND THE CHILD



Selections from the exhibition of drawings and paintings entered for the Fourth International Competition in children's art, conducted by *Shankar's Weekly*.

TWINS—Kausalya (14), Madras.

HOUSES—W. Ross (13), Lovedale, Nilgiris.

IN THE CHURCH—Sointu Raunio (15), Turku, Finland.

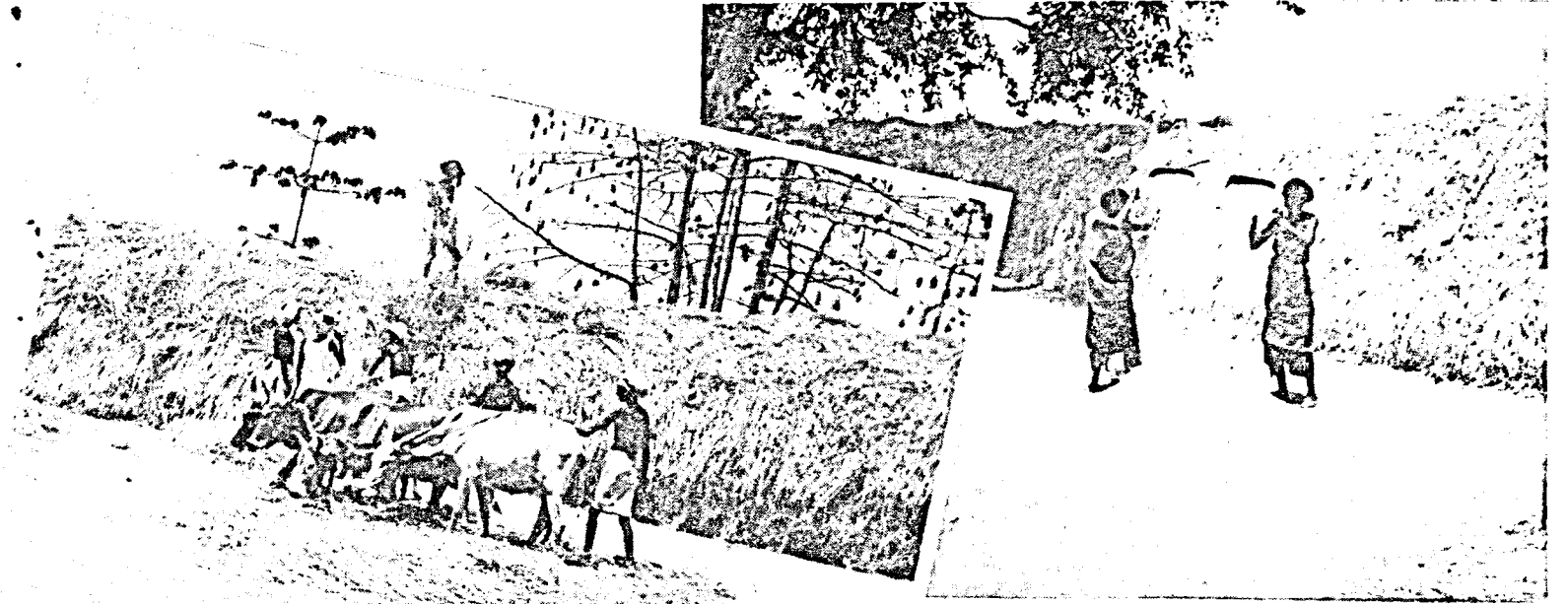
FATHER GOES TO OFFICE—S. Indhirani (8), Madras.

HAIR STYLES—O.T. Sreelekha (11), Madras.



ATHUR FARM IS RUN ON MODERN LINES

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Three miles from Chingleput lies the 200-acre Athur Farm, a green retreat amidst barren surroundings. Six years ago, when Sri K. Srinivasa Iyer, a Madras advocate, acquired this land, it was indistinguishable from the desolate neighbourhood.

Today, thanks to scientific and systematic farming, using tractor to reclaim the land, rainfall charts to plan sowing operations, electric pumpsets to work the wells, selected seeds with guaranteed yield, judicious cropping and loyal workers, Athur Farm produces 2,500 pounds of paddy per acre.

Self-sufficiency is a reality on the Athur Farm. The hundred workers of the Farm are paid in kind; blackgram, greengram, gingelly and sugarcane are grown and distributed to the workers. In their leisure hours workers spin cotton into yarn, for making into Khadi cloth.

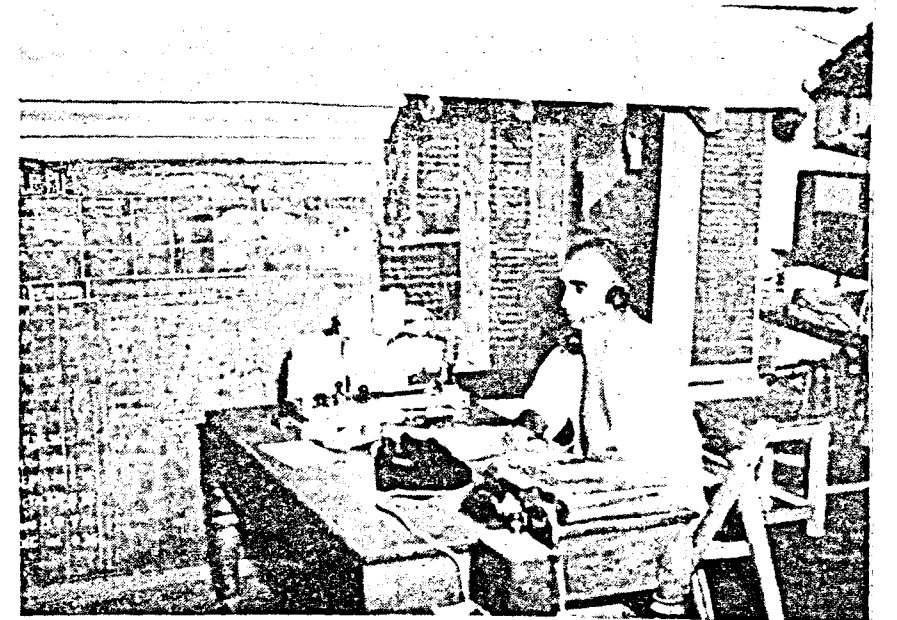
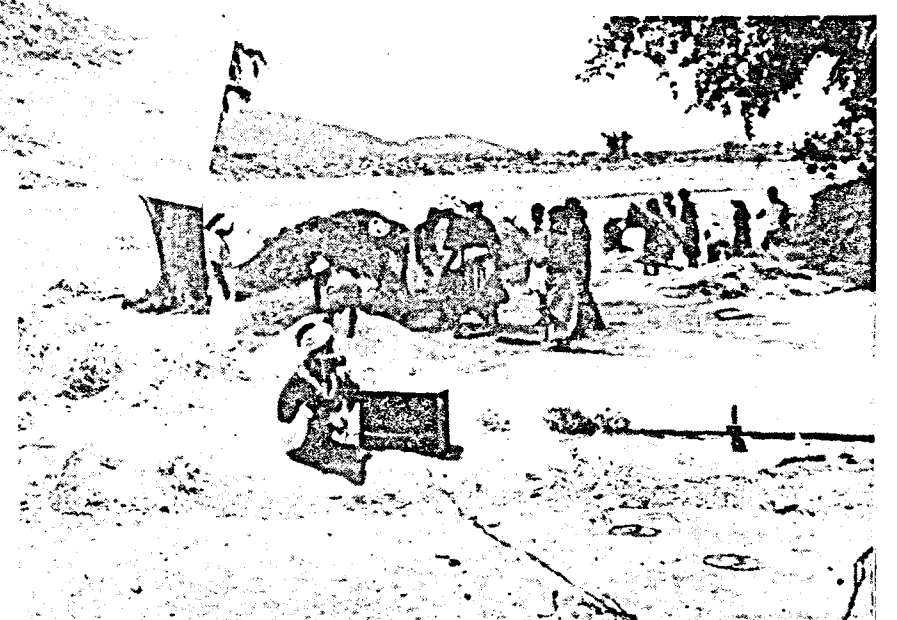
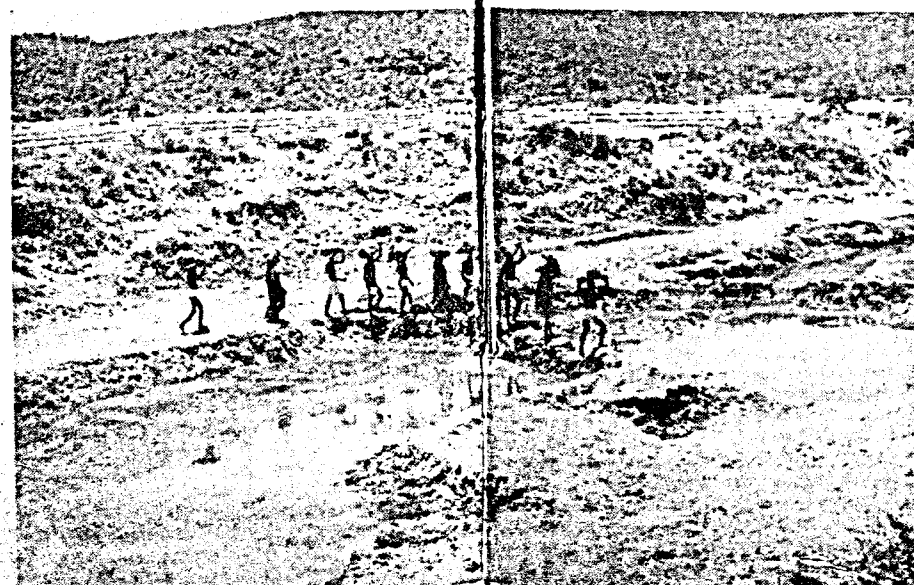
Pictures show :

Left (top to bottom) : (1) Farm workers gather the harvest and (2) bring it by headloads to the threshing-yard (3).

Centre (left and right) : Threshing is done by hand and by cattle.

Right (top to bottom) : (1) Women do the winnowing, (2) The chief farm-hand reports on the field-telephone and asks for instructions. (3) The nerve-centre of the farm where Sri Srinivasa Iyer, the Advocate-farmer, keeps in touch with his workers by telephone, and keeps an eye on production with the aid of wall-charts.

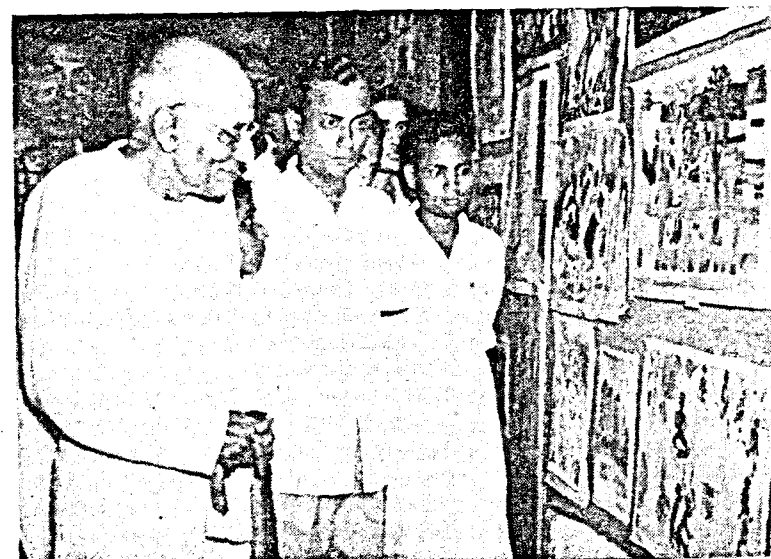
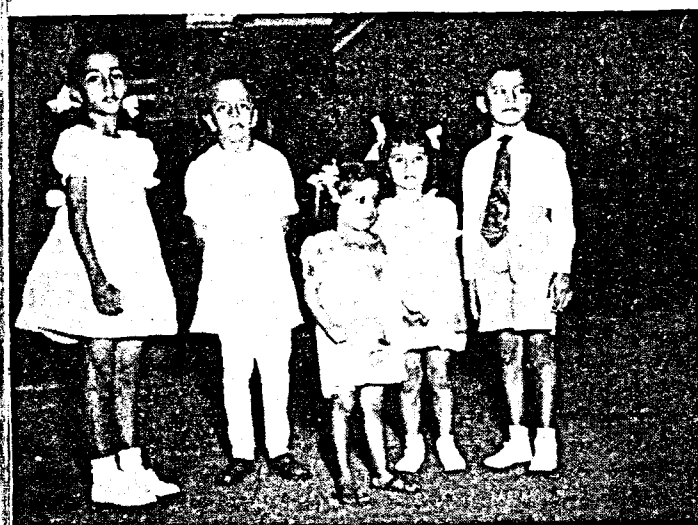
Below : From the far corners of the farm the workers bring in the golden harvest.





THE WORLD OF ART

Kumari Nirmala Joshi, Secretary, Sangeeth Natak Akademi, sponsored by the Government of India, met representatives of prominent institutions devoted to dance, drama and music, at the Museum Theatre, Madras City.



An exhibition of children's drawings and paintings, entered for the Fourth International Competition in children's art, conducted by *Shankar's Weekly*, was inaugurated recently by the Chief Minister at the Government Museum Centenary Exhibition Hall, Madras City. Pictures show the prize-winners and the distribution of prizes.



AGRICULTURE

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MADRAS INFORMATION

connects the four corners of his farm to his desk from where he can contact any work centre at any time of the day or night. The farmhouse has a radio and a neat conference hall. The monthly cultivation chart and rain chart are prominently displayed on the walls. In fact, the farmhouse is the nerve centre of farm activity. Self-sufficiency is not a slogan, but a reality in Srinivasa Iyer's farm. It is a miniature panchayat with the social and communal life well planned by the farmhouse, in which the advocate spends almost all the time he can snatch from the tiring business of legal work.

Paddy alone does not constitute food for workers. So blackgram, green gram, gingelly and sugarcane are grown and distributed to workers. Even cotton is grown to supply them clothing. But this experiment at cotton growing is not quite a success, for the

plants do not grow well on that soil. The plants are not to blame; after all that is all that can be expected in a dry district like Chingleput. Cotton is collected periodically by workers, who spend their leisure either listening to the radio in the farmhouse or spinning. All the workers, including women and young children, know slivering and spinning, in fact all the mysteries of Khadi. The spun yarn is sent to Tiruppur and woven into Khadi.

2,500 pounds per acre

Sri Iyer produces on an average 2,500 pounds per acre. In other words, 20 bags of two cartloads of paddy are obtained in his farm. He is of the view that even 6,000 pounds or 48 bags of paddy can be raised per acre under ideal conditions. Never in his farm has the yield gone below this minimum of 2,500 pounds per acre.

Raising this paddy cost Sri Iyer slightly over Rs. 200 per acre in normal seasons. Ploughing costs him Rs. 30, water baling Rs. 50 (by oil engines and only if there is continuous supply of water), manuring Rs. 60, seed Rs. 10, weeding and transplanting Rs. 20, harvesting and threshing Rs. 25 and vigil Rs. 5.

For this capital expense, the yield will be 2,500 pounds or two cartloads of paddy, whose value at the prevailing market rate is Rs. 350 to Rs. 400.

It is the view of Sri Srinivasa Iyer that a man with ten acres of land, provided he lives on the land and supervises all the agricultural arrangements, can save about Rs. 3,000 a year at that prevailing prices. "Agriculture is certainly a paying profession, if taken up seriously", emphasised this advocate-farmer.

MADRAS BANANAS

A MONOGRAPH

BY

K. CHERIAN JACOB, L.Ag., F.L.S.
(formerly of the Madras Agricultural Service), Coimbatore

Pages xii + 228]

[Price, Rs. 7-6-0

84 illustrations

Contents

History and area; nomenclature; description; origin of varieties; names of varieties; commercial varieties in Madras State; cultural practices; banana products and dietetics; analysis of the fruits, and six appendices, bibliography and index

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Fish Farming in Village Tanks

By SRI V. D. SPURGEON, Deputy Director of Fisheries, Madras.

The present shortage of food is well known. With the failure of monsoon for the last five years in succession over a vast region in the south, and devastating cyclone in Tanjore and Tiruchirappalli deltas, food crops have completely failed this year. The prospects of import of foodgrains from foreign countries are not bright. Thus the position to which we are driven today is serious. Unless all sorts of foods are grown to make good the deficiency of rice, there is no easy way out of this problem.

As Protective Food

While talking of food, we usually think of rice alone. But nutrition experts consider milk, fruits, eggs, meat and fish as most important and call them as protective foods. They are called protective foods, because they maintain the stamina of the people at a high level and thus protect them from Tuberculosis, Anaemia, Malaria, Diarrhoea, etc. To save the poor masses from the ravages of the widely prevalent malady, viz., Tuberculosis, the protective foods must be made as cheap as possible so that even the poor may be benefited. Of the several types of protective foods mentioned above, viz., milk, fruits, eggs and fish, only the last one, viz., fish is cheap enough.

The main source of fish is sea. Tamilnad from Madras to Cape Comorin has a coastline of about 500 miles. The villages and towns within this coastal belt can get easily their fish supplies. But the majority of our population lives far inland in small villages. Even for such people, who are scattered all over in the interior hamlets, fish is obtainable.

I have gone to many villages and noticed that there is hardly any village without one or more tanks. During the years when there was usual rainfall, some villages set apart one tank as drinking water source, another tank was set apart for bathing and yet a third one for washing clothes and cattle. In some places, even during the present drought tanks have been allowed to fall into complete disuse with water not being utilised in any way. On account of stagnation, the water goes foul, vegetation grows

rank and mosquitos breed prolifically. Waters lying fallow thus are a constant threat to the villager's health.

Preparation of Tank

Fish can be grown in all tanks at minimum expenditure. Before stocking any piece of water with selected varieties of fish, attempt should be made to clear it of all predacious fish such as Vallai, Keluthi, Koravai, Uluvai, Veral, Veellangu, Ambattan kathi, frogs, snakes and tortoises either by repeated netting or by draining the water and drying up the tank during summer.

The abovementioned fishes, if not removed, play havoc with the non-predacious varieties of fish. What is wolf among sheep is Veral among fishes. One Veral is enough to destroy hundreds of smaller kinds. The frogs, though they appear harmless, are extremely destructive of fisheries, as they will prey on fish eggs and larvae. Likewise water snakes and tortoises live upon fish. Therefore predacious fishes, snakes, frogs, tortoises and even certain fish-eating birds in village ponds must ruthlessly be destroyed. After this is done, fish farming in any tank will be a success.

Pond Vegetation

Village tanks full with water weeds are ideal for fish culture. Among the different kinds of weeds, lotus and water-lily and hydrilla are the best. Water weeds play an important part in fish life. First of all, they form the food of vegetarian fishes, secondly they oxygenate the water. Thirdly weeds offer shade for the fishes, during hot summer.

Thus weedage serves manifold purposes. The more the weeds are, the better fish life will be in any given piece of water. However, there is a limit for the amount of weeds in a tank. Weeds should not overgrow and completely cover the water surface. In such circumstances, the atmospheric oxygen is completely cut off from the tank water surface which means less oxygen in the tank and suffocation for the fishes. So there should be just enough weeds to oxygenate the water and it should not be allowed to cover the entire water surface. Dewatering should be done whenever the tank vegetation becomes rank and foul.

Fish for Culture

Preparation of a tank, firstly by removal of predacious varieties of fish, and secondly by planting water weeds as described above involves no big capital or labour. When that is done, fry of good varieties of fish are to be collected from natural sources or bought from Government Fisheries fish farms and introduced into the prepared tanks. Soon after floods in our rivers, the group of fishes that are known as carps, spawn and swarms of their fry become available in small irrigational channels that branch off from the main course of the river. Here they can be collected by simple devices such as basket traps, cast nets, dip nets, etc.

In thousands these helpless fish fries can be trapped and turned out into tanks and reared. The most common carps that can be collected in our rivers are as follows: Catla, Labeo fimbriatus, Labeo calbasu, Labeo kontius, Cirrhina cirrhosa, Cirrhina reba, Barbus dubius, etc. These are collectively better known to the local people as *Kandai meen*. These are excellent fresh water fishes living exclusively on water weeds. They thrive well in any fresh water, small or large and stagnant or running. In Bengal and Bihar where fish is very much in demand, every tank owner cultivates carps as successfully and profitably as he can. The carp fries take nine months to one year to grow to marketable size. The number of fish that can be stocked in a tank largely depends upon the nourishing capacity of the water as well as the surface area that comes in contact with the air.

As a general rule, 200 fry can be stocked for every 100 cubic feet. A tank measuring 50' x 50' x 10' is large enough to support 2,000 fry. Carps are clean fishes and breed only in running waters. Special mention must be made about the carp called Catla. It is known in Tamil in some places as *Thoppa meen* or *Japan kandai*. It has a large head and looks whitish. Its remarkable quality is its fast growth. In fact it is the fastest growing fish so far known to us. So tanks which hold water only for six to nine months in a year can be stocked with Catla.

alone, as within this short period Catla fingerlings grow to marketable size. When water dries up in summer, this fish can be caught and consumed or sold. Hence specially remember Catla while taking over seasonal water for fish culture. Catla seeds are collected in lakhs by the Fisheries Department from Godavari, Krishna and Cauvery rivers and supplied to interested pisciculturists at nominal cost.

Gourami.—Apart from the local carps mentioned above, the Fisheries Department supplies a few exotic fishes for culture in village tanks. Among these, Gourami is the best. Its maximum size of 24" lack of bones, delicious flavour and the ease with which it is bred and transported render it the best fish for culture in garden pools and tanks with luxuriant vegetation. A pond with a surface area of 200 square feet and a depth of 3 feet with lotus and water lilies is best suited for Gourami culture. It is mostly a vegetable feeder and is partial to lotus. Oilcake paste mixed with a little animal food forms a welcome artificial food for this fish.

It breathes air directly also from the atmosphere and stands transport over long distances very well. It becomes sexually mature in the third year and breeds generally twice a year. It is not a prolific breeder, 500 being the usual number of eggs at a time. Gourami is noted for its nest building habit. As the breeding season approaches, the pair searches for a suitable spot on the margin of the tank and builds a nest as large as football with blades of grass and other weeds and fixes it firmly to the marginal weeds just 6" below the surface of the water and deposits the eggs safely inside the nests.

Etioplus.—Among the indigenous varieties of fish that can grow and breed in any type of water, Etioplus is the best. Primarily it is a backwater fish, but it adapts itself admirably for life in completely fresh water. It is known as *Setha Kandai* in Tamil. It is another vegetarian fish. It eats weeds and has a great partiality for hair weeds. The fish has light green colour with eight dark transverse bands. The body is flat and broad. The dorsal fin has several sharp spines and thus the fish manages to escape predacious fish or other enemies which try to prey upon it. The fries of this fish can easily be collected from all the backwaters of the Madras State and stocked in large

numbers in village tanks. It is the only fish that not only adapts itself to completely fresh water and brackish water, but also breeds in all other kinds of water.

In the case of all other inland fishes, they either do not live in certain kinds of water or if they manage to live, they never breed. In either case, there is the serious handicap to permanently establish their varieties in inland waters whereas in the case of Etioplus, it grows anywhere on the plains and breeds anywhere and establishes itself permanently in the course of three years. Hence its supreme importance in inland culture operations. Besides, Etioplus is best suited for rock-cut wells where Gourami and carps may not thrive.

Further due to its hardihood, non-predacious nature and easy adaptability to any kind of water, Etioplus is claimed to be the best fish for village tanks. Apart from these, the Fisheries Department supplies Chanos and Mullet fingerlings also.

Manuring.

The success of fish farming is largely due to the amount of fish food made available in tanks. The fish food can be increased by manuring the waters. This is easily done by adding cattle excreta, stable refuse, dried grass, kitchen sweepings, etc. These lie about in all villages without any use and therefore there should not be any difficulty in manuring the village ponds with them. Bathing of cattle and men and dhobying in tanks should be encouraged, as they greatly increase nourishment for the fish. Adding village sewage in small doses makes fish fatten soon for the table. In Bengal, many of the fish farms in rural areas are being manured by this method only.

Fishes Control Diseases.

Fishes play an important part in controlling diseases that spread through water. Such diseases are styled water borne maladies. You know that the larval forms of mosquitoes lead an aquatic life before the full-grown mosquitoes emerge. So it is easier to kill mosquitoes while they are "babies" in water. Mosquitoes alone are responsible for Malaria and Filaria. Cyclops carry the dreaded guinea-worm disease. By destroying mosquito larvae and cyclops (while in water) these diseases common in villages can be totally eradicated. The best method of doing this is by growing fishes in such tanks.

All fishes when young feed on mosquito larvae, and some eat away cyclops.

Therefore, fishes should be grown in our village waters to promote health among villages. Further, fishes help in maintaining general sanitation in inland waters. They eat rotting vegetation and scum too and thus keep tank water clean. By introducing special type of mosquitocidal fishes, Malaria has been completely rooted out from many places. Write to the nearest Fisheries Officer for advice and supply of public health fishes.

Facilities Offered.

The Village Panchayats can seek the advice of the Fisheries Department for pisciculture in their waters. Where there are no Panchayats, villagers can form themselves into co-operative societies and apply for loans, or ask for a Government owned tank to be placed at their disposal for fish farming. The individual pond owners can avail of the facilities extended by Fisheries Department and grow fish.

Under the present circumstances of food shortage in our State it is hoped that the villages will come forward and with the help of the Fisheries Department take to scientific pisciculture along the lines broadly indicated above for their individual profit and for the good of the people at large. (A.I.R., Tiruchirappalli.)

Facts and Figures

During the period June 13 to June 24, the volume of telegraph traffic at the Katmandu Post and Telegraph Office in connection with the Everest Expedition, rose from 2,000 to 20,000 words per day; the congratulatory and press telegrams dealt with totalled 125,000 words.

The share of the passenger and goods traffic carried during 1951-52 by the four types of gauges on Indian Railways is as follows: broad gauge, 829 million passengers and 101 million tons of goods; metre gauge, 389 million passengers and 27 million tons; and the two narrow gauges 59 million passengers and four million tons of goods.

The six cities of Ahmedabad, Bombay, Calcutta, Delhi, Kanpur and Madras use 56 per cent of the country's generated electrical energy.

Madhya Pradesh has the largest area under forests, which cover 66,962 square miles, as against only 135 square miles in Ajmer.

Roads in South Arcot

There are no roads in South Arcot District associated with the names of the kings of olden times as in other districts in the south. Local traditions reveal however that the road from Manalurpet to Tyagadurgam and on to Assanur on the Madras-Tiruchi Road, was the route of the ancient Chola kings of Tanjore for pilgrimage trips to the famous temple at Tiruvannamalai in North Arcot district. But the road itself does not have the necessary adjuncts of such a hardy tradition.

From the earliest times of the East India Company paucity of roads in the district topped the list of wants; the "least watched" of the lines of communications at that time was the old Madras Road, entering from Merkanam in the north and following the coastline to Chidambaram in the south. Even this was very sandy owing to its proximity to the sea; hence a new road passing through Tindivanam, Villupuram, Ulundurpet and Tholudur was formed.

In 1852, a programme of 400 miles of new constructions was undertaken, chief of which were the Cuddalore-Salem road via Vriddhachalam and the Panruty Lower Anciut road via Sethiathope Anicut. It is worthy of note that these constructions included the planting of avenue trees by the sides of these roads.

Mr. Malthy, the then Collector in 1853, suggested a levy of one anna per kani of land for construction and repairs of roads and this is the nucleus from which the legislation for levying a separate "Road Cess" grew up and exists to this day.

Mileage

Even after the road cess was levied and local boards were inaugurated, there was not much development in the matter of communications and the total mileage gradually rose from about 550 in 1854 to 902 miles in 1905 and 1,194 miles in 1920. Subsequent to this with the enthusiasm displayed by the non-official Presidents of District Boards the mileage rose to 1,526 miles in 1932 and again to 2,059 miles in 1938.

At present, there are 2,034 miles of roads in the district (excluding those

handed over to the P.W.D. on 1st April 1946) of which only 1,299 miles are motorable. The area of this district is 5,218 square miles and this means 0.39 mile of road per square mile against the State average of 0.29

served by one mile of road is 1,295 as against the State average of 1,346. Hence, while mileage in area basis is more than the state average, the mileage on population basis is slightly less than the State average.

Classification of Roads

There are 86 miles of National Highways of all India importance and 90 miles of Provincial Highways of State importance in the district. The "District Roads" are the main lines of communications inside the district connecting important towns. These District roads are further subdivided into "Major" and "Other" District Roads according to their relative importance. All the Major District Roads are eventually to be maintained at State expense and the Other District roads by the District Board.

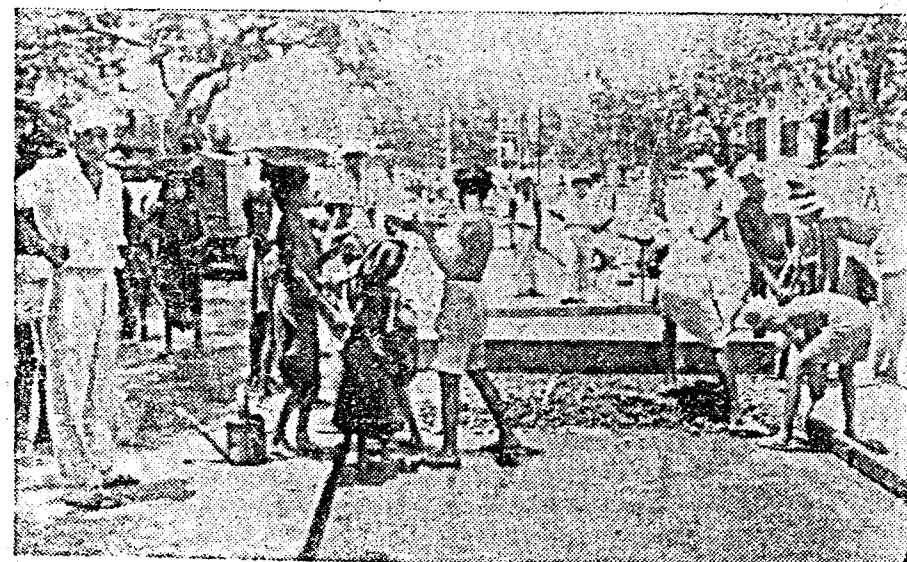
The post-War Development plan contemplates the addition of only nine miles under Major District roads and 174 miles under Other District roads.

In addition to the above classification, there are village roads, which are purely feeder roads to villages. There are 658 miles of such roads and 759 miles more are proposed to be formed under Post-War Road Development.

Rural Roads

The population of 26.09 lakhs in the district are distributed in 2,340

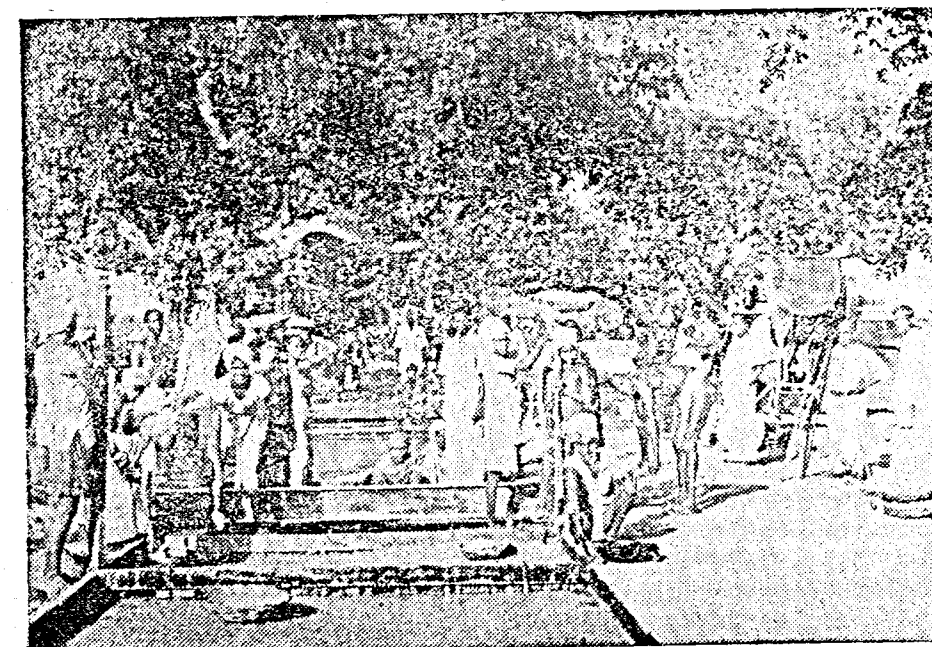
mile per square mile. The population of the district is 26.09 lakhs according to the 1941 census and the population



ROAD-making work in progress on the Cuddalore-Chittoor Road.

villages and towns. Out of this 158,322 people, i.e., 6 per cent of the population live in 566 villages, each of which has a population of less than 500; of the balance of 1,749 villages or towns with a population of 520 and above, 75 are already served by roads and the Post-War Development Plan aims at providing access roads to the balance of 25 per cent also. This however does not contemplate provision of roads to villages with less than 500 population in view of the sheer magnitude of the scheme. Some of them however already lie on existing roads and many more will come within easy reach of the new roads to be formed. The Post-War Development Plan proposes 942 miles of new roads and this when fully implemented will give a total of 2,977 miles of roads serving villages in which 94 per cent of the population reside.

The first five-year Programme of the Post-War Development Plan is in progress and 15 miles of new roads have been completed so far. All these formations are mostly of small lengths of less than five miles and no important long length of formation is envisaged, worth mentioning. Land acquisition presents great difficulties and it is hoped that the recent changes introduced in the procedure will result in solving this problem and quicker progress in the formation of new roads.



LAYING of a cement-concrete road.

Metalled Roads

The soil in the district is not favourable to road making. In Cuddalore and Villupuram Taluks, the soil is sandy loam, which has to be stabilised with clay, to form a base for any surfacing to come on top. In the Chidambaram Taluk which is a delta area, we have the double disadvantage of unfavourable clay soil added to water logged conditions. Practically the whole of Vriddhachalam Taluk is a black cotton area and even Kallakurichi, Tirukoilur and Tindivanam and Gingee Taluks which are upland areas have considerable large areas of black cotton soil.

Blasted granite is used for roads with heavy traffic and even this is available only in a few places in the southern taluks of the district. Laterite metal useful for light traffic in other District Roads and Village Roads is available in Cuddalore Taluk and is largely used. No other kind of metal is available.

Out of a total length of 2,034 miles, only 936 miles are proposed to be metalled under Post-War Development. Thus there is much headway to be made in the matter of providing all-weather metalled roads in the district. At present, the Major District Roads maintained by the District Board

can only be euphemistically called metalled, while several other District Roads, are not even gravelled. Village roads in black cotton soil areas, are in bad condition, as even the provision of a hard base is costly and maintenance only consists in making impassable stretches tolerable by the application of sand.

In Cuddalore, Vriddhachalam and Chidambaram taluks, there is paucity of granite metal for main roads and this has to be transported by rail. A stone crusher unit has been installed at Padur and is working for the past two years. As it is difficult to secure waggons in the season for collection of materials owing to sugarcane transport, it is hoped to increase production of this crusher so as to solve the problem of rail transport once for all.

Traffic Intensity

The volume of traffic, its composition and direction of flow, are essential data for the design and subsequent maintenance of a road. An outstanding feature revealed by traffic figures, is the fact that since 1946 the total volume of traffic on all roads has increased appreciably over the pre-war figures. This increase is observed to be more under motor vehicles than bullock-carts as the former method of transport is proving more popular. Again, even this increase in motor vehicles were marked in the case of vehicles of 3 to 5 tons and over 5 tons. Thus the road surfaces are now called upon to bear heavy loaded trucks and buses to a much greater extent than before the war. It is therefore evident that better types of road surfaces have to be provided for these sections with heavy traffic if the road surfaces are to be in fair condition.

The traffic intensity in the National Highways from Madras to Tiruchirappalli is over 1,500 tons, up to Cuddalore from the north, and further south it tails down to 500 to 600 tons only.

The traffic intensity in Provincial Highways is 500 to 600 tons only, except on the Cuddalore-Chittoor Road. The first 10 miles of this road falls within the sugarcane area and carries a traffic of 1,500 tons and a length of 16 miles in continuation is an access road to the headquarters of the district from several taluks in the interior and carries traffic of 2,000 tons per day.

HIGHWAYS

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On the other Government Roads, there is only one Major District Road—Vikravandi Lower Anicut Road which carries a traffic of more than 1,000 tons. The rest of the Major District Roads and other District Roads carry a traffic of only 500 tons or less.

Cement-concrete and black-top Surfaces

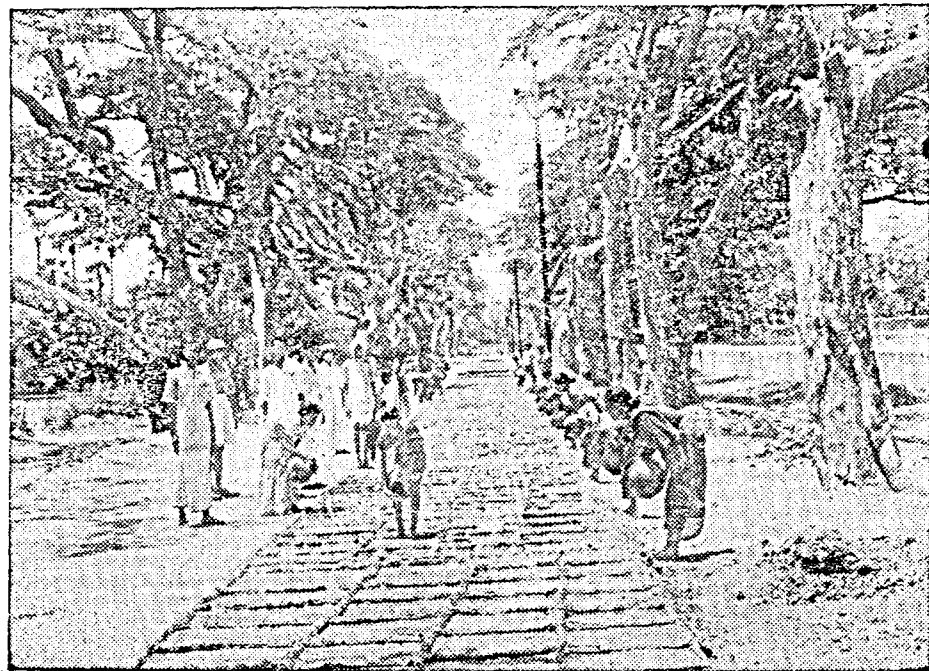
Improved surfacing as cement-concrete or bitumen treated surfaces, require high initial cost, specially the former, but they are economical, owing to their longer life and better amenities. Owing to financial stringency, improved surfacing has been restricted to stretches where the traffic intensity is high and existing methods uneconomical.

Bitumen surfacing is being done under maintenance specially in built up areas of towns and villages as these areas have to be made dustproof. The Madras-Tiruchirappalli National Highways is black-topped for a length of 20 miles from the north and this is being gradually extended to Villupuram and further south. Portions of either towns as Chidambaram, Vriddhachalam, Ulundurpet and Tindivanam have already been provided with black-topping surface and the work is being continued every year. The total length of black-top roads now is 48 miles and a further length of 75 miles have been proposed to be completed in two years.

There is at present only eight miles of cement-concrete road, three miles of which are near the Nellikuppam Sugar Factory. Further work in this area is in progress and ultimately the first 10 miles of the Cuddalore-Chittoor Provincial Highway will be a cement-concrete road 18 feet wide. The road from Chidambaram to Bhuvanagiri has been cement-concreted and nearly completed recently and the total length is four miles. There is a proposal to provide cement-concrete pavement for miles 10/16 of the Cuddalore-Chittoor Road as this stretch already carries more than 2,000 tons traffic and is bound to increase in the future.

Major Bridges

South Arcot District is affected by monsoons in the Bay of Bengal and consequent high floods have carried away many bridges in the past. All these have been reconstructed except two, one across the Coleroon



SQUARE puddles are frequently watered, to enable the cement surface to set firmly.

which is the boundary between the South Arcot and Tanjore Districts and the others across Pambai River near Villupuram. These two are however now under reconstruction.

Under the Vipan Scheme of Road Development out of 18 bridges proposed only nine were taken up and completed.

The Post-War Road Development Scheme which has now superseded the Vipan Scheme provides for the construction of 17 Major Bridges at a cost of Rs. 38 lakhs. Besides this, one bridge is also proposed under the Road Development Fund programme financed by the Government of India on the Tyagadurgam-Manalurpet Road.

Two bridges one over Coleroon and another at Gingee estimated to cost Rs. 26 lakhs and Rs. 93,500 respectively, are in progress and five other works are under investigation.

Minor Bridges and Culverts

The numerous smaller water courses form bottlenecks in the communications system and call equally for bridges and culverts. The Post-War Road Development Plan provides for the construction of all such minor bridges costing Rs. 25 lakhs. Under the Five-Year Plan 19 works have been taken up for execution and eight works have been completed.

Administration

The roads in the district as all over the State, are divided into four groups for purposes of administration, viz., Government, District Board, Municipal and Panchayat Roads. The National Highways are financed by the Government of India but administered by the State. The State Government finances Provincial Highways and a majority of Major District Roads while the District Board finances the rest of the Major District Roads, other District Roads and Village Roads.

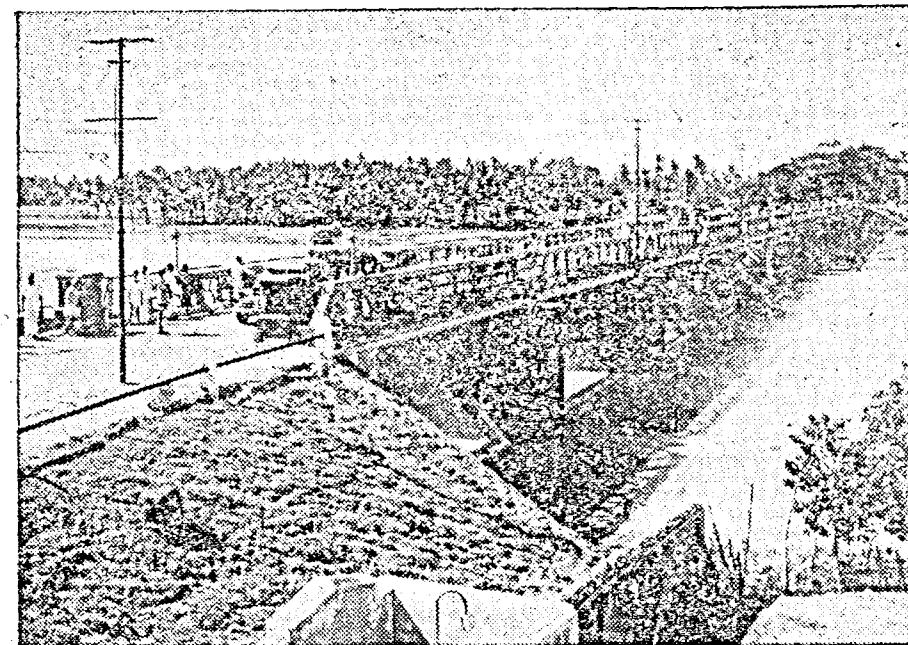
The Municipalities of Cuddalore, Chidambaram and Tindivanam finance the roads and streets left in their charge and Panchayats numbering 13 look after the purely local roads of very minor importance and their streets. The State Government gives grants to the District Board, Municipalities and the Panchayats for road improvement works.

All Government and District Board Road works are executed by the State Highways Department. Panchayats carry out their own works, but certain original works of the Panchayats are executed by the Highways Department with payment of centage charges. Municipal Road works are executed by their own staff but occasionally the Highways Department is required to take up some important works for them as deposit works.

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SIDEWALKS are provided for bridge on the Cuddalore-Chidambaram Road.

In this district the Highways Department has a Divisional Engineer with headquarters at Cuddalore, five Assistant Engineers with Headquarters at Tindivanam, Tirukkoyilur, Cuddalore, Vriddhachalam, and Chidambaram and 18 supervisors as below :—

- 1 Tindivanam Subdivision—
Tindivanam East.
Tindivanam West.
Gingee.
Vanur.
- 2 Tirukkoyilur Subdivision—
Tirukkoyilur West.
Tirukkoyilur East.
Kallakurichi.
Ulundurpet.
- 3 Cuddalore Subdivision—
Villupuram East.
Villupuram West.
Panruti.
Cuddalore.

- 4 Vriddhachalam Subdivision—
Kurinipadi.
Vriddhachalam.
Kaludur.
- 5 Chidambaram Subdivision—
Sethiathope.
Chidambaram.
Porto Novo.

Out of the above five subdivisions the first four are permanent and the fifth at Chidambaram is a temporary subdivision formed and continued, from 16th September 1947. In addition there is a sixth temporary subdivision for the work of cement concreting the Cuddalore-Chittoor Road 1/6—10/0 with one Assistant Engineer and two supervisors.

Expenditure

The expenditure incurred in recent years on Road works in this district is given below :—

		Maintenance.		Original works.		Total.	
		Govern- ment. RS.	District Board. RS.	Govern- ment. RS.	District Board. RS.	Govern- ment. RS.	District Board. RS.
1946-47	..	5.88	2.94	13,613	52,538	6.02	3.47
1947-48	..	7.92	4.93	42,982	1,50,526	8.35	6.44
1948-49	..	13.11	5.70	89,017	3,93,147	14.00	9.68
1949-50	..	12.84	5.20	3,17,185	3,53,221	16.01	8.73
1950-51	..	11.59	6.02	3,73,603	2,69,940	15.33	8.72

It may thus be seen that large amounts are being spent for the improvement of roads and that the expenditure is fairly steady for the past three years ending 1950-51.

Avenues

As already said under previous History avenue trees have been long associated with roads in this district. The avenues originally planted in the middle of the last century are existing even today. Within the last three years special attempts have been made to plant trees in all the gaps and the same effort is being continued.

The total number of avenue trees at the end of 1950-51 on Government roads was 91,369 and on District Board roads 13,001. The total number of trees in the district is thus 104,370.

Places of Interest

Historical interest.—Gingee, the headquarters of the taluk, is of great historical interest. It was the headquarters of the later line of Vizianagar Kings, after their downfall. The main fort is on the top of a precipitous hill unapproachable on three sides and the entrance on the fourth side is controlled by a drawbridge. There is a smaller fort on the lower hill. Only old ruins of the Forts are seen now but inscriptions are of archaeological interest.

Cuddalore Old Town and New Town.—Cuddalore Old Town is a port with historic interest which is now used for both export and import of merchandise. Cuddalore New Town contains the old Fort St. David near the sea, reminding one of the 18th century rivalry between Britain and France. The present Collector's residence was the old quarters of Lord Clive and the grounds of St. Joseph's High School are still called Colonel's Gardens.

Pondicherry.—This is the headquarter of the French possessions in India and is 13 miles north of Cuddalore and equally reminds us of the days of Lord Clive and Duplex. The town attracts devotees from all over India to the shrine of the late Sri Aurabindho Ghose.

The Veeranarayana Tank near Sethiathope in Chidambaram Taluk is a large tank fed by a supply channel from the Lower Anicut across the Coleroon River. Its area of water spread is about 8.5 miles and when the tank is full, this will be a beauty spot and may also be of interest for some shooting.

Industrial Interest

Nellikuppam, six miles from Cuddalore, is the site of Parry & Co., Sugar Factory with a capacity of 2,000 tons per day, the largest such factory in South India. It contributes both to the increased traffic in the area and to the paucity of wagons for transporting road metal in the working season, which coincides with the cane season.

Neiveli is a Railway station on the Cuddalore-Vriddhachalam line; 24 miles away there are artesian springs here above a rich layer of lignite. Experiments are being conducted here by a special staff as to the best means of disposal of the water and the quarrying of the lignite below.

This district is a large producer of groundnut and owing to this there are large oil mills at Villupuram in the

north and Vriddhachalam in the south, manufacturing groundnut oil for export.

At Merkanam in the north, the manufacture of salt under Government control is undertaken.

Religious Interest

Chidambaram is a famous place of pilgrimage of all-India importance built during the times of the Chola Kings of Tanjore. The district abounds also with other temples of lesser importance than Chidambaram and which also attract pilgrims during festivals. These are Mylam, Tiruvarangam and Tiruvakkarai, Vadalur, Srimushnam, Vriddhachalam, Tiruvendipuram, Tiruvedi, and Tirukkoyilur.

The district is fairly fertile even in dry areas and with further improvement in communications, agriculture and industry will be greatly benefited.

Statistics showing area, population, number of villages, length of roads, etc., in South Arcot District.

Area.	South Arcot District.	For the whole State.
1 Area in square miles	4,201	127,768
2 Population (1941)	2,608,763	49,840,564
3 Number of divisions	1	37
4 Number of subdivisions	4 1 (temporary) 1 (special).	101
5 Number of sections	16 (permanent) 2 (temporary.)	367
6 Number of villages less than 500 population (1941).	594	12,669
7 Number of villages more than 500 population (1941).	1,749	23,683
8 Number of Panchayats (Major)	13	418
9 Number of Municipalities	4	92
10 Number of firkas under the Rural Welfare Department.	4	35
11 Length of Government Roads	548	15,187
12 Length of District Board Roads	1,449	22,171
13 Total length of all roads	1,997	27,358
14 Length of National Highways in miles ..	86-0-0	2,000
15 Length of Provincial Highways in miles ..	90-2-0	3,096
16 Length of Major District Roads, Government and District Board in miles.	(734)	16,071
17 Length of Other District Roads in miles ..	466	7,780
18 Length of Village Roads in miles	623	8,411
19 Minimum allotment required for Government Roads.	Rs. 19,55,492	Rs. 5,03,11,688
20 Average rate per year	Rs. 3,567	Rs. 3,313
21 Provision made in the five-year programme of P.W.R.D.	56.31 lakhs.	1,207.23 lakhs
22 Length of cement-concrete roads (1949) in miles.	1-3-0	141-4-16
23 Length of black-top surface roads in miles ..	43-6-0	602-0-630

Handspun Yarn

The Government have received representations that in the case of dealers in pure handspun yarn and in cloth woven on handlooms wholly with handspun yarn, the levy of licence fee and registration fee under the provision of the Madras General Sales Tax Act, 1939, may be given up. The Government have after careful examination decided to exempt from April 1, 1953, all persons who deal exclusively in handspun yarn from payment of licence fee under the Madras General Sales Tax Act, 1939. A person who deals not only in pure handspun yarn but also in goods other than yarn shall be deemed to be a person dealing exclusively in handspun yarn for the purpose of this exemption. But no person who deals in yarn of other varieties in addition to handspun yarn will be entitled to any exemption in respect of such yarn.

The Government have also decided that from April 1, 1953, no registration fee shall be prescribed or be payable in the case of persons dealing exclusively in handspun yarn or in cloth woven on handlooms wholly with handspun yarn. Handloom cloth woven with mill yarn exclusively or in mixture will not be entitled to any of the exemptions herein notified.

Cardboard Containers for Liquids

The extension of the use of cheap cardboard containers to the packing of liquids has now been made possible as a result of the research work carried out in the laboratories of the Council of Scientific and Industrial Research.

Cardboard containers are widely used for packing a large variety of solid materials. For packing liquids, such as oil paints, varnishes, enamels, oils, boot and metal polishes, however, cardboard containers have till now been considered unserviceable.

Coating compositions have been formulated from readily available materials, which, when applied to cardboard, paper or fabric, render the treated material impermeable to liquids. Coated cardboard containers are suitable for packing a large variety of liquids.

Details relating to the preparation and application of coating compositions have been discussed in the April issue of *Vigyan Pragati*, the monthly Hindi bulletin published by the Council of Scientific and Industrial Research.

Welfare of the Under-Privileged

By SRI R. S. MALAYAPPAN, Director of Harijan Welfare.

Harijan Welfare work is entrusted to the Harijan Welfare Department of the Madras Government. It deals with the work of amelioration and welfare of the following communities: (1) Scheduled Castes, (2) Scheduled Tribes, and (3) Backward Classes.

The term "Harijan" was not invented just to denote a particular caste or castes, but it was conceived to denote a new social policy of looking upon the under-privileged classes as "Children of God" and to sweeten and add a spiritual content to the attitude and approach of other classes towards them and their problems.

There are 77 sub-communities notified as Scheduled Castes in the Constitution (Scheduled Castes) Order, 1950, and their population as per the 1951 Census is 8,533,632. They are spread throughout this State—they are practically in every village. Only such castes which were treated as "Untouchable" till now are included in this list.

Scheduled Tribes

The Scheduled Tribes as per the Constitution (Scheduled Tribes) Order, 1950, number 40 and their population according to the Census of 1951 is 635,979. They are mostly concentrated in the hilly regions of the Northern Circars, in the Nallamalais of the Kurnool and Guntur Districts, on both sides of the Western Ghats in the Districts of the Nilgiris, Coimbatore, Madurai, Tirunelveli, Malabar and South Kanara and in the Laccadive and Amindivi Islands off the coasts of Malabar and South Kanara.

They are a sort of simple, contented and unambitious people living in the forests and hills in the interior, unaccustomed to modern civilised methods of living but having their own distinctive culture and pattern of life. There is no untouchability practised against them and they are economically better than the Scheduled Castes but very backward educationally and have to suffer the disadvantages along with the advantages of isolation from richer and more prosperous people.

Eligible for Help

The Scheduled Castes and the Scheduled Tribes referred to above

and a few other castes like Badaga, Irula Tribes formerly kept under close observation by the police, etc., which were originally included either in the Scheduled Castes list or in the Primitive Tribes list but omitted from the present lists and who require special help, are eligible for help from the Harijan Welfare Department.

The so-called Backward Classes of the State number 149 and their population is 19,716,215 according to the Census of 1951. These communities are spread over the entire State, but the majority of them have been concentrated in certain districts only.

Organization

The Harijan Welfare work is carried on by the Director of Harijan Welfare, an officer of the grade of a Collector, assisted by two Deputy Directors of the grade of Deputy Collectors. He is the co-ordinating officer for the ameliorative work in the districts which is attended to by the District Welfare Officers and other subordinate staff. The District Welfare Officers are of Deputy Collectors' grade in

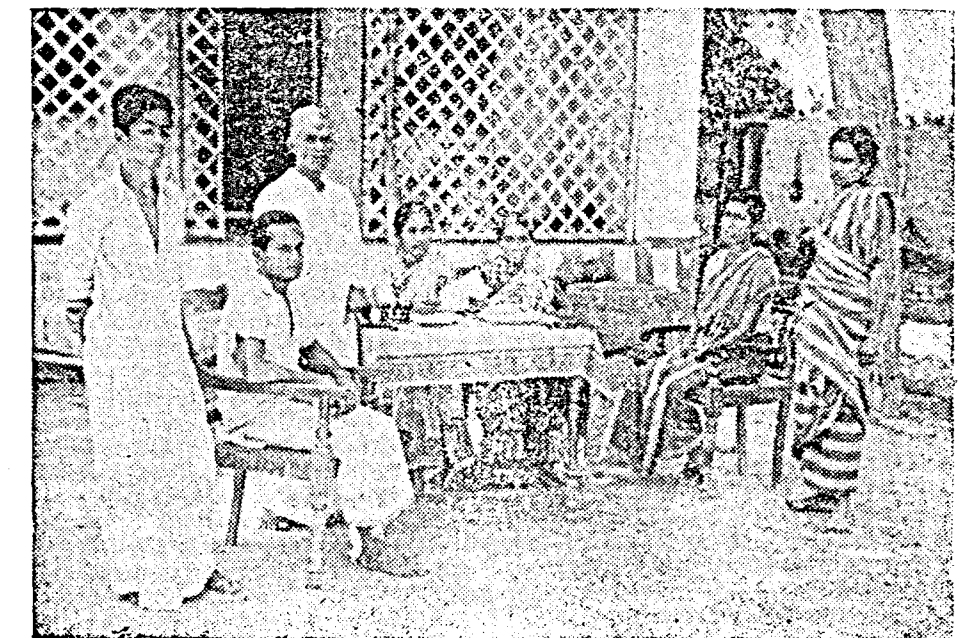
eight districts and of the grade of Tahsildars in the remaining districts.

In addition, a State Harijan Welfare Committee with the Minister for Harijan Uplift as Chairman and M.L.As. and other interested in the cause of Harijans as members, and a Harijan Welfare Committee for each District consisting of officials and non-officials and with the Collector as its President, have been constituted to advise the Government and the Department on the needs of the Harijans. There is also a State Backward Classes Advisory Committee at Madras with the same Minister as its Chairman, to advise the Government on the ameliorative work intended for the Backward Classes.

Ameliorative Measures

The ameliorative measures undertaken for the eligible communities fall under the following broad classifications:—(1) Education, (2) Public Health and (3) Social and Economic Uplift of the eligible communities.

In the field of education, facilities provided consist of maintenance of special schools, free hostels at important



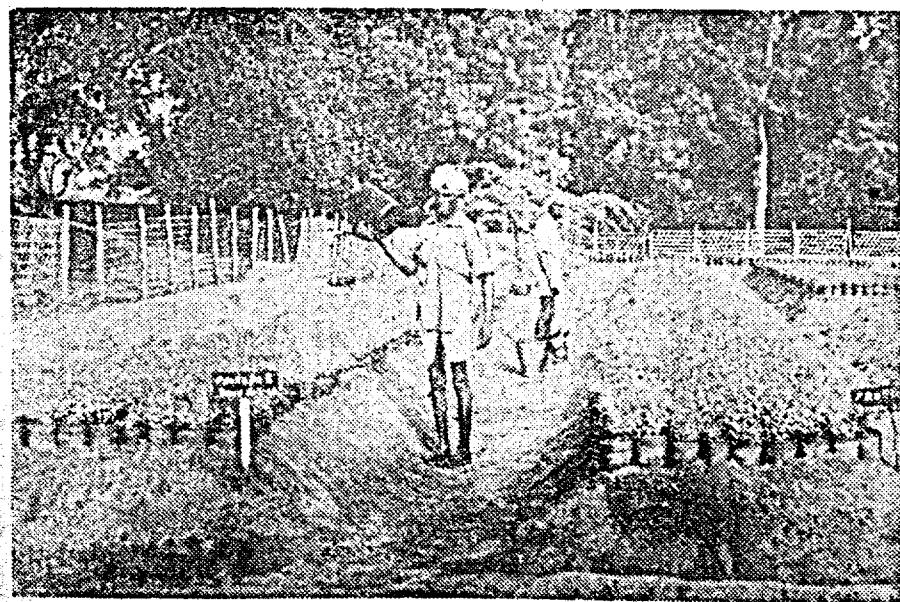
PANCHAYAT: Srimathi Perianu Ammal, President of the Karivalamvandanallur Panchayat, along with the Lady Vice-President and lady members at a sitting of the court.

The Sand-drift Problem in Rayalaseema

By SRI S. R. RAO, B.A., BAR-AT-LAW, I.F.S., Conservator of Forests, Bellary Circle, Bellary.

The eastern bank of the Hagari River for a length of about 70 miles was entirely treeless, except for the Moka plantation raised by the Forest Department more than half a century ago. No planting work was carried out between 1911 to 1941, with the result that adjoining fields of the bank were covered by sand drifted by winds and the ryots were put to considerable loss. The necessity for a wind belt was felt so keenly that the Ceded Districts Economic Board took the matter up to the notice of the Government who directed the afforestation work.

The type of afforestation that has been undertaken to arrest the drift of sand from river bed such as the Hagari and Pennar is by putting up a wind belt of wind resisting trees. So far, this type of afforestation has been confined to the eastern bank of Hagari River for about 70 miles and half to two chains wide in the Bellary District and along the right bank of the River Pennar in the Cuddapah District over a 20 mile length and 2 chains width. The species used in the first year of planting were *Prosopis juliflora*, *Inga dulces*, *A. Lebbek*, *Neem*, *Pongam* and *Casuarina*.



WONDER SPECIES : *Prosopis Juliflora* at the Hagari Plantations Nursery. This wonder species is known as 'Mesquite' in America.

Quite astonishing success has been achieved with the first three of the named species though the results have varied. Costs were, to begin with, high, i.e., about Rs. 60 per acre in sandy soil. However, it was undoubtedly the correct policy to go all out for success, in the first instance, regardless of expense. By 1947 it became possible to bring down the costs due to the improvement in the planting technique by a third of the 1942 cost even though wages had doubled or even quadrupled subsequent to 1942.

Wonder Species from America

✓ *Prosopis juliflora* has proved the most successful species from the point of view of wind and sand resisting effect.

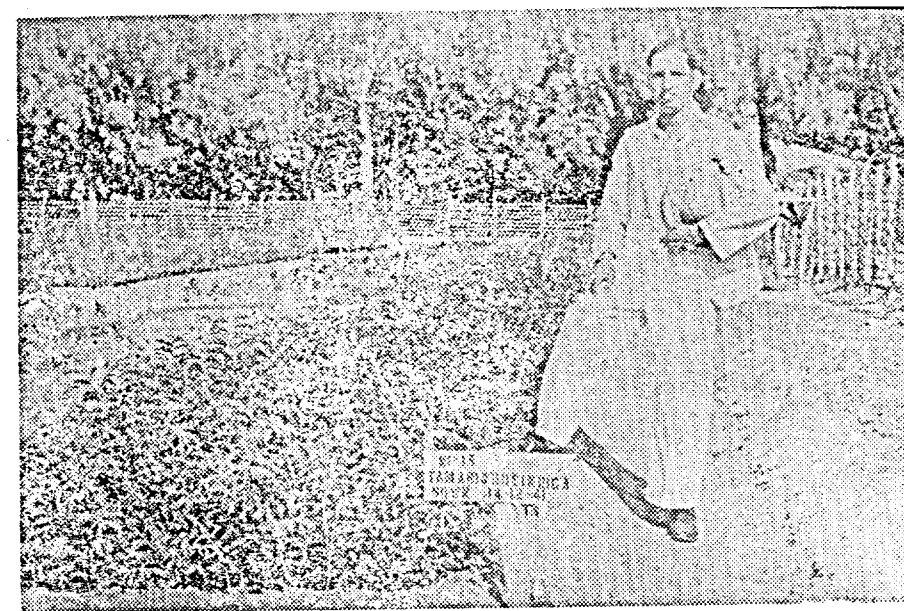
Afforestation along the eastern bank of the Hagari River commencing from the Mysore border in the south to the point where the river falls into the Tungabhadra River in the north was taken up in 1941 as a result of proposals which were approved by the Post-War Reconstruction Committee and completed by 1948. Today, we have well established plantations all along the eastern bank of Hagari River consisting mainly of a species which is an exotic to India and which came from

Mexico. It is known as *Prosopis juliflora* or commonly known in America as the 'Mesquite'.

The chief merit of this exotic is that it grows easily in drought affected areas such as the districts in the Rayalaseema. Now one notices all over the Rayalaseema the natural spread of this species, apart from efforts by individuals to raise their own hedges with this wonder species which is going to save the fuel problem of the famine affected areas of Rayalaseema for many years to come. Forest Officers are indeed amazed at the behaviour of this species in the areas where rainfall is scanty and freakish and famine is experienced periodically. For the last few decades the Forest Department has been struggling with the problem of afforesting dry areas and did not know that a species like this existed.

It came to the Punjab first many many years ago, but we did not know of its existence in the Madras State. When the Hagari afforestation work was taken up in 1941, a packet of seeds was obtained from the Provincial Silviculturist, Punjab, and tried it on the Hagari bank. The results achieved in the very first year of planting of this species over a length of 1½ miles of the Hagari bank was so good that the Chief Conservator who inspected this work on 31st December 1952 reported to Government, "The results are excellent and far in excess of my expectations." The Chief Conservator again inspected further afforestation work carried out between 1942-44 in January 1945 and reported to Government, "I am now confident that the work can go forward on a large scale."

He also expressed the view that fire-wood plantations on an extensive scale in this locality (the eastern bank of Hagari River) will have a special value apart from protection from sand-drift, as the country side is treeless and cowdung is extensively used for fuel instead of being put on land. He, therefore, proposed to Government that a bigger undertaking of afforestation to include all suitable land along the Hagari might be approved. As a result, a Special Afforestation Forest Division was sanctioned in March 1945 for two years to



TAMARIND : The Hagari Plantations Nursery raises *Tamarindus indica* or the tamarind tree.

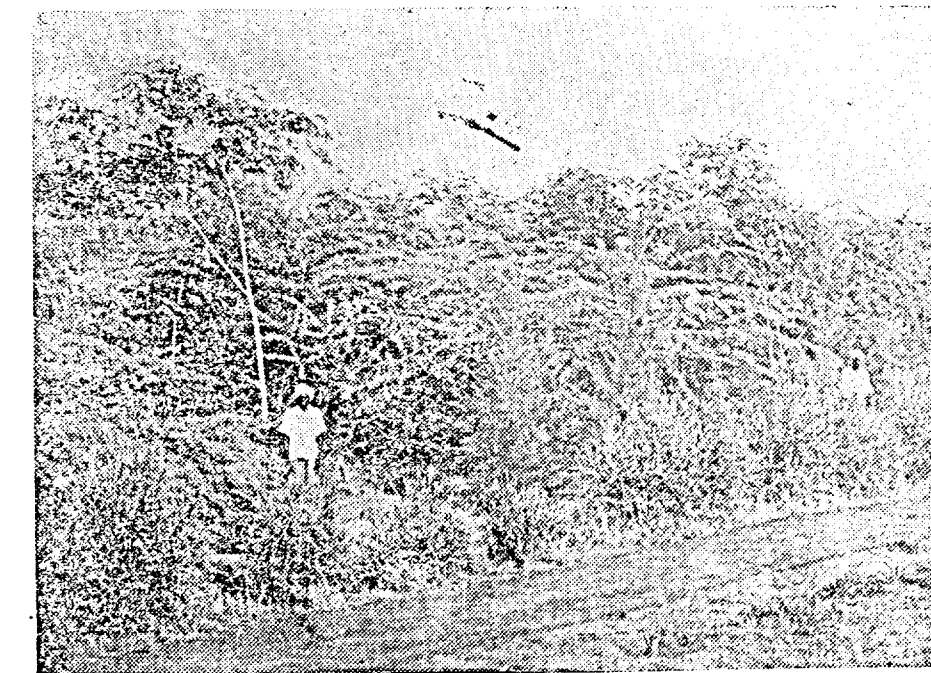
tackle this large-scale afforestation envisaged by the Chief Conservator.

Initial Difficulties in Planting

In the first year of planting the drift of sand had to be contended with. There was no water to be had for watering. Seeds sown in sandy soil got buried under sand or were dislodged through wind action. Germination of seeds was poor and uncertain. Pot plants had to be used to ensure success and such plants watered from wells, ("Doruvus" made by scooping the sand in the river-bed) and at long distances, making watering expensive and difficult. Protection against the dessicating effect of wind had also to be provided by first raising a hedge of *Euphorbia tirucalli* on the windward side.

Therefore in the beginning the transplants used were raised in small earthen pots (open at both ends) in a nursery. This proved a very successful but a very expensive practice; but the experience gained has shown that it would be possible to dispense with this method. One particular feature of the planting work done along the Hagari River is the astonishing variation in rates of growth of plants all similarly treated, in soil which all appear to be much the same in composition.

The Hagari plantations are today well established and about 15 feet to 20 feet high for ten years' growth.



LATER GROWTH : After ten years the plantations are about 15 to 20 feet high.

Excellency Sir Arthur Hope (Governor of Madras) who visited this plantation on 4th July 1943 wrote as follows:— "A very interesting experiment and has made a successful start. I hope when it is completed and the trees have grown that the drift of sand will be stopped and the land improved for agricultural purposes."

These expectations may now be regarded as having been fulfilled.

Useful as Fodder

Cattle, sheep and goats wander all over the area eating the pods of the *Prosopis* and leave the seeds behind with their dung and which germinate almost everywhere regardless of the type of soil met with and with little or no water. Therefore, the *Prosopis* is now spreading wherever a small nucleus is started either as a narrow wind belt or as a hedge to field.

Wind erosion is caused when strong winds blow during the hot months of the year, and when the sand in the river-bed is lifted and carried over long lengths and deposited on arable lands. Near Guliam village in Bellary District, the sand-drift problem was so acute that a whole village had to be shifted inland for about a mile and a half from the river bank. Here the wind belts have been put up and the sand-drift successfully

centres, provision of scholarships, boarding grants and grants for books and clothing, payment of examination fees and grants of financial assistance to private bodies and persons engaged in the maintenance of hostels, schools, etc., for the benefit of the Harijans. These facilities are in addition to the free education imparted to them at all stages under the Madras Educational Rules which alone costs Government about Rs. 13.75 lakhs (on payment of compensation to private educational institutions and Universities on account of loss of fee income).

This Department is running 1,356 elementary schools for the benefit of the Harijan children in the whole State, besides two High Schools for boys, one in Masulipatnam and another in Chidambaram and one High School for girls in the latter place (up to IV Form only). About a lakh of children are receiving instruction in these schools. The special feature of these elementary schools is provision of midday meals and supply of textbooks at the cost of Government. The supply of midday meals, which has very good effect on the health of the children, besides providing an incentive for larger attendance, costs Government about Rs. 19 lakhs.

There are 20 Government hostels run exclusively for the pupils of eligible

communities where about 1,400 boys and girls are maintained free of any payment, and they cost the Government about Rs. 2.35 lakhs. Besides, 555 hostels run by private agencies are also subsidised by the Government to the extent of Rs. 21.08 lakhs at the rate of Rs. 150 per annum per boarder. About 13,800 pupils are maintained in these hostels. In many of these hostels more boarders than the number of grants given by the Government are maintained by the managements out of subscriptions and donations, etc.

In addition, about Rs. 11.93 lakhs have been spent in 1952-53 on the provision of scholarships and stipends to the students of eligible communities reading in colleges and other educational institutions including Professional Colleges and Technical Institutions, to cover the cost of books and special fees, etc., besides their actual lodging and boarding charges if they reside in hostels attached to the educational institutions. The total expenditure on these educational facilities which was Rs. 2.5 lakhs in 1925-26 has risen to about Rs. 93.95 lakhs in 1952-53.

Public Health

Under Public Health come the following activities:—(1) Provision of house-sites, (2) provision of wells and tanks for the supply of drinking water,

and (3) provision of sanitary amenities, like latrines and bath-rooms, pathways, street lighting and burning or burial grounds.

The Harijans in the rural areas have long been living in wretched houses. In some districts they do not own the land on which their little huts are built and are liable to be evicted at any time. This gives the landlord a power of coercion which in former times was ruthlessly exercised. The Government have given a high priority to the scheme of providing house-sites to the Harijans in the programme of ameliorative work. Wherever more or less suitable land at the disposal of Government is available it is assigned to them as house-sites free of payment.

But as suitable Government vacant land is limited in extent, the Government have often to acquire large extents of private lands under the Land Acquisition Act by paying compensation. The Government assigned lands at their disposal for 61,429 house-sites up to the end of 1951-52. They acquired private lands for providing 59,351 house-sites up to the end of the same year.

House-sites are now given free of cost to all Harijans who do not own any, except in cases where they can afford to pay the cost. Each family is assigned an extent of three cents in wet area and five cents in dry areas. This extent is exclusive of the land required for the provision of streets, lanes, pathways, etc., for which the Government bear the full cost. This applies to rural areas.

In the case of Municipal areas, it is the responsibility of the Municipal authorities to provide house-sites for the Harijans, and if they are unable to meet the cost they approach the Government for grant or loan. The Government expenditure under this head was Rs. 6.14 lakhs in 1951-52 and about Rs. 7.86 lakhs in 1952-53. The Government are trying to devise ways to minimise the delay in acquisition of land for house-sites for Harijans.

In Madras City

The position of Harijans in Madras City is different from that in the rural areas. In some divisions of the City the Government have constructed tenements for them on half-grant half-loan basis. In Swatantrapuram in Tondiarpet and Brisleyanagar they have constructed houses with all sanitary amenities and are collecting nominal rents from Harijans living there. In

many localities they have established Harijan colonies on Government vacant lands after laying them into plots and providing all amenities like street lighting, water-supply and drainage, etc. Of late, the Harijans living on private lands for years together are resisting eviction by the owners and the question of how to deal with the legal difficulty or providing alternative accommodation is under active consideration.

The Government up to the end of 1951-52 constructed or repaired 9,350 wells at a cost of Rs. 59,33,631. Still there are a large number of villages where drinking water facilities have to be provided. The expenditure on the provision of wells and sanitary amenities in 1952-53 was about Rs. 5.77 lakhs.

Social Uplift

The twin acts passed by the Madras Government, viz., Removal of Civil Disabilities Act, 1938, and the Temple Entry Authorization Act, 1947, and the provisions in the Constitution have legally abolished the age-long untouchability and social disabilities from which the Harijans suffered. But mere enactments are not enough; what is required is change of heart and outlook on the part of the public. It can be truly said that this has largely taken place. Owing to the increasing efforts of the Government, the Harijans have been made to realise their right to move freely with the Caste Hindus without any fear.

Still there are places where untouchability and the other disabilities exist. It will take time to root out this age-old custom completely from the face of the country. Government are taking steps to list out bad spots and to concentrate their attention on these places. But Government alone cannot successfully solve the problem. The public and non-official organisations must come to their aid in eradicating this evil.

Economic Aid

As regards the economic uplift of the eligible communities, the Government have been practically reserving all the available Government lands fit for cultivation for assignment to Harijans. Co-operative land colonisation societies are being formed for settling the Harijans and other landless poor in colonies wherever suitable lands for the purpose are available, with Government assistance to the colonists by way of free grants and interest-free loans for share capital and purchase of seeds, manure, etc. In the Godavari and



NAKKALAMUTHAMPATTI HARIJAN CHERI: The Caste Hindus are seen cleaning the street in the cheri.

Krishna Delta areas, a number of field labour co-operative societies have been formed for Harijans and large extents of lanka lands have been leased out to them on the basis of average rentals.

Similar concessions have been extended to co-operative societies formed of Harijans in respect of fishery rights in tanks and collection of minor forest produce in reserved forests. To improve the conditions of tannery and leather works in which workers are mostly, if not all, Harijans, the Government have decided to acquire sites for tanneries and flaying-houses free of any payment from them. In a few cases they have also granted subsidies for the construction of tannery sheds and for capital equipment for starting

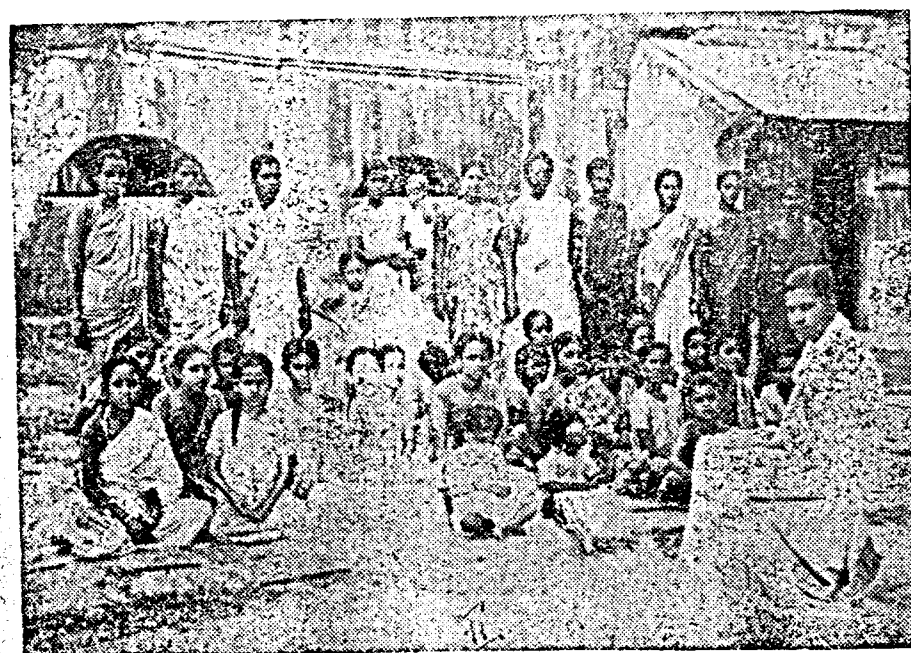
leather works manufacture, for instance, Nidubrolu in Guntur District and Kambur in Anantapur District. These measures greatly help the Harijans.

"Criminal" Tribes

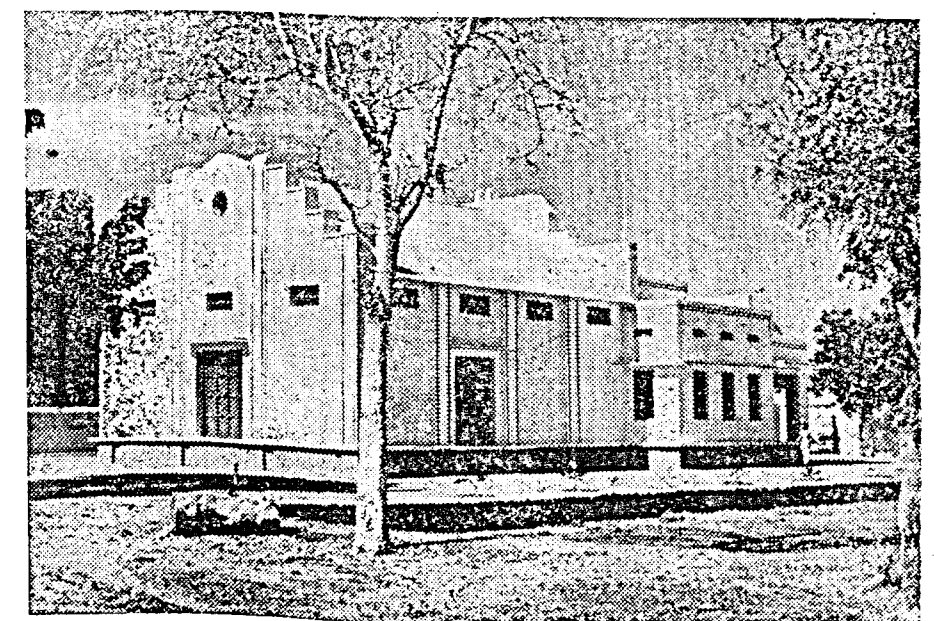
As already stated, members of tribes formerly held under police observation for criminal activities are eligible for all the concessions which have been given to Harijans. In addition, in special localities where these tribes are living in large numbers, special measures have been undertaken by the Government for the improvement of their socio-economic conditions. The reclamation of the Piramalai Kallars in Madurai District is attended to by a Special Deputy Collector. There are about 250 special schools for Piramalai Kallar children in Madurai District, most of which are run by the Government.

In addition, there are two boarding houses maintained by Government where 400 Kallar pupils are being maintained free of any payment. Besides, boarding grants at fixed monthly rates are also sanctioned to over 1,000 Kallar boys and girls admitted in the several institutions under the management of Christian Missions and other private agencies. Besides education, about 290 co-operative societies of various types are serving the needs of the Kallars, which the help of loans granted by the Government on a liberal scale.

(continued on page 30)



MEETING OF THE KHADI SEVA SANGAM where Khadi Chits for lady spinners are conducted by its President Srimathi Periamu Ammal who is also President of the Panchayat Board.



GODOWN constructed by the Konganapuram Co-operative Society.

arrested. Cultivation has been rendered possible in areas protected on all sides by the wind belts which are now five years old and about 15 feet to 20 feet high.

When the Public Works Department first aligned in 1943 a trace near the Hagari bridge for the Tungabhadra Canal, they were up against the sand-drift problem here also. They requested the Forest Department to afforest both sides of the canal track for a length of 3½ miles and more to two chains width. This work was also carried out successfully in 1943 and 1944. Afforestation on the above lines in Cuddapah District along the right bank of River Pennar was later on taken up at the suggestion of the Public Works Department to tackle the sand-drift problem in the Proddatur and Jammalamadugu taluks of

Cuddapah District, and it will take a few years more to complete this work.

All rivers and streams in Madras State running through dry districts could be afforested like Hagari and Pennar at a small expense and the sand-drift problem tackled. The demand for Prosopis seed is continually on the increase and it is being indented far from the other districts in the Madras State. The ryots are prepared to pay at Re. 1 to Rs. 1-8-0 per pound of seed to raise their own hedges. It will be a great boon to the Rayalaseema if existing 'milk' hedges (*Euphorbia tiruculli* species) are replaced by the Prosopis. The Prosopis will not only serve as a hedge but will also supply fuel and its pods will do for fodder.

The Agricultural Department received large quantities of seed collected by the

Forest Department for supply to the Public and in connection with the annual Vanamahotsava drive.

In famine-affected areas, it is pleasing to the eye, to see, on once completely sand covered area, the peacock green leaves of the Prosopis and such nice hedges of the species alongside of fields. With the advent of the Prosopis in the Rayalaseema, not only has the flora of the treeless country side been enriched, but fauna is also beginning to resort to these plantations. A panther has been seen in the plantations.

The photographs show the evolution of the Hagari plantation from 1942 to 1952, from its initial stage to its present stage. Where once we had nothing but sand, we have now a wealth of forest trees.

Welfare of the Under-Privileged

(Continued from page 27)

Reclaiming Koravas

The Korava reclamation work is carried on in the districts of Salem and Ramanathapuram, while Yenadi and Sugali reclamation work continues in the districts of Nellore, Kurnool, Chittoor and Anantapur. Special schools, hostels and boarding houses have been established at different places in the above districts for the benefit of the children of these ex-criminal tribes.

The total expenditure on the reclamation of these tribes formerly subjected to police observation was Rs. 7.72 lakhs in 1951-52 and about Rs. 8.65 lakhs in 1952-53. There are four settlements where ameliorative measures for members of these tribes are being carried on.

The concessions to Backward Classes consist of grant of scholarships—both residential and non-residential—to deserving students studying in College courses including professional and technical. Government also grant examination fees to College students. In addition, Government are giving boarding grants to Backward Class pupils admitted into the Harijan subsidised hostels. The total amount spent on these concessions was Rs. 10.50 lakhs in 1951-52 and about Rs. 10.75 lakhs in 1952-53.

Scheduled Areas

The Scheduled Tribes living in the State outside the areas declared as Scheduled Areas under the Constitution of India are enjoying the concessions and other ameliorative measures undertaken by the Harijan Welfare Department for Harijans. In the case of Scheduled Tribes living in the Scheduled Areas (viz., Agency Tracts in Northern Circars, and Laccadive and Amindivi Islands) several ameliorative measures such as special schools and hostels, hospitals and dispensaries, anti-malarial operations, co-operative societies and land colonisation schemes have been undertaken by the Government, and the execution of such measures has been entrusted to the different departmental heads, the expenditure being debited to their respective heads of account.

It can thus be seen that the Government have been doing a great deal to further the interests of these under-privileged communities. In spite of the severe financial stringency through which the Government have been passing, they have not stinted expenditure so far as Harijan Welfare work is concerned. This can be seen from the fact that the expenditure to Government on ameliorative work rose from Rs. 8.7 lakhs in 1924-25 to Rs. 132.37 lakhs in 1952-53. *Jai Hind!*

(A.I.R., Madras)

Crop Competitions

The Government of India have been awarding annually an All-India prize of the value of Rs. 5,000 and the certificate of 'Krishi Pandit' to the best producer in each crop securing the highest yield per acre on the basis of the results of the State Competitions. The Government of India have been feeling grave doubts as to the genuineness of the performances claimed.

The Government of India have now decided that the All-India prizes should, in future, be awarded on the basis of the results of a special competition to be held each year in which farmers who secure the first six highest yields in each State in the competition of the previous year will be eligible to participate. This will help closer scrutiny of the claims made.

Accordingly, no All-India prizes will be awarded with respect to the competitions held in 1952-53, but the first six among the successful competitors in this State for each crop will be selected for competing in the All-India competition to be held during 1953-54.

The All-India prizes will be awarded in respect of Paddy, Wheat, Jowar, Bajra, Gram and Potatoes, subject to the condition that there are at least four participating States with regard to each crop.

Detailed information in respect of the crop competition scheme will be available with the Taluk Agricultural Demonstrators.

Bhavnagar Kshayarog Fund

Chief Minister's Appeal for Liberal Support

Sri C. Rajagopalachari, Chief Minister, Madras State, has issued the following appeal:

His Highness the Maharaja of Bhavnagar, our late Governor, has given me a sum of Rs. 1,00,000 which has been set aside as a nucleus for a Tuberculosis Fund to be called the "Bhavnagar Kshayarog Fund".

Tuberculosis is one of the major diseases in India. In recent years it has been showing a disturbing tendency to spread. Mass radiographic screening has revealed its prevalence to a considerable extent, though in some cases the disease is latent and has not produced visible symptoms. The Government are doing their utmost to provide institutional treatment for patients suffering from this fell disease for which there are now reasonably satisfactory remedies, but it requires costly and prolonged treatment. We are maintaining a Sanatorium at Tambaram with facilities for the treatment of 424 patients and another Sanatorium at Bellary for 220 patients. We are also maintaining a special clinic in the City with a few beds and an Institute at Egmore for out-patient treatment. We have taken over the T.B. Sanatorium at Nellore constructed by the Nellore District Branch of the Madras Provincial Welfare Fund. We will be taking over shortly the Sanatorium that is being constructed by private donations at Mudusheddi (44 beds). In addition to this, we are also paying maintenance grants to five private sanatoria totalling a sum of about

Rs. 1,62,000 per annum. The private Sanatoria are required to earmark at least 1/3 of the beds for indigent patients. The Government are also helping in the starting of Sanatoria in other districts like Tanjore (150 beds), Madurai (86 beds), Periyaram (84 beds), Devakottai, etc. The pace of progress is limited because each bed costs about Rs. 2,000 recurring per annum to maintain.

The demand for institutional treatment is so great that there is always a long waiting list in all the Sanatoria. In the T.B. Sanatorium at Tambaram, the waiting list is reported to contain about 2,000 patients and in the U.M.T. Sanatorium, Madanapalle, the number is about 80. The incidence of the disease is widespread, particularly among poor people. For want of beds, they generally do not get admission in a Sanatorium on application. They have to wait for considerable time and in the meanwhile the disease reaches an advanced state. Nor are they in a position to undergo the treatment at the hands of private practitioners because of its costly nature. The few that get admission in good time and come out free from the disease after some months are unable to keep up their health because they have to return to the environment, the stress and strain of which were responsible for their disease. In order to help these unfortunate victims of disease, the Government have instituted a special fund to assist indigent T.B. patients of this State. Our late Governor, His Highness the Maharaja of Bhav-

nagar, has made a most generous and timely gift of Rs. 1,00,000 to be utilised by me for charitable purposes. It has been decided that with this sum as a substantial nucleus, a "Bhavnagar Kshayarog Fund" be constituted for the relief of the distress of Tuberculosis patients. The fund will be invested in Government securities and the interest thereon will be utilised for the relief of the T.B. patients. The sole administrator and holder of the Fund will be the ex-officio Health Minister of the Government of Madras. A separate Personal Deposit Account has been opened in his name for this purpose. Monetary assistance will be given to the most deserving poor patients suffering from T.B. according to their needs. The patients receiving aid will be referred to a named institution for out-patient treatment or advice regarding personal precautions to prevent the spread of infection.

Those who are fortunately placed are invited to contribute generously. The donations may be in a lump sum or in instalments. Annual or monthly recurring donations are also very welcome. All donations will be added on to the corpus. It is hoped that this Fund will grow rapidly to adequate size so as to reduce the misery of the growing number of unfortunate Tuberculosis patients in this part of the country. Unless we revive the spirit of charity, society cannot hold together in the present economic order. The generous minded public and organisations are invited to contribute their mite towards the Fund.

C. RAJAGOPALACHARI,

Chief Minister to the Government of Madras.

Executions

Neeruganti Kadirappa of Kadiri in Anantapur district, who, on the night of 6th July 1952 murdered an infant child of his concubine in a cruel manner and was sentenced to death

by the Additional Sessions Judge, Anantapur, on 26th November 1952, was executed on the 7th July, 1953, in the Central Jail, Bellary.

Bodeddula Bala Pamigadu of Eruvalem village in Proddatur taluk, Cuddapah district, who, on the 5th

October 1951 stabbed and killed Polugadu alias Samuel of his village and was sentenced to death by the Sessions Judge, Cuddapah, on 31st October, 1952, was executed on the 6th July, 1953, in the Central Jail, Vellore.

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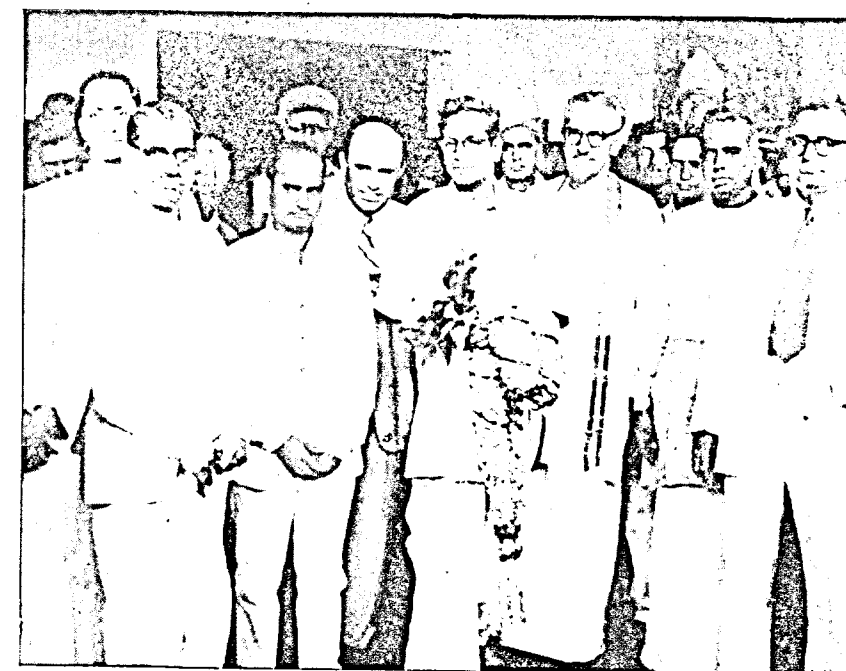
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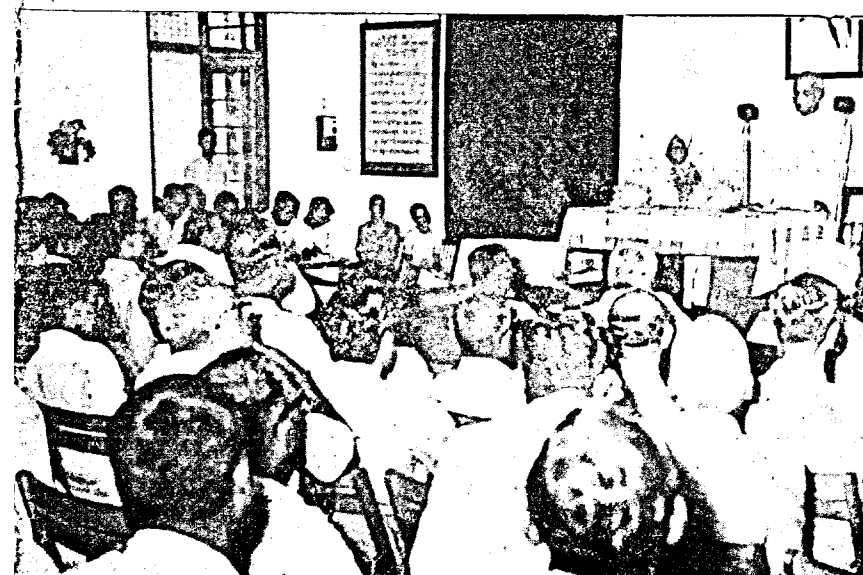


CITY ENGAGEMENTS

Dr. B. V. Keskar, Union Minister for Information and Broadcasting called on Sri C. Rajagopalachari, at the Madras Secretariat, Fort St. George.



Sri Arun Chandra Guha, Deputy Minister for Finance, Government of India (garland in hand) recently visited Madras City.



Sri C. Rajagopalachari, Chief Minister, recently inaugurated the combined Annual Session of the Association of Engineers and Engineering Association (Madras P.W.D.)



CITY ENGAGEMENTS

Shri Sri Prakasa, Governor of Madras, receiving Sri C. M. Trivedi, Special Officer for Andhra affairs, at Meenambakkam Aerodrome.

The Governor of Madras gave a party to the officers and men of the Indian Custodian Force proceeding to Korea.

View of the last day session of the Madras Legislative Assembly (*top*) and Legislative Council (*bottom*).

The Chief Minister Sri C. Rajagopalachari with the members of the Legislature at a party held at Raj Bhavan, Guindy (*bottom right*).

Madras Information³²⁵

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"WE SEEK TO SERVE AND NOT TO COMPETE"

September 1953

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Cover page: The New Elementary Education Scheme introduced recently enables the Children not only to learn the Rs. three but also to be trained in useful crafts. The two boys seen in this picture are students of a village school in Chingleput district. They are helping their parent in his craft and thereby learning to be useful to themselves and to others.

Be Freedom-minded, Keep Banner Flying

Governor's Call to People

It is exactly six years today that we achieved the status of a Free Nation and a Sovereign people, for which for long years, the greatest in the land had struggled and had suffered; and year after year as this date—the 15th of August—has come round, we have renewed our pledge to keep the banner flying, and never deviate from the path that had been chalked out by the Great Master at the time that he took up in his own puissant hands, the leadership of the land, and when on our part, we decided to follow him.

Today it is the sixth time that we have the occasion so to do; and it is but right that we should take stock of the situation and see where we have gone wrong, and find out the best means by which we can set ourselves on the right path again. We have also to examine what we have succeeded in doing so far, and make sure that the work is on right lines so that further and continuous efforts could be made for progress in all directions.

The Fulfilment of the Ideal

It would be futile to expect human beings to live in a state of perpetual emotional exaltation; and six years is a long enough time for the sheer joy of having obtained independence despite everything, to subside; and now that 'everything' which means the satisfaction of the daily needs of life, naturally comes to the force. We have today to see how far we have been able to fulfil the ideal of democratic Republic such as we have declared ourselves to be; how far the Government is responsive to the people's wishes; and how far the people are prepared to co-operate with the Government they themselves have established.

We must not allow ourselves to be side-tracked into thinking that everything is going wrong, simply because there is some excitement or agitation at one end, or some strong expressions of disapproval at the other. Democracy for one thing depends for its proper functioning, upon an opposition to Government whether in the Legislature or outside, always turning its search-light in all corners of the administration, and even exaggerating any drawbacks for the very important purpose of correcting possible

errors, and in a legitimate attempt to change the personnel of the highest executive, and put others in power who may be the exponents of another line of political thought, in a peaceful constitutional manner, so that they might also have chance of implementing their wishes for social well-being, from positions of vantage and power. Having taken the democratic system of Government as our ideal, no one need be frightened at the various distempers that we see around us. They are all part of the game, and have to be accepted as such. The test whether the Government in power enjoys the confidence of the people, is the response that the people make to any special demands made by Government; and the prevalence of an atmosphere of peace and security,

showing that the authority of Government is recognized and accepted.

Proof of People's Confidence

Judged from these standards, there is no doubt that the Government in the country whether in the Centre or in the States, stands vindicated. Madras along with the Government of India and many sister States, floated loans of large amounts; and despite the tightness of the money market and the exceedingly disturbed economic conditions of the people, as a result of the last great war, the partition of the country, and many other factors, all the loans were fully subscribed. In Madras particularly, long before the target date was reached, the loan was subscribed to more than twice the amount asked for. This is a proof not



Make Independence Real for the Handloom Weaver

—Rajaji.

There are a million weaver-homes in Madras in each of which there is a handloom working and cloth of unrivalled quality produced thereon. Four million souls depend on these looms for their daily sustenance, without any entirely other source of living.

These one million looms are a scattered giant-factory on which the State spends nothing either for capital or for housing or other amenities. At least six times these numbers must be the looms and the men and women depending on them in India as a whole, more than the entire population of the Bombay State.

Once upon a time our weavers had to fight Lancashire; now a bigger giant-enemy is installed in the cities of India within our shores. No skilled balancing of costs and subsidies can ever truly solve this problem.

Problem of the Millions.

These 25 million men, women and children cannot be put on any other work which the resources of Independent India can discover or organize for them. All our cultivable land is not enough even for those now engaged in agriculture and no factory or net-work of factories can absorb these millions nor cope with the problems of capital and management involved even if the impossible were somehow set going.

only of the confidence that the people in general have in the Government, but also of their active support in the measures that Government seek to take for nation-building purposes in the form of various projects that they have in hand, and for which they had specifically asked the people to help by subscribing to these loans.

As to the question of law and order, it will be difficult to imagine a society where there is no quarrel that leads to violence; where there are no burglaries or riots or murders. The test of harmonious relations lies in the co-operation of the people with the Government in the maintenance of peace and general conditions of life in which men and women have the

It is not a problem of price adjustment but employment and feeding of the twenty-five million men, women and children who cannot just be disposed of on a paper policy.

What then? Shall they perish or shall we stop the mills working on categories of cloth which these handloom weavers are by tradition trained to produce and have all the machinery required therefor? The categories are well known and I have been crying for reservation to save these millions, who will be quite content to struggle on that basis.

Day of Hope and Anxiety

This is Independence Day. What else can a man of Madras think of on this day of hope and anxiety except these millions who are crying for relief and assistance?

Sri Kanungo, Chairman of the Textile Enquiry Committee, was here a few weeks ago. He told me that he spent some days in Salem and saw with his own eyes, the conditions prevailing in that great weaver-city.

Salem, my place when I was young, is a great hive of handlooms and so are many other towns, not to speak of the thousands of the handloom villages scattered all over our State.

Freedom from Unfair Competition

Let us make Independence real for these honest, diligent men and women

largest possible measure of freedom in personal, domestic, social and economic matters. In fact, it is remarkable that despite the Revolution we have undergone when there has been a change over from a foreign Government to one of our own, there has been practically no disturbance to social life such as invariably accompanies any drastic changes in the very fundamentals of Government, its principles, its personnel and its administrative machinery.

Justifiable Pride in Achievements

Tested in whatever way one can think of, it seems to me that we can legitimately feel with a glow of justifiable pride that in the short time at our disposal and despite all the

whose hands are skilled and who are ready to produce what is an article of essential importance to society in India. They ask for nothing but freedom from unfair competition which we ourselves have set up against them with considerable labour.

Let us not talk words that have no meaning for hungry souls. Let us just tell the mills to produce anything else but not what these weavers have been producing. The mills may sell their cloth in all Asia and make money. But let them not compete and starve out these men and women who have served society for ages faithfully and are still prepared to do so.

Always Wear Handloom Cloth.

The difficulties of the textile bosses are near and cast a long shadow, but the millions of handlooms with a man, his wife and their children around each of them are real, though by their distance from the seats of power they seem small like the stars in the sky.

Ponder over this deeply; meanwhile, brothers and sisters, do not buy any mill dhoties or mill-made sarees. If you have already bought them, put them aside and be ashamed to wear them in public when these handloom weavers are in such great trouble.

(August 15, 1953)

obstacles placed in our way, we have done well as a free nation, suddenly thrown on our own resources in peculiarly difficult circumstances.

We cannot, however, afford to rest on our oars today. We have much to do. We have all to work hard on our separate tasks, so that the nation may continue to grow ever stronger and more vigorous, and be enabled to face the future and the buffets of fortune that it might have in store for us, without fear or flinching. We have to fight the great enemies, poverty, ignorance and disease, unemployment and hunger, that continue to haunt us.

Learn to Value Freedom

We have to learn to value freedom so that we might all be Freedom-minded

"Let us Learn the Wisdom of Work"

Rajaji's Message on the eve of Independence Day, 1953.

Providence might have left us in unfortunate political subjection still, but by the grace of God our nation attained honour and independence and six years have passed since then. Though independent, we have not yet found our feet. We have not yet learned wisdom, the wisdom of humility, co-operation and work.

There are some people to whom if they are not just epicures, life has lost all intelligible meaning. They live only to impress the chaos of their own souls on all that surround them. We must not let them ruin India.

Let us not indulge in mutual jealousy and hatred. There is so much of work to do for all and everyone of us. We are so poor and poverty is the root of most of the other evils. There is no magic that can convert poverty into wealth. We can steal and rob one another, but that way no wealth is produced. It is only hard work, wise co-operation, hope and perseverance, that can and surely will usher in prosperity.

It is time we shed the illusions of mutual hatred and jealousy and the transient satisfactions derived

from the gratification of group passions. Let us merge all the God-given energies of individuals in united national service and may August 15th of this year mark a change in our hearts—from selfishness to co-operation, from inertia to well directed zeal, from jealousy to wisdom. Let us realize that we shall perish unless we work, unless we unite and work.

Good men in the West are helping us. But there are also small men there and they are quite a number, who laugh at our blunders and misfortunes and say to one another, "We said so!". Let us heave our thoughts up to what our succeeding generations reading the record of our faults will say about it fifty years hence. We have it in our power to avoid the faults that our good and wise children will find in us. Let us cleanse our hearts and bestir ourselves as the ants that build their hills and the bees their hives and laboriously work to fill them with grain and honey, no one for oneself but every one for all. To some, my words can be just platitude and nothing more. But if one be earnest and prepared to look within and see faults therein what I have said can be full of meaning. May God help us to say truthfully. JAI HIND.

which I fear, we are not yet. We have to get out of our narrowness and prejudices so as not to endanger our Unity as we are inclined to do for petty aims and ambitions. We have to train ourselves, men and women alike, in our civic duties and social responsibilities, and a proper appreciation of the true values of life. The Five years' Plan has got to be implemented; and everyone must help, for it concerns us all.

We have to realise that the Government and the people are not separate, one from the other, but are the same; and that it is always in the hands of the people themselves to make what Governments they like and to put those in power who they think would be most serviceable to them. We have to get out of the negative agitational frame of mind that we had strangely developed during the last few decades, and turn our attention to constructive endeavours in a proper constitutional manner.

We have to respect ourselves and respect everyone else; and while each person fearlessly performs his own duties, however painful they might be, he must recognise the right of

everyone else also to be afforded proper opportunities to be able to do the same.

A Full Quota of Suffering

Madras has had to face to the full, all the difficulties that any other State in the Union has encountered. We have had our floods and cyclones, our drought and our hunger. We have done our best, actively and generously helped by friends from everywhere, including Malaya, to mitigate the hardships of these calamities and bring succour to those in distress. We are grateful to all who have come to our rescue. Then we are over and above these, facing the difficulty of having to readjust ourselves to a changed condition of political and administrative existence. The great and historic State of Madras that, stretching East and West and South, has played such a notable part in the shaping of events during the last three centuries and more of the history of our land, is on the eve of being partitioned; and the residuary State that will continue to be called the State of Madras, will in extent after a bare six weeks from now, be less than half of its present size, a large portion going to form a new and separate State of Andhra and a small portion merging in the existing State of Mysore.

Partition and Future

Much passion has been roused and many hot words have been exchanged among those who have thought one way or the other on the many issues involved. Now, however, when final decisions have been taken, it is the path of wisdom and of virtue to accept what has been settled, and part as friends, determined to keep the most affectionate of mutual relations amongst all concerned, and prove by our words and our deeds, that the territorial separation has in no way meant the sundering of the hearts of those who lived in one and the same State before, and would live in two and even three States from now onwards; but that it has actually forced stronger bonds of spiritual unity, going to strengthen and not to weaken the great motherland we all love so well.

If democracy is to be successful, we have to bow to the majority and accept finality when that is reached. We can never succeed with our experiment in democratic ways of life and thought, if everyone should always be determined to see to it that his ideas alone prevail, and that no one else is given a chance of ventilating his views.

(Continued on page 8)

The Need for The New Scheme

By SRI T. P. SANTHANAKRISHNA NAIDU, B.A., L.T., Principal, Teachers' College, Saidapet.

Educationists and members of the teaching profession should welcome what is now spoken of as the "new" scheme in elementary education. According to this scheme, children are to attend schools for only half the day and to assist their parents in their work or learn a trade as apprentices under local craftsmen, wherever there are such facilities, or engage themselves in a craft or other activity at the school itself.

There are many reasons why educationists and teachers should welcome the scheme. It is not so new and revolutionary as it is said to be, for as long as three decades ago a few rural schools under Christian Missions had begun working on this plan. Instances are described by that veteran educationist of Chittoor Miss E. VanDoren, in her book *Fourteen Experiments in Rural Education*. In comparatively nearer times, in the late thirties, an outstandingly eminent Director of Public Instruction of Madras, the late Sir Meveral Statham, in his instructions to inspecting officers to combat wastage in elementary schools, due to the dropping off children from rural schools when they were old enough to assist their parents or to contribute by their labour towards the income of the family, was repeatedly suggesting that parents should be persuaded through the personal propaganda of the inspecting officers to send their children to school at least for a few hours every day. These were his words: Where parents withdraw children from school before the completion of the elementary school course a little persuasion might in many cases result in the return of the pupil to school at any rate, for a few hours in the day, the school hours being so adjusted to fit in with the domestic, agricultural or industrial work engaged in by the child.

The School Day.

To the statutory definition of the school day of five hours an exception has always existed in the rules providing for part-time attendance of pupils under the following conditions:—

(i) That the part-time pupils are confined to Scheduled Classes and girls only, in Standards III, IV and V; and

(ii) that instruction is imparted for a minimum of three hours a day.

That the provision was only an exception is presumably due to the economic conditions of those days and the community groups which were more particularly affected by them. The significance of the provision is, however, that the idea of part-time school is an old one which was prevalent even in those days.

In order to examine the Modified Scheme of Elementary Education and to make recommendations thereon, the Government have constituted a Committee of the following gentlemen:

Professor R. V. Parulekar (Chairman), Director of the Indian Institute of Education, Bombay, Dr. B. B. Dey, Retired Deputy Director of Public Instruction, Madras, Sri Mujeeb, Vice-Chancellor, Jamia Milla, Delhi, and Sri. S. Govindarajulu Naidu, Director of Public Instruction (Member-Secretary).

The Committee will (i) examine the system of Elementary Education as it prevailed in the State till last year and the manner in which the quality of that education can be improved and the number of pupils receiving education can be increased; and (ii) examine the Modified Scheme of Elementary Education and its working particularly in relation to the objects stated in item (i) in all its implications, and make recommendations on the subject to Government.

But in actual practice the idea did not progress to any noticeable degree. Attempts were, however, made from time to time by the Director of Public Instruction to publicise the provision but, as existing conditions show, these attempts have not been a success. A more effective and more authoritative appeal, with the advantage of wider publicity and bolder challenge, ought to be therefore welcome to all educationists who have fostered the idea in the past but have not found themselves able to progress far in putting it into practice.

The Aim of the Change.

Apart from this historical reason, as it may be called, there is also another very important reason why the teaching professions should welcome the new scheme and make its contribution towards its successful implementation. Amidst the confusion caused in the minds both of the public and of the teaching profession by recent controversies on the objectives of elementary education the new scheme introduces a refreshing note of clarity, precision and simplicity regarding the aim of the elementary school. It separates the aim of training for a livelihood from that of general enlightenment through the conferment of the master tool of literacy; and it makes the former largely the responsibility of the parent and the local community and limits the responsibility of the teacher and the school to the aim of making the children permanently literate.

When one considers how clouded this aim has become during the past seven or eight years, getting hand and eye training and general manual skill mixed up with craft training and earning through the crafts, expecting that the elementary school teacher can be burned into an Admirable Crichton, one should have a sigh of relief that the end to this confusion is not far if the new scheme is received in its proper light. And the teacher with his aim now clearly defined is in a position to concentrate all his efforts towards this aim and go forward with confidence. While as a member of society and as a citizen the teacher has his own share of responsibility towards the child outside school as well, it is a significant implication of the new scheme that this function of his is distinct from that as a teacher and does not therefore dissipate the discharge of his now well-defined work at school.

A Realistic Attitude.

When we ask what is wrong with our schools we merely ask "what is wrong with ourselves", wrote Philip Wylie in *This Week Magazine*, but we forget this and assume that everything is wrong with schools and nothing is wrong with ourselves. Perhaps for the

first time in recent history the new scheme recognises that the school alone cannot do everything and that society has its own duty to perform towards the child in fulfilling his training for life. This is a refreshingly welcome and realistic attitude which if it stirs society as much as it heartens the teacher should have abundant results. But all this does not mean that the teacher, finding his responsibility limited and defined by the scheme, can sit back and leave the school time-table and the school clock to take care of the rest of his work. Nor does the aim of literacy imply that all teaching should be through books and through chalk and talk. Both school organization and teaching methods will require a new approach. Older pupils who alternate school with their work will come to classes more alive and with richer experience and will therefore need more realistic lessons; they may no longer be the passive listeners they were. They may put questions; they may want to know many things.

A Satisfying Form of Work

In the atmosphere which these older pupils bring into the school, assuming they are numerous enough, the younger children who still attend school for the whole day may need scope for more activity, as also those older children who cannot be placed with local craftsmen or other occupations. The teacher has to rise equal to the needs of both these classes outside schools and take interest in it and in them; he has to provide satisfying activities, like gardening, cleaning and decorating the premises, song and dance for the younger children and productive crafts for some at least of the older children. But these are not new to him; he has only to revive them in himself if in the past he listlessly put them away in his bewilderment when he was asked to do so many things and did not know where to begin and therefore did not begin at all. And no longer concerned solely with craft outturn and productivity, he will be capable of taking a more kindly and sympathetic interest in the crafts pursued by his older children outside school under master craftsmen, incidentally educating himself in the life around school and for a new kind of guidance to his older pupils. The defining of responsibility and the limiting of the aim and the assignment of a part of

the education of the child to the parent and to the community does not therefore mean a reduction of work for the teacher. It means an increase, but it will be a more interesting, realistic and satisfying form of work.

The increase of work is, however, not only to the teacher, but it is also to the parent and to the local community in general, as well as to the inspecting officer. It was perhaps due to this fear of increase of work that past attempts on the same lines as the new scheme did not meet with any success, except where missionary zeal on the part of a few Christian institutions produced unostentatious success little known outside beyond the circle of those who were in touch with these institutions. But at a time when the country is going ahead with big and small schemes of vast benefit to the population, effort should be enormously increased in all directions and in all fields. Education should not lag behind.

Emphasis on National Heritage.

In spite of the apparent similarity of what is called the 'new' scheme in elementary education to the fifteen-year old departmental provision for part-time pupils in rural elementary schools and in spite of Sri Rajagopalachari's disclaiming originality for the idea and his reference to the late Sir Mervat Statham in one of his recent speeches, there is a fundamental difference in approach and emphasis between these two great men.

At a time where there were no two opinions regarding the objective of permanent literacy, the late Sir Mervat's emphasis was naturally on literacy and the provision for part-time pupils was a concession to the parent who would otherwise keep his child away from school altogether; but Sri Rajagopalachari's emphasis as a patriot and philosopher is on the national heritage of craftsmanship and industry and the native capacity of the child for self-absorption from life and living realities and for the acquisition of skills through imitation and spontaneous practice in a realistic setting. If this difference is not recognised and appreciated, there is a grave risk of what after all is a comparatively minor detail of school organisation, namely, that of working hours of rural schools, assuming undue prominence to the detriment of an essential major principle of education.

Already this is happening. Much of the opposition to the new idea centres around the details of the working hours and the consequent organizational arrangements. Even those who welcome the change are thinking more of these details than of the principle underlying the new approach. While it is necessary in the interests of orderly progress that a certain amount of thought should be given to these details, they should still be considered as details subordinate to the essential main principle, as otherwise a proper settlement of these details may not be possible at all.

Principles of Learning.

Like the detail of three hours formal school, the principles of learning through active participation in the life of the local community is not new in the history of education. Rousseau had said "No book but the world, not teaching but facts. The child who reads is not thinking he is only reading; he is not acquiring knowledge he is only learning words—The letter killeth, the spirit giveth light—Stoop to the working man's position, in order to rise above your own" and declaimed "with our babbling education we make nothing but babblers;" and the professional teacher is not unacquainted with Rousseau's writings. Yet the teacher has gone on in the way he has done with his formal five-hour school, with its time-table and syllabus and text-books, because that was what convention and the "rules", which emphasised from more than substance expected him to do. Indeed he has done it so long he has come to regard the system as his own, forgetting and gradually losing altogether the idealism with which he was perhaps imbued in the days of his training for the profession; and in what is now presented to him from outside he fails to recognise the substance of his own ideals of the past, or else recalls the frustration of his early ideals and, based on his own past experience, feels sceptical about the chances of the fulfilment of those ideals at this late stage.

It is therefore necessary for the success of the present move in elementary education that the teacher should be understood with reference to his past experience and helped through a revival of his own past idealism in education and through a clarification of the philosophy of education through realistic living and work. This should be done by those who are placed in a

Audio Visual Education

By SRI K. RAGHAVA REDDI, Special Officer for Audio Visual Education.

Educational institutions in advanced countries like England and America, almost without exception, have been using some or all of the modern audio visual aids such as projectors, radios, recorders, and stereoscopes, for instructional purposes, for several years past. But we, in this country, have not made much headway. These aids are rather new to us, though a few educational institutions have been using some of them in the past few years.

It was in the year 1947 that the State Government stepped in for the first time with a definite scheme of Visual Education. Licensed 'Private Exhibitors' owning 16 m.m. cinema projectors were authorized by Government to give film shows in secondary schools and training schools. This system, which, by the way, did not provide for anything more than cinema shows, was discontinued from March 1951, when the Government took over the entire responsibility of providing instruction through modern audio visual aids, making them available to the class teacher in the class room.

Rapid Advance.

During the past two years rapid advance has been made in this direction. The films and filmstrips lent from the Central Film Library in the office of the Director of Public Instruction, which has at present

1,100 films (16. m.m.) and 1,500 filmstrips (35. m.m.) are very popular, as may be seen from the statistics.

The intention of the Government is to encourage every school which can afford to do so, to build and develop its own film library, and to permit inter-school exchange of films and filmstrips on terms approved by Government. In the past one year about 50 schools have started their own film libraries mostly consisting of 16. m.m. silent films, consistent with the accepted policy of the Government to encourage the use of silent films in the class-rooms. These school libraries possess now, in all, about 450 films.

Mention may be made, in this connection, of the fact that the Government prescribed a "minimum audio visual equipment" (consisting of a 16.m.m projector, 35 m.m. film-strip projector and a radio set), in 1951, in the hope that every school will become equipped with this, as early as possible. The progress is rather slow in respect of non-electrified schools which number about 800 out of a total of about 1,500 schools. However, as an experiment, the production of electricity at the school premises, through the school's own generator for supplying current for its projectors, and for charging the battery for its radio, is being tried in non-electrified areas.

Audio Visual Equipment.

In the large majority of cases the audio visual equipment and accessories are bought from out of the accumulations in the Audio Visual Fund of the school, to which the collections from the pupils, in the schools which can provide instruction using the modern audio visual aids (at the rate of Re. 1 per year from each of those in Forms I to III and at the rate of Rs. 2 from those in High Schools) are remitted. The expenditure is strictly controlled, and the purchase of equipment, which should be of the approved type is arranged for, at favourable rate by the Education Department of the Government.

With regard to the training of teachers in handling and maintaining equipment, considerable attention has been paid during the years 1951-52 and 1952-53, particularly since the availability of projectors, films and other audio visual equipments alone cannot guarantee the success of the Scheme. It is necessary that for effective utilization of these aids, teachers should learn something about the maintenance and use of the equipment and also the proper technique of using these aids in the class-room. As many as 14 intensive training courses of four days' duration were conducted in different parts of the State for teachers employed in schools

position to advise and guide rural teachers in the capacity of educational administrators and senior members of the profession.

The Natural Learning Process.

The philosophy underlying the new move also contains the answer to a challenge the significance of which should be appreciated by educationists and, through them or independently by the working teacher. If the school is to contribute anything substantial to the life of the child, that contribution should be something in addition to what the child acquires outside school by way of ability to adjust himself to life around him and not a secondhand substitute for it; in other words, the

child who attend school should not be inferior to one who does not go to school, in respect of the abilities and skills which children naturally and spontaneously acquire from their environment. If literacy is what the school contributes the literate child should be as capable as the illiterate one to milk a cow, climb a tree, splice a length of rope and perform all the odd jobs about the home and the village which he would still do if he had not gone to school. If a child who goes to school is not able to do these things, his literacy is a poor substitute to what he has lost by going to school. This is how the village parent who does not send his child to school or who is indifferent about his child's regular

attendance thinks. Unless and until he understands that his child has something to gain and nothing to lose by going to school, there can be no real school in the village.

The school should therefore respect and provide for the natural learning process of the child outside its own walls and to base its contribution towards literacy on that process, taking into account what the child acquires by it, and thus answer the parent's challenge. The new move is something more than three hours' school instead of five hours which only partly and vaguely understood the parent's challenge. Within it is a philosophy which meets the parent's challenge—as well as the challenge of the times.

AGRICULTURE

10

MADRAS INFORMATION

On the Nilgiris, the two important crops, viz., the main (nearly 11,500 acres) and the second about 7,000 acres are purely rainfed, respectively coming up with the help of the south-west and north-east monsoons. The small irrigated area of 1,500 acres is confined to fairly low level lying lands which have irrigational facilities through perennial jungle streams.

Conditions Required

The following conditions are important for raising an average potato crop, particularly in the plains:—

1. *Land*.—The soil should be loamy, capable of taking up irrigation and drainage easily. Heavy clay soils retard good tuber development. Alkaline soils are definitely not suitable.

2. *Water*.—In the absence of good and sustained showers during the growth of the crop, irrigation facilities are very necessary. The crop should be watered at least once a week if no rains are received.

3. *Season*.—Temperature is an important and limiting factor in the plains. A maximum of 80° F is desirable and the ceiling should in no case exceed 90° F. Such a condition obtains only during the cold weather months of October-January over the plains. Another advantage is that some showers on account of the north-east monsoon are certain during this period and will benefit the crop.

Manure Cost

Potato can be raised more economically in the plains than on the hills, when the question of manuring the crop is considered. On the Nilgiris, the manure bill of the grower is very heavy, amounting to nearly Rs. 320 per acre. Such a costly dosage is dictated by a number of conditions like the highly acid soils with their heavy contents of iron and alumina which revert the phosphates applied to steep slopes tending to erosional losses of much of the nutrients and of course the inherently poor soil. The soils over the plains are richer both in humus and minerals and neutral in reaction. They are generally well stocked with potash which is an important mineral requirement for potato. An acre of average potato crop removes from the soil about 47 lb. of nitrogen, 22 lb. of phosphoric acid and 77 lb. of potash. Hence the following formulation for a manure mixture to supply these quanta may be considered optimum per acre.

300 lb.	groundnut cake meal.	} To supply about 54 lb. of nitrogen.
150 lb.	ammonium sulphate.	
150 lb.	super	} To supply about 30 lb. of phosphoric acid.
100 lb.	Potassium sulphate or muriate.	
700 lb.	-	} To supply about 50 lb. of potash (the balance is taken as readily available from soil reserves.

Details of Cultivation

(a) *Seed*.—Freshly lifted tubers are not fit for immediate planting. The seeds have to be stored in well ventilated rooms, preferably spread on wooden racks, three or four layers deep. Under such storage the seeds begin to break, i.e., sprout out from the eyes in about six to eight weeks. This would be the best time to put them in. In the Nilgiris, the main crop is harvested in August and by the time the month for sowing on the plains (October) approaches, the material would be ready for sowing.

(b) *Preparatory cultivation*.—The land is ploughed to a fine tilth and cattle manure or compost applied before the last ploughing and covered up to five tons per acre. The field is then laid out into ridges and furrows spaced two feet apart.

(c) *Sowing*.—Seed is placed 9 inches apart in the furrows. After manuring with the mixture suggested by placing it on a level with the seed, the seeds in the furrows are covered with the earth from the adjacent ridges and immediately watered. The seed rate would amount to eight or nine bags of 200 lb. each.

(d) *Irrigation and after-cultivation*.—Further irrigation may be done once a week or postponed, depending on any rain received. The seeds begin to sprout out of the soil in two to three weeks after sowing and sprouting will be complete in a month. The plants are to be earthed up twice, once after sprouting is finished and the crop averages about 6 inches in height and the second time when the crop covers the lines by loosening the soil but without disturbing the root zone. Stagnation of waters should be avoided.

Normal plant protection measures may be undertaken against possible attack of the foliage by *Ephilachna* beetles and cutworms by dusting with insecticides. If rat damage to roots is noticed the rodents may be baited with zinc phosphide. The limited north-east monsoon rains will not be

generally conducive to early blight but should spots appear on the leaves, Bordeaux mixture spray will prove useful. No other serious pests or diseases are likely on the crop.

(e) *Harvest and yield*.—The correct time to lift the crop will be when the haulms completely dry up and die down indicating full tuber maturity. Earlier lifting will result in skinning of the immature tubers and loss of keeping quality. The ridges that carried the plants should be broken up carefully during lifting to avoid damage to tubers by cutting.

Under normal conditions an acre yield of 6,000—7,000 lb. is considered possible and profitable.

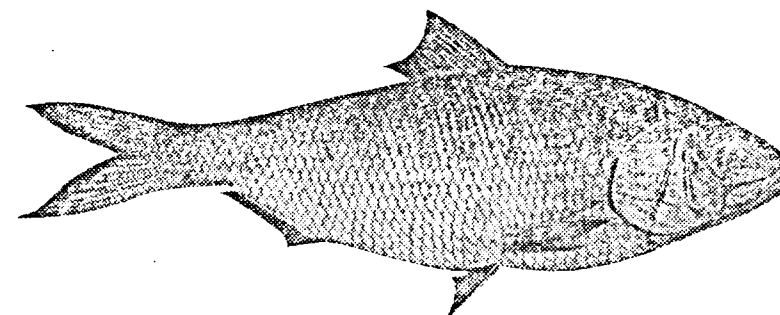
Varieties grown.—Good crops of potatoes are being raised successfully in lower elevations such as the Shevaroy Hills in Hosur Taluk, Salem District, and Palnis in Madurai District during the cold weather months. At the Agricultural Research Station, Koilpatti in Tirunelveli District, small-scale trials with a few varieties received from the Central Potato Research Institute, Patna, during the 1951-52 crop season, gave encouraging indications of yields of between 6,000 to 8,000 lb. per acre. Investigations at the Agricultural Training School, Orathanad, in 1950-51 yielded similar conclusions and three varieties, viz., Arran Scout, Up-to-date and President proved their suitability for cropping in the plains.

It is proposed to explore the possibilities of taking a winter crop of potato on the plains by the conduct of cold weather trials at various Agricultural Research Stations and on the holdings of a few interested landlords in selected districts. If these exploratory attempts yield good indication, then they will gradually pave the way for the routine cultivation of this valuable vegetable on the plains in an increasing way. Potato which is at present beyond the reach of the average man both due to high prices and short supply can be rendered available cheaper by this process.

FISHERIES

11

MADRAS INFORMATION



HILSA—The Delight of the Table

The increasing absence in the State rivers of the bright silvery *hilsa*—the delight of the table, has called for the special attention of the Fisheries Department.

The *hilsa*, belonging to the herring type is a migratory fish. The fish is fatty and the body is latterly compressed. The fish grows to a maximum length of 23½ inches and weighs 4½ lb. *Hilsa* known in Tamil as *Ullan* and in Telugu *Polasalu*, is rich in bones; but this defect is heavily compensated by its taste which is comparable to a combination of that of salmon and the herring.

A Fast Swimmer.

A fast swimmer, *hilsa* is essentially a sea fish. But during floods in the rivers, the adults migrate from the sea or the river estuaries and go up-stream, in some instances, even 150 miles into the upper reaches of the rivers, to deposit the eggs.

On the quantity of the flood discharged into the sea, depends the number of *hilsa* shoals that ascend up the river. But the major rivers of the State are dammed and consequently very little flood waters flow in the sea. Though useful for agricultural purposes, the dams, anicuts and weirs, stand as barriers for the free migration of fish in the rivers. Hence there is not only a decrease in *hilsa* fishes, but a control is also imposed on their breeding.

Indiscriminate Fishing.

All the *hilsa* that migrate in the river are stranded at the bars of the dams or anicuts. And 90 per cent of them are breeders.

Such a huge congregation at the foot of these artificial barriers, serves a great temptation to fishermen. The attention of the fish is mainly

concentrated in spawning and they fall an easy prey.

The *hilsa* fishery at the anicuts of Godavari, Krishna and Cauvery are worth a few lakhs of rupees. But catching them before the breeding season would amount to total and extensive destruction of the fishes. This has contributed to the decline of the fishery, and the major absence of *hilsa* fish in South Indian streams.

Efforts at Preservation.

The Fisheries Department lost no time in tackling this problem, for the fish has good food value.

Steps taken to preserve *hilsa* are twofold. The first is the protection of the *hilsa* fishery in the dam areas and the second is the propagation and protection of the progeny.

Fishing Prohibited.

Under the Indian Fisheries Act, fishing is completely prohibited in the dam site for a distance of one mile.

Hatcheries are set up at important places where large congregation of *hilsa* breeders occur to artificially propagate the species. The breeding fish (male and female) are netted and the milt and the ova are carefully removed. The fertilization is carried out artificially and the eggs are hatched in specially constructed tanks. When the larvae grow into fry the latter are transported to, and released in, suitable areas where they feed and grow further.

Though *hilsa* does not form one of the major fisheries of our State, yet its popularity and its taste, have placed it high among the popular fishes and hence the Fisheries Department of the State is doing all it could to protect, propagate and preserve this variety.

Harijan Welfare

The Government have reconstituted the State Harijan Welfare Committee with the Minister for Education and Harijan Welfare as Chairman. The non-official members are: Sri A. S. Shahajananda, South Arcot, Sri H. M. Jagannathan, North Arcot, Sri V. S. Sivaprakasam, Madurai, Sri V. Bashyam Iyengar, Madras, Sri B. Parameswaran, Madras, Sri S. Arumugam, Salem, Sri D. Dasarathan, North Arcot, Swami Anand Thirth, Madurai, Sri L. N. Gopalaswami, Tiruchirappalli, Sri M. Chadayan, North Malabar, Sri K. Eswara, South Kanara, Sri S. R. V. P. Murthy Raju, West Godavari, Sri Vavilala Gopala-krishniah, Guntur, Sri T. Mallaya, Bellary, Sri P. Gunnaya, Srikakulam, Sri M. Rajeswara Rao, West Godavari, Sri Vemula Kurmayya, Krishna, and Sri E. Ganganna, Anantapur.

The term of office of the non-official members is three years. The Secretary to Government, Rural Welfare Department, the Director of Harijan Welfare, and the Registrar of Co-operative Societies are ex-officio members of the Committee. The Director of Harijan Welfare is also the Secretary of the Committee.

Facts and Figures

1. Every five seconds, around the clock, a goods wagon is loaded on the Indian Railways. During June this year, an average of 17,355 wagons were loaded every day, 64 per cent of them on broad-gauge. This was 936 wagons more daily than three years ago.

2. During the first six months of the operation of the Community programme in 81 development blocks all over India, nearly 11,500 acres of waste land were reclaimed and work on another 5,700 acres was in progress.

3. India exported 1.36 million tons of manganese ore in 1952-53 as compared to 1.12 million tons in 1951-52.

4. Out of India's total production of 316.9 crores of coconuts in 1951-52 the States of Madras and Travancore-Cochin accounted for 280.2 crores of coconuts.

5. During the period January to April 1953, internal air operating companies carried 157,250 passengers. During the same period 28,071,908 lb. of freight and 9,238,587 lb. of mails were also carried.

and nearly 300 teachers have already been trained in this manner. In addition to these, 300 teachers also have received training in the Central Film Library in the office of the Director of Public Instruction, in the handling and maintenance of projectors. Teachers are also encouraged to visit the Central Film Library, and observe its working whenever they happen to come to the Headquarters.

Training and Maintenance.

While the staff of the Director of Public Instruction trains the teachers in the matter of handling and using projectors, the Radio Engineer to the Government arranges for the training of teachers in handling and using radios. In the majority of cases the State Broadcasting Department looks after the maintenance of the battery sets owned by schools.

The technique of using these modern aids in the class-room has also shown considerable improvement. In the schools which own projectors, these are used in the class-room by the teacher during working hours in conjunction with the class lessons, often along with other aids like maps, charts, models, etc. The school programmes broadcast by the A.I.R. are also popular with the students.

Quite a recent addition to the approved list of audio visual aids is

(Continued from page 4)

If we accept democracy as the basis of our Government, we must not accept it only on paper and in theory, but must also be prepared in our own lives to pursue persistently and cheerfully the methods that alone can make it possible and successful.

Let us all pledge ourselves on this great Day as we celebrate the sixth anniversary of our Freedom, that we would be worthy of being a Free people and would work our hardest, so that the ideals for which we stand, may be attained; and that by spontaneous service of each other, we shall help to make our country a great and prosperous one, happy within its own borders, and at peace with the world at large; a shining example of tolerance and goodwill for all to follow and to emulate.

—By courtesy, A.I.R., Madras.

Best Books in Tamil and Malayalam

Prizes for 1952-53

The Government of Madras have approved of the proposals of the Tamil Academy and the Pan-Kerala Literary Academy for the award of prizes for the best books in Tamil and Malayalam for the year 1952-53.

Tamil: (1) *Research*: "Tirukkural Solladaivu" by Tamil Mani Velayudham Pillai; (2) *Short Story*: "Pavalamaligai" by Sri K. V. Jagannathan; (3) *Natural Science and Agriculture*: "Manvalam" by Sri P. Kothandaraman; (4) *Education, Psychology and Religion*: "Ramakrishna Upanishad" by Sri C. Rajagopalachariar; (5) *Medicine and Health*: "Suggestions to Pregnant women" by Dr. K. Venkataswamy.

Malayalam: (1) "Vartta Silpam" by Sri Kutti-Krishna Marar; (2) "Naishadharoapanam" by Sri P. Kunjirama Kurup; (3) "Neelavelicham" by Sri P. C. Kuttikrishnan; (4) "Charithrakeralam" by Sri P. A. Syad Mohammed; (5) "Kuttikalute Gandhism" by Sri A. P. Vasudevan Nambeesan; (6) "Kavi" by Sri Mannalath Sreedharan.

Each prize in respect of Tamil books will be of the value of Rs. 500 and each prize in respect of Malayalam books will be of the value of Rs. 250.

Sri C. Rajagopalachariar, Chief Minister, has expressed his desire that the prize to be awarded to him for his book "Ramakrishna Upanishad" be given to the Ramakrishna Mutt, Madras, the publishers of the book.

the view master stereoscope. But since the supplies are limited, and the method of utilizing these stereoscope necessitates each pupil using a view master simultaneously with the teacher, in the class-room, only a beginning could be made.

The Remarkable Success

A glance at the statistics below will show the remarkable success which has attended the introduction of the revised scheme of Audio Visual Education in 1951, and its unquestionable popularity.

Progress made during the year 1951-52 and 1952-53.

	1951-52.	1952-53.
1. Number of 16 m.m. cinema projectors owned by schools.	150	340
2. Number of 35 m.m. filmstrip projectors owned by schools.	30	160
3. Number of radio sets owned by secondary schools under the auspices of the Education Department.	270	540
		(900 including sets owned by elementary schools).
4. Number of 16 m.m. films owned by the Central Film Library.	800	1,110
5. Number of 35 m.m. filmstrips owned by the Central Film Library in the office of the Director of Public Instruction, Madras.	342	1,500
6. Number of film shows given in schools with the films borrowed from the Central Film Library in the office of the Director of Public Instruction, Madras.	8,000	22,270

Potato Cultivation on the Plains

Potato is an important food crop that deserves both large-scale and quick multiplication of quality seed material and widespread extension to regions in which it can be profitably cropped. At present its cultivation is chiefly confined to about 20,000 acres on the higher plateaux of the Nilgiris, where it is a major food and money crop.

The average per acre yield of potato is about four tons while that the common foodgrains touches only a tenth to one-eighth of the figure. Potato starch is more easily digestible and assimilable than that derived from the cereals and therefore, it is a

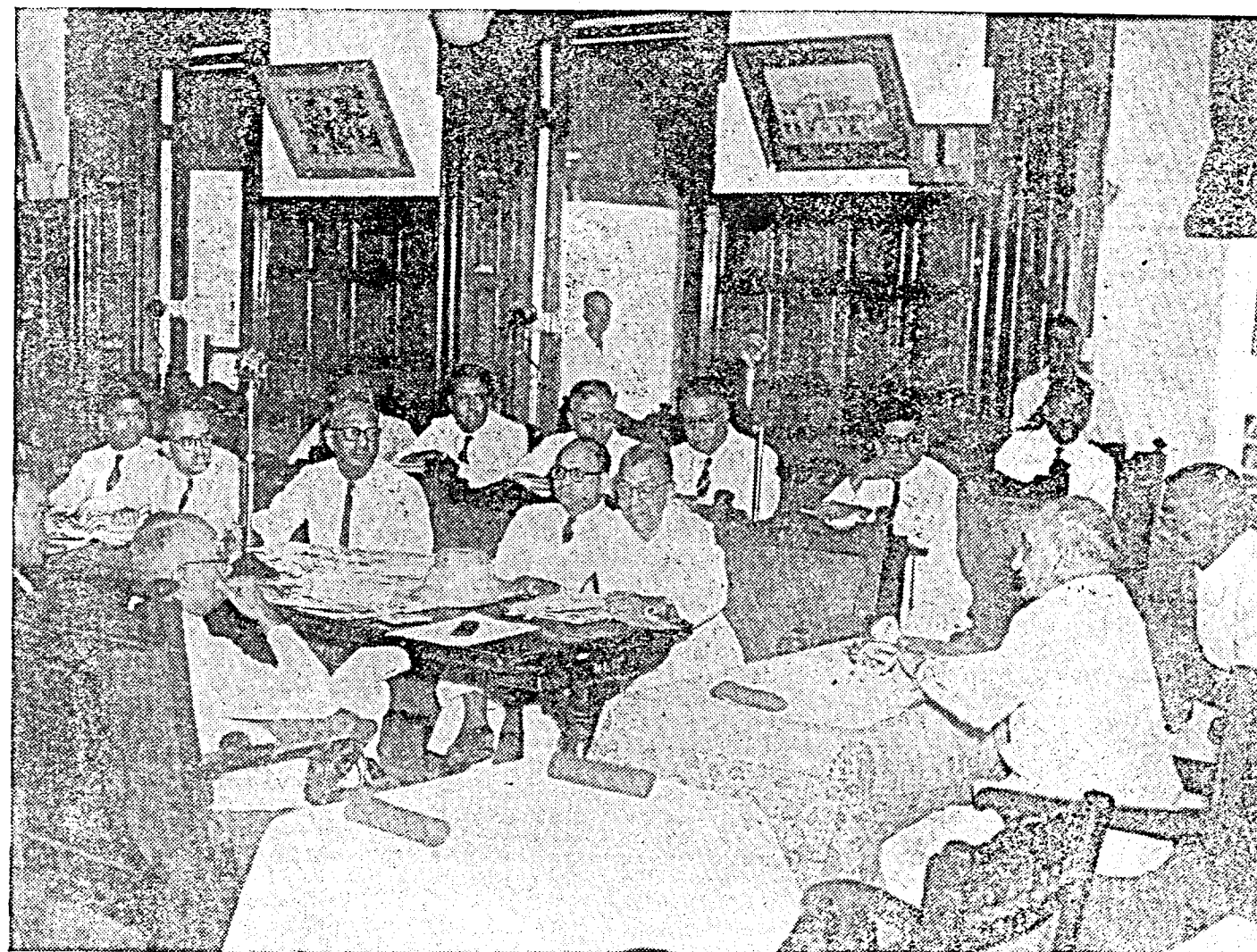
pre-eminent "energy food". In addition, it has a rich store of minerals. Unlike other vegetables which perish quickly and easily, potato can be stored for comparatively longer periods without appreciable decay. Again, it yields itself readily to processing. It may thus be evident that any steps taken to extend the present low acreage under the crop and its consumption on a wider scale will help in increasing the food resources of the State.

Practically the entire cultivable area on the Nilgiris Hills, excluding the permanent tea, coffee and cinchona plantations, is already under potato. Hence any extension in its acreage

will have to be necessarily on the plains.

Crop Seasons

Except the Nilgiris, which has three well-defined crop seasons for potato, viz., the main (April-August), the second (August-December) and the irrigated (January-May), only one crop is taken in the other potato zones of India, inclusive of the Simla Hills. This single crop is usually raised during the cold months. For normal growth and tuber formation, a temperature range of 60° F—80° F is the most ideal for potato. Such a condition obtains over the plains only during winter.



During his tour in the State, the Union Minister for Agriculture, Dr. P. R. Deshmukh, conferred with the officials of the Madras State and discussed with them problems connected with the State's Grow More Food Schemes.

INDUSTRIES

14

MADRAS INFORMATION

extraction of pupae oil which is largely used for making soap due to the paucity of vegetable oils in Japan.

Step in Right Direction

In Madras State the bulk of raw silk produced is by Charka reeler with the crude reeling appliances. Recently a few charka reelers have been encouraged by the Department to adopt improved methods of reeling in what is called Production-cum-training Centres. This is a step in the right direction to improve the quality of charka silk and proposals are under way to increase the number of Production-cum-training Centres.

In the Government Filatures at Kollegal where there are 350 basins working, which are of sitting type, superior quality silk is being reeled. The silk produced in this Filatures has already established a name in the market. In addition to the sitting type of basins, a new Japanese multi-end standing type of improved reeling machine has been installed which is working satisfactorily, with a combined cooking arrangement.

The following steps are suggested to improve the silk industry in the State.

Introduction of a system of cocoon grading and classification and ware-housing as Japan with a view to get best quality of cocoons to Filatures.

Increasing the number of Production-cum-training Centres to improve the quality of raw silk produced by charka reelers.

Introduction of improved types of cocoon drying machines Yamato type in the Government Silk Filatures.

Increasing the number of units of the new multi-end standing types reeling machinery with combined cooking arrangement and utilisation of by-products.

Importance of Publicity

In Japan much importance is paid to publicity for improvements effected as a result of researches by propaganda. Besides radio talks and publication of special bulletins by the Raw Silk Bureau of Japan and also by private associations, the extension section of the National and Prefectural Experimental Stations are engaged in exhibiting propaganda films with the help of projectors in the villages. Here also it is



Two typical houses built by the Babujinagar Rural Housing Society at Amaravathi, Guntur District.

The Babujinagar Rural Housing Society

The Babujinagar Rural Housing Society, Amaravathi in the Guntur district, is a typical society formed under the Rural Housing Scheme.

Registered on August, 1950, for the benefit of the villagers, the Babujinagar Rural Housing Society started functioning on 19th August 1950, with 27 members on its rolls with a paid up share capital of Rs. 2,250.

The affairs of the society are attended to by an executive body of five members nominated by the Registrar. The promoters of the society purchased an extent of 9 acres 5 cents of land from the Zamindar of Amaravathi and divided it into 23 house-sites.

The housing scheme consisted of two type-design houses: Design 1 consists of a

house of 5 rooms with a plinth area of 562 sq. feet costing about Rs. 7,200 and design 2 consisting of 4 bigger rooms with a plinth area of 1,080 sq. feet costing about Rs. 8,500. 18 members have begun construction of houses in the colony of which 12 have been completed and 6 are in progress. Of the 12 completed houses 7 have already been occupied by the members. The society has been given a Government loan of Rs. 79,800 to enable the members to build the houses. Each member is given Rs. 5,000 as a loan for the construction of the house. All the houses are expected to be completed and occupied before the end of September 1953 and the complete formation of the colony would become an accomplished fact ere long.

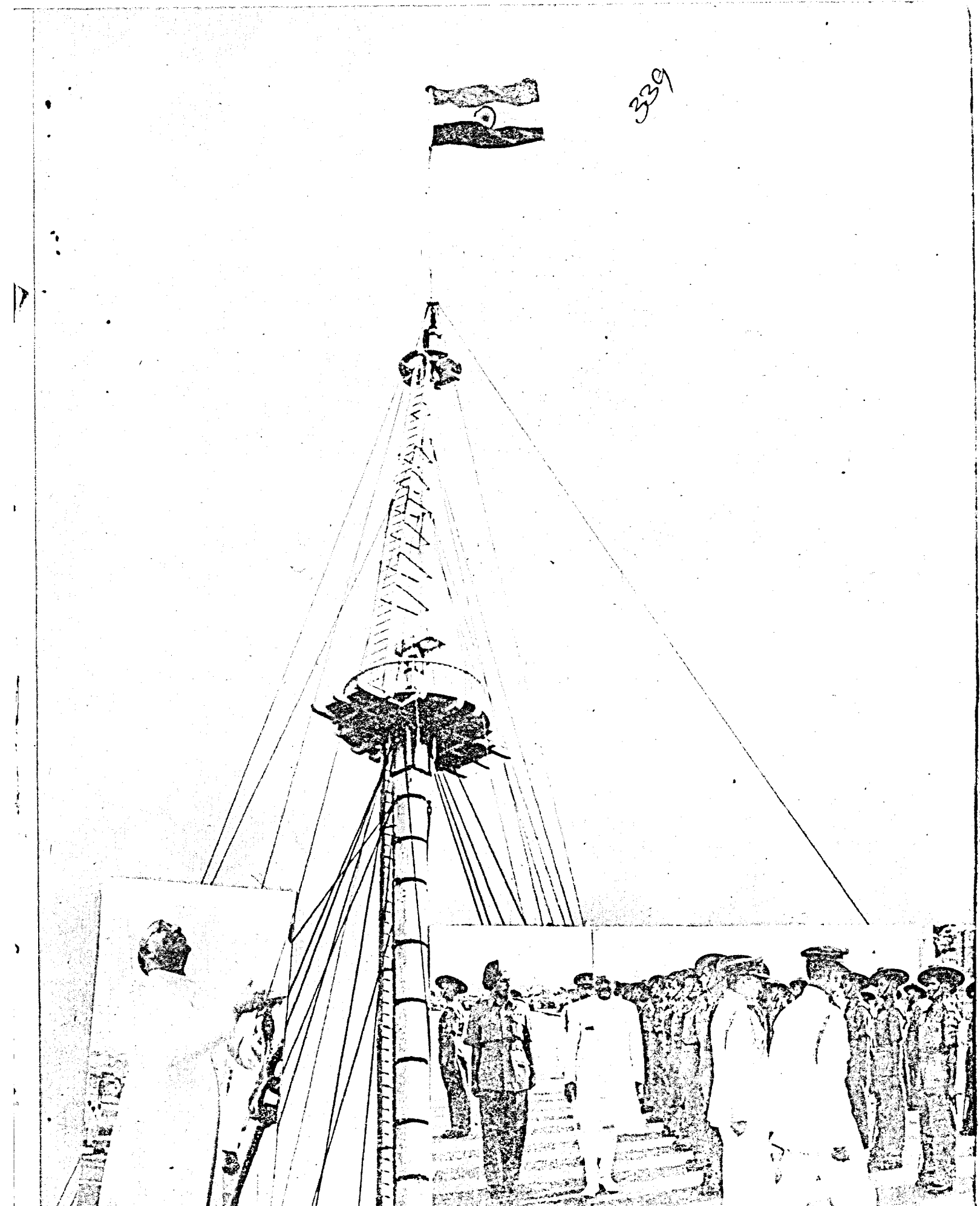
very necessary that the work done on the various aspects of the industry should be made known to our Sericulturists through films exhibited by the Department.

In this connection, it is also submitted that if the silk industry in Madras State is to improve, it can be only by researches in all the branches of the industry as in Japan. This is possible only by establishing an up-to-date Regional Research Station as already envisaged in the Five Year Plan with necessary trained technical personnel.

Caption for the facing page

INDEPENDENCE DAY

Shri Sri Prakasa, Governor of Madras, hoisted the national flag at the Secretariat on the morning of the Independence Day, 1953. (Inset right) Governor inspecting the guard of honour, (Inset left) and hoisting the flag.



Silk Industry in Japan

By SRI N. K. GURURAJAN, Sericultural Research Station, Kollegal.

The Sericultural Industry in Japan is introduced as a subsidiary occupation to agriculture as in India. Sericulture is practised by individual farmers throughout the country unlike here where the industry is confined to certain tracts where the climatic conditions are quite congenial for the industry. In Japan, mulberry growing and rearing of silk-worms has been found to be more remunerative than growing food crops, due to the demand for raw silk from all over the world. Improvement has been noticed in all the branches of the industry due to research which is given the highest importance in all development plans. By adopting rational methods, the cost of production of cocoons and silk has been considerably lowered and high grade silk is exported outside. Thus Japan has become the premier silk producing country.

A brief account is given below on the improved methods adopted in Japan in the various aspects of the industry and the methods at present followed in India with particular reference to Madras State and the measures that could be advantageously introduced in our country to suit our conditions here.

Mulberry Cultivation.

In Japan, Mulberry is cultivated mostly as bushes similar to our system. Three crops are taken in a year, i.e., in spring, in April and May; in summer, in July and August; and in autumn, in September and October. Many high-yielding varieties have been introduced after selection. The most popular variety is KAIRONE-ZUMUGAESHI which is propagated by grafts over a variety called Roso which can be raised by seeds. There are many private nurseries and co-operative nurseries engaged in this important work of supplying grafts to sericulturists.

Mulberry is grown in a variety of soils. Generally speaking, the soils in Japan are poor in their chemical constituents. The soils are generally acidic and the sericulturists are fully alive to the importance of improving the soil by intensive cultivation.

Rainfall in Japan is plenty and there is no special irrigation to the mulberry gardens. Application of manure in a balanced form and liberal dosage of lime to neutralise the soil acidity have increased the yielding capacity of the gardens. Besides application of chemical manures in a balanced form, green-manure crops such as soya beans, sun hemp, etc., are grown in mulberry gardens. By the introduction of some of the high-yielding varieties of mulberry and intensive cultivation methods adopted, the average yield of mulberry per acre has been kept up at 18,000 lb. per year for 3 crops as against 5 or 6 crops in Madras.

In Madras State where sericulture is practised, mulberry is cultivated in bushes but the gardens are mostly rainfed. Local variety of mulberry which gives 5 to 6 crops in a year yielding about 3,000 to 4,000 lb. of leaves in a year is grown. Manuring is done once in a year during the pruning season and only farmyard manure is applied. The quality of farmyard manure that is generally applied is poor in nitrogen contents and the dosage per acre is too low.

High Yielding Varieties.

In order to increase the yield of mulberry, leaf some of the high-yielding varieties of mulberry like Kairone-zumugaeshi could be introduced by grafting on the local variety as this variety has been found to grow well under our conditions. Application of composts and growing of green-manure crops could also be undertaken on a large scale to enrich the soil. Application of lime will improve the soil texture and make the soil respond to manure quickly. Application of chemical manures cannot be advocated since almost all the gardens are grown under rainfed conditions.

Pruning of mulberry is done once in a year in Japan to preserve their vitality. In order to increase the yield of leaf improved methods of pruning are done. There is only one method of pruning followed by the sericulturists of Madras State, i.e., pruning the shoots close to the level of the ground. The improved method consists in

pruning the shoots close to the ground in alternate years followed by middle pruning. Another method is pruning alternate shoots in a bush and by spreading the pruning operations instead of simultaneously cutting all the branches in a day, the vitality of the plants could be preserved. This system is advantageously taken up by our Sericulturists.

Silkworm Rearing.

In Japan, silkworm rearing is spread over to three to four crops in a year (i.e., from April to October). Spring rearing is the biggest and the best and is followed by summer and autumn. Uni and bivoltine races are reared. They undergo a period of hibernation. Sericulturists rear silkworms in their own dwelling house and women and children attend to the rearing of worms.

Since they are all educated, they take special care in the maintenance of necessary temperature and humidity conditions required for different stages, observe sericultural hygiene to avoid diseases and take other necessary precautions for harvesting a successful crop from the time of incubation of eggs till cocoons are harvested.

Introduction of the system of young silkworm co-operatives is one of the big landmarks in Japan towards improvement of rearing in order to raise a uniform quality of cocoons and to give relief to the farmers to attend to their agricultural operations. Young silkworms are reared with great care by experts appointed by the co-operatives and when the worms are in the third stage, they are distributed to individual farmers, consistent with the availability of mulberry leaves in the garden of each farmer.

Improved Rearing Methods

In Japan, certain improved methods of rearing of young silkworms in order to obtain optimum conditions of temperature and humidity are followed. They are the box system of rearing and cellar system of rearing. Worms of later stages are reared by individual farmers in open

air during spring season and indoors in summer and autumn. In order to save labour, shoot and branch feedings are followed during spring season when the rearing capacity is more. In co-operative rearing establishments, labour-saving devices such as mechanical leaf choppers are used for chopping mulberry leaves.

In Madras State though silkworm rearing is carried on by a large number of Sericulturists, there is no uniform method adopted for rearing of worms. Silkworm rearing is spread over five to six crops in a year according to the availability of mulberry leaves. Some of the rational methods such as regulation of proper temperature and humidity and hygienic ways of treatment of worms are not followed due to ignorance.

Our Sericulturists should rear only examined seeds and they could follow the co-operative system of rearing young silk worms under ideal conditions by adopting box system of rearing, brushing of newly-hatched worms with powdered paddy husk to ensure uniform hatching, using powdered slacked lime for clearing silk-worm beds in order to prevent the occurrence of bacterial diseases, adopting labour-saving devices such as using mulberry chopping machines, especially by Sericulturists and using improved mountages of bamboo and straw to avoid defects in spinning of cocoons. By adopting such rational methods of rearing silkworms they could get increased yield of cocoons and improve their quality.

Seed Production

The efficiency of examined seeds is fully understood by Japanese Farmers and use of unexamined seeds is prohibited by law. In order to improve the quality of seeds to guarantee a successful crop to the farmers and to facilitate enforcing strict supervision the number of egg producers has been restricted and their productive capacity has been increased with adequate facilities.

Many of the large-scale egg-producing concerns are owned and managed by big reeling mills or Filatures. They distribute the eggs to the farmers, supervise their rearing and ultimately purchase their cocoons. In case of failure of crops which is very rare, the distributing concerns

refund the cost and recommend for relief from the Government Agricultural Relief Fund.

There are three kinds of silkworms eggs produced i.e., P 2, P 1 and F 1 eggs. P 2 eggs are produced and maintained by different research stations, whereas P 1, i.e., second generation of the original race and F 1 industrial eggs are reared by farmers. P 2 and P 1 eggs are prepared in egg cards whereas F 1 eggs are prepared in loose grains. Individual moths are examined in the case of the P 2 and P 1 eggs but only 13 per cent of the moths are examined in the case of F 1 eggs. Since the eggs are all of univoltine and bivoltine character, they are hibernated and a portion is treated artificially for summer and autumn rearing. Different races and their combinations are reared in different seasons.

Quality Eggs Production

In Madras State the seed organisation consists of Government-owned grainages, aided grainages subsidised by Government and many private seed-preparing establishments. Quality eggs are produced by Government and aided grainages but the unexamined seed preparers, in order to produce eggs at a low cost, sacrifice quality. They are mostly uneducated seed cocoon vendors who cannot follow the technique of seed preparation.

It is therefore necessary as in Japan that production of unexamined seeds should be prohibited by law in order to improve the yield and quality of cocoons produced by our Sericulturists. Production of parent races especially the foreign races should be restricted and no other agency except Government Farms and Research Station which should maintain the stock and issue to aided grainages should handle them. Production of Foreign race layings by agencies other than Government should also be prohibited as in Japan.

Methods that are adopted for distribution of F 1 eggs in Japan where only 10 per cent of the moths are examined cannot be followed here. All the improved methods of preparation of P 2 and P 1 eggs are being followed in the case of foreign races reared in the Farms. Labour-saving devices that are adopted in the grainages in Japan such as moth-crushing machines and cocoons, etc. "Flossing machines, will be

shortly introduced in Government grainages here.

Silk Rearing

In Japan introduction of a system of cocoon grading and testing by law has greatly contributed to the stabilization of reeling industry. The reeling mills will know what quality of raw silk can be produced by using the cocoons that are purchased from their rearers so that the research stations attached to the different silk reeling mills could evolve suitable breeds of silkworms suited to the requirements of the reeling mills. There are many cocoon grading stations all over Japan established by Government for grading and classifying cocoons and intimating the results to the Filatures for fixing the prices.

Benefits of Cocoon Grading

The system of cocoon grading is beneficial to the rearer and the reeler in standardizing the quality. The old sitting types of basins with 6 ends have been completely replaced by 20-end-standing types. It is capable of producing silk of 6 A quality. Researches are under progress to introduce automatic reeling machines. Improvement in cocoon conditioning and storing is done with 'Yamato' type cocoon drying machines provided with an endless belt. The cocoon drying chambers are heated by steam. Perfect conditioning is secured by this arrangement. There are also private cocoon conditioning warehouses for storing cocoons where a nominal fee is charged. These facilities help the filatures to store their cocoons under ideal conditions in such warehouses.

In all the Filatures, cocoon cooking is done by Chiba or Masuzawa types of combined cooking machines which consists of a number of chambers where cocoons are subjected to different temperatures. Utmost care is taken for the cooking of cocoons. Reeling operations are carried on with multi-end basins where 2 and 3 A quality silk is usually produced for export purposes. The production per day per basin is about 2½ lb. The reelers are all trained girls and it is a noteworthy feature that no supervisors are employed for the supervision of the work of the reelers and this goes a long way in reducing the reeling cost. The Chief by-products in a Filature are silk waste and pupae oil. Generally every Filature has its own plant for



THE NEW SCHEME

"Children taught under the new Elementary Education Scheme will be better trained than those who went through the old system of Elementary Education, and would turn out to be better engineers, technicians and scientists for that training."

—C.R.

The photographs on this page were taken in schools in the Chingput District, where the new Elementary Education Scheme is in force and depict the varied useful crafts and occupations in which the pupils are being trained.



SOCIAL EDUCATION OFFICERS' TRAINING CENTRE

The pictures in this page depict some of the activities at the training centre for Social Education Officers, at Gandhigram, Madurai. The trainers are receiving practical training in various phases of rural life. After training they will go out as brain trusts to the community project areas of the State.

COMMUNITY PROJECTS

19

MADRAS INFORMATION



Villagers forming a new road at Madurai Community Project area.

Road To Rural Prosperity

Wanted: one village worker for every ten villages!

Under the Community Projects and National Extension Service Schemes, 120,000 villages will be selected for development work. The area they occupy is about a fourth of the country. Specialised assignments involve specialised personnel. To meet this need, each State in India has one or more Extension Training Centres.

Theory and practice of agriculture with all their modern connotations occupy a prominent place in the curricula of these training centres. The pattern of training given in all the States is alike, except for minor variations to suit local conditions. Modern extension methods, so far untried in India, are given accented emphasis in this scheme of training.

For the trainees, the day starts early with prayers and physical culture, followed by a brief interval for breakfast. Then comes practical work in the fields.

This involves ploughing, compost-making, cattle-care and allied activities. They are taught modern methods of preparing plots and of sowing; the value and techniques of applying manures; and those odds and

bits of practical knowledge so necessary for better agriculture.

For such practical training they are usually grouped into batches, each under a qualified and experienced instructor. Here they learn A to Z of practical and scientific farm work.

After the practical class in the fields, theory lessons start. At these, each trainee gets a workable knowledge of all agricultural subjects and a few more. Among the latter are subjects like rural psychology, village lay-out and instruction in vocational training. Due emphasis is given to the subject of co-operation, so essentially tied up with village prosperity.

Personal Contacts.

The trainees collect census figures relating to population, education, cattle-care and crop statistics from the villages to which they are assigned. They make direct contact with the villagers to ascertain their needs and try to solve village problems. When they meet seemingly insoluble problems, they bring the latter straight to the class-rooms or discussion groups, where the advice of their instructors is available. In this manner, a two-way contact is established between the villagers and the trainees.

Almost without exception, the trainees at these centres have been able to win over the confidence of villagers. A piece of advice here, a gesture of help there—with these they evoke the enthusiasm of the village people towards better practices in agriculture, that would result in increased village prosperity.

Throughout the duration of the course, the accent of instruction is on the assimilation of practical knowledge that would stand the trainees in good stead when dealing with village problems. Demonstrations play a very important role in the training imparted. The trainees are taken to veterinary institutions to learn livestock care and cattle diseases and their cure at first hand. Or, to co-operative societies to learn the ropes of co-operative management. By setting an example themselves, the trainees are encouraged to establish direct contact with the villagers and rural life.

Not all that they learn pertain to agriculture; but they all have a bearing on village improvement.

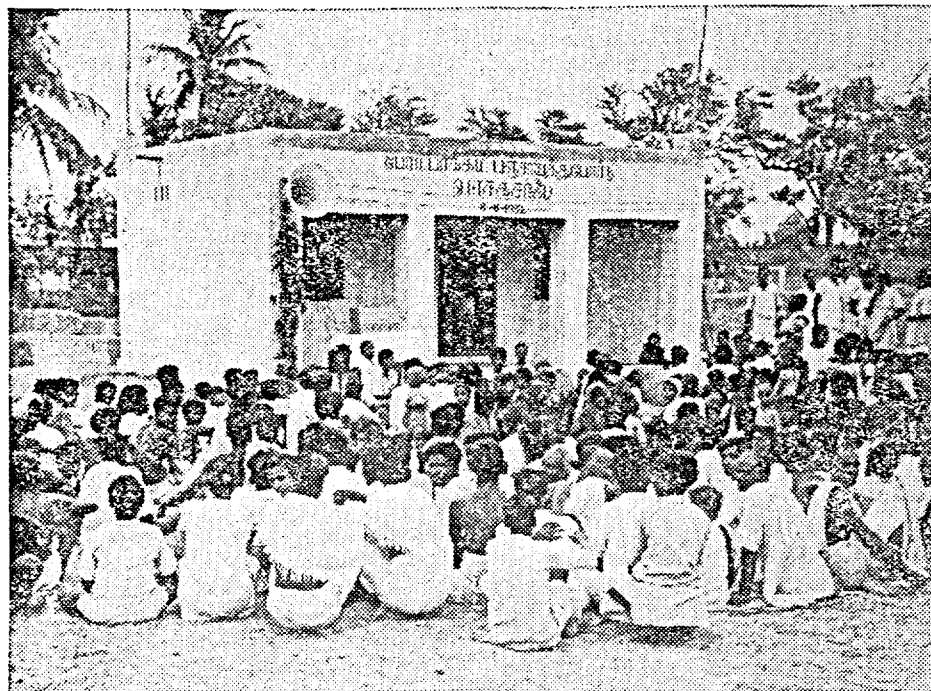
Road-making—a pedestrian task, indeed—assumes vital significance when it concerns the villages. Good approach and feeder roads are essential for village trade and prosperity. These roads make not only communications easier, but bring about closer contacts amongst groups of villages. New ideas will thus travel quicker; they help establishing new and improved agricultural practices; and, in the final sequence, all add up to a more prosperous community life.

The trainees receive a working knowledge of sanitation, of environmental hygiene, the utility of bore-hole latrines and other health measures. As in everything else, the training imparted is meant for translation into practice, in the villages in which they may have to serve later.

Promotion of literacy is another important activity which every trainee takes on hand. Visual aids, village classes; all these go to make adult literacy classes interesting as well as instructive.

Indian villagers do not live by agriculture alone. During periods of seasonal unemployment, other means of livelihood have to be sought to

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Evening time at Perambakkam in Chingleput district.

Community Listening

By SRI H. JOGA RAO, Assistant Radio Engineer.

Madras is one of the first States in this country to recognise even in 1938 the vast potentialities of radio as an instrument of utility and recreation for the people. The problem of transmission of radio broadcasts was solved satisfactorily even two decades back, but that of making the radio transmissions available to the mass of the people through radio receivers, continues to be a major obstacle even now. The difficulties are enormous. It is almost impossible to see at this stage, how many years it would take for the people in this country to be able to listen under conditions which radio needs to have its best effect, namely, around the family set in the home.

In 1938, Madras State inaugurated an experimental measure of installing about 100 radio sets free of cost, in as many villages, to watch the reaction of the people to community radio listening. Community radio listening is at best a compromise arrived at, to provide to the people the barest minimum facilities to listen to the radio programmes. However, the people realised its usefulness and shortly after, a larger number of applications poured in, from villages far and near in the State and in some cases offering

voluntarily to meet the cost of installation. The scheme, which was started as a small experimental scheme, expanded considerably and despite the wartime difficulties, a large number of villages could be provided with this amenity. On 24th April of this year, the 2500th community radio set was switched on in the village of Anjanur, Coimbatore District, making another landmark in the progress of community listening in the State. Since then, the number has gone up to still higher a figure and stands today at 2,750.

Problems Involved

However, a large number of important problems are associated with community radio listening, of which at least a few require consideration in detail, for understanding this vast and complicated subject. First of all, what is the scope of the broadcast programmes suitable for community listening? Secondly, what are the most suitable hours for listening to these programmes and should there be restrictions on the working of the sets with regard to both time and programmes received? Thirdly, what sort of organisation is required to take up the all-important job of installing and maintaining these community radio

receivers economically and reliably keeping them working all the 365 days in the year.

In these days of highly specialised use for which radio programmes are put to, in more developed democratic countries like England, and America, a particular programme is broadcast at a time to serve only a small but homogenous cross-section of the people to derive maximum benefit out of the broadcast. For instance, in the case of school broadcasts, it is so specialised that separate programmes are planned for age groups, so close to one another, such as 9 to 11 and 12 to 15 years, etc. But at a village community centre, the audience is drawn from the most illiterate and uneducated to the literate and educated sections of the population of all ages. They also come from different groups, classified according to their professions, such as farmers, industrial workers, schoolmasters, weavers, artisans, etc. Obviously it is almost next to impossible to prepare a schedule of programme for an evening, which would serve the needs of all the sections of the people that gather at the centre. The contents of these programmes could therefore only be such that they appeal to as many of the audience as possible.

Suitable Hours

Coming to the next question of selection of the most suitable hour in the day for the broadcast of these programmes, it is not possible to find a complete answer to it. It is, however, generally admitted that the hours after 6 o'clock in the evening would be most suitable when all the villagers return from their work and would be free to assemble at a common place for recreation. Keeping this in view and the fact that the people in most of the centres assemble in the open air, the listening hour is fixed for a period of two hours in the cool evenings, between 5-30 and 8 p.m. A minimum continuous period of two hours is found necessary for the people to find sufficient interest in the broadcasts. In the case of mains operated receivers, which are 25 per cent of the total, no time limit is fixed on the working hours of the set.

It is also found in practice that broadcasts from the regional services are the most satisfying to the bulk of the listeners at the community centres. It is therefore out of this necessity that the set is arrested to

receive the broadcasts from only the regional station.

Organisation Needed

Now I come to the third and the most important aspect of community radio listening in the villages, on which depends in short its success or failure from the point of view of the listening public. It is the type of organisation that is needed to install and maintain the community receivers efficiently and economically. It is not generally known how much of efficient organisation and systematic work, paying attention to every small detail, is necessary before, say, even 1,000 receivers could be installed and maintained satisfactorily in as many villages separated from one another by hundreds of miles. Frequent idleness of sets leaves a lasting impression in the minds of the people that the radio is more a box of tricks than an instrument of utility. The organisation required for such efficient maintenance of the sets had to be well planned and built up through experience gained in the field continuously over several years and should not be subjected to experimentation in its set-up, every few years.

The problem of maintaining the 2,700 receivers in as many villages and towns in the State is closely linked up with a large amount of work and meticulous attention paid to every detail, for its success. For instance, talking in figures, over 30,000 rail and 40,000 road miles through public conveyance, 6,000 road miles by country carts and another half as much mileage by foot are covered every month by the field staff of the State Broadcasting for the transport of radio sets, accessories, maintenance equipment, etc., during the course of the maintenance work. More than 100 sets are repaired for major faults and about 300 to 400 for minor faults by the field technical staff, who are stationed in 90 service stations located in the midst of the receivers.

Domestic Type Receivers

The State Broadcasting has in the course of this work tackled multifarious technical problems both long and short range. To start with, commercial type domestic type receivers readily available in the market were installed in the villages. After a few years, however, the Department found itself having on hand a large number of different types of receivers requiring a great variety

of costly spares to be kept in stock for their maintenance. Greater effort was also required on the part of the field staff to acquaint themselves fully with these different types of sets. The Research Section of the Department designed a standard type of community receiver; 1200 Nos. of this type of community receiver have been assembled in the departmental workshops and installed successfully during the last three years. The problem of stocking of spare parts and servicing work in the field has been considerably reduced owing to this standard type of receiver.

I wish to tell you how the people in the villages through their Panchayat Boards give their greatest willing co-operation to the Government for the expansion of community listening facilities. They pay for the entire cost of the receivers from either out of the funds of the Panchayats or through private donations and also meet part of the annual maintenance charges. While this has shown how our people are aware and very much radio-minded, it has at the same time helped the Government to provide this amenity to them quickly and at low cost.

Listening Facilities

An equally large effort has been made by the State Broadcasting to improve the listening facilities in the bigger cities. After considerable experiments in the Research Section of the Department, Wire Broadcasting systems are installed in some of the larger municipalities in the State. It is possible through these systems to broadcast programmes on public health, civic consciousness, festivals, local sports and other events in addition to relaying all the radio broadcasts from A.I.R. Stations. There are about 18 such municipal installations serving 300 listening posts and 10 more to serve an additional 200 listening centres are under installation in as many municipalities at an early date. It has, therefore, been possible to provide this improved and economical type of service to the people in larger municipalities and towns, who could afford them and who gave the largest measure of co-operation.

Apart from these activities, the State Broadcasting had helped in installing and maintaining about 400 sets in as many schools in the State for the children to benefit by listening to the school programmes broadcast

from A.I.R. Stations in the State. In addition, radio sets in special institutions like Government Agricultural and Fish Farms, Hospitals, Labour Colonies, Jails and Mobile Publicity Equipments used in Prohibition Amelioration Schemes are installed and maintained by the State Broadcasting.

Popular Pastime

It is no exaggeration if I say that today not less than two lakhs of people are listening every evening to the radio broadcasts at community centres in the State and these facilities are within the reach of almost one-third of the State's population. All of this work could be done within a net expenditure to Government of only about Rs. 3 lakhs per year on average over the last 15 years.

While community gathering and listening is nothing new to India and particularly to South India, be it at a wedding or a temple festival or a village fare, still community radio listening at a radio centre requires further improvement in the listening conditions. Certainly much has been done and is being done by All India Radio to give the people programmes that will both attract and add to their knowledge. However, one of the aspects of broadcasting that may change considerably the outlook of the people in the villages to community radio listening, may be special attention that may be paid to them in the broadcasts themselves. I would go so far as to venture to suggest, that there should be regular broadcasts focussed to a group of listeners, who are living in a given area by people selected from it and from as wide a cross-section as possible including farmers, artisans, factory workers, weavers, etc.

Scope for Expansion

While it could be said that much more has been done in Madras State than anywhere else, to foster and to enlarge the community radio listening facilities, still there are considerable areas, where further development can be done only by careful and planned expansion of the facilities. Only about 2,700 villages are now provided with this amenity out of a total number of about 40,000 villages and hamlets in the State. Let us not, therefore, think that broadcasting under community listening conditions will ever be easy. It is in fact, broadcasting

(Continued on page 30)

Towards Better Living

The successful establishment and faithful functioning of democracy depend upon the willing, active, and enthusiastic participation of the people in ameliorative schemes undertaken by the State. The Community Projects are one more link between the Government and the people, and have helped to strengthen the bond of sympathy and partnership.

The Community Project Scheme inaugurated in this State on October 2, 1952, offers an eloquent testimony to the results that could be achieved by the collective effort of both Government and people to attain a higher standard of living. The scheme is the result of Indo-U.S. Technical co-operation agreement, under which the U.S. Government have placed at our service monetary, material and technical resources to reinforce our own for the implementation of the scheme.

Essentially A Villager's Scheme

The scheme is essentially a villager's scheme, for in its working it is the villager who should take the initiative in deciding what he needs and in what order. It is he who should gird up his loins and get down to the ground with the axe and the shovel and start the multipurpose development of his own individually, collectively or in groups. The Government agencies, no doubt, are there, but only to complement his effort in every phase of his activity and at every stage of the progress.

The Madras' Share

Of the 55 project areas in all India, six are in Madras. The K. C. Canal area covers parts of Cuddapah and Kurnool districts; the lower Bhavani area covers parts of Coimbatore and Tiruchirappalli districts; the Malam-puzha area covers the Palghat Taluk of Malabar District; the East Godavari area covers Kakinada, Ramachandrapuram, Peddapur and Pithapuram Taluks; the Periyar area covers parts of Nilakottai, Madurai and Melur Taluks, and South Kanara area covers Karkal, Mangalore and part of Coondapur Taluks.

Each project area consists of about 300 villages with a population of 2,00,000 divided into three blocks. The development of these blocks will be taken up one after the other within the first three years from commencement.

The Objective to be Achieved

We have seen what the scheme is and how it aims at creating through villagers' own efforts better living conditions. "Better living conditions" is a very vague term and it has to be defined.

In the scheme, the minimum amenities that are essential for the country have been taken into account. A village (we have taken it as containing 100 families or 500 persons) should have at least 2 surface wells or tube-wells or tanks for drinking water; it should have adequate facilities for drainage. It should have agricultural extension service at the rate of at least

one agricultural extension worker for every five villages. It should have veterinary services through a veterinary hospital. Sanitation services should be made available at any time. At least half of the agricultural land, if possible should be served with irrigation through irrigation canals, tube-wells, surface wells, tanks and lift irrigation from rivers, lake, etc. One-third of the area of the village should be kept reserved for the village housing, grazing fields, and fuel forests freshly planted, if not already existing. Cultivable waste land should be reclaimed.

The road system in the villages taken up should be so developed as to link every village within the project area up to a maximum distance of half a mile from the village, the latter distance being connected by feeder roads through voluntary labour of the village population, only the main roads being provided for and maintained by the State or other public agencies.

Schools for primary education for all school-going children should be functioning, adult education and recreation centre in the open air or in the village school should be established and conducted by the village worker with the assistance of the teachers of the school.

Where facilities exist, fishery centres should also be opened.

Fulfilment of the Dream

Can this dream be fulfilled? A year's achievement despite nature's

betrayal by failure of monsoon has proved that the work is well ahead, and the dream can be attained.

There is a drive in the villages for the use of good quality seeds, green manures and chemical fertilisers. People are taught to dig compost pits and use compost to enrich their soil. Vegetable raising has been popularised in project areas. There is a new awareness among the ryots of the possibilities of richer harvest by following these new methods suggested.

Opening of at least one veterinary institution in each project area has been the target. This has almost been fulfilled. In the K. C. Canal area, the veterinary staff has formed themselves into a touring billet and during last year visited sixty villages. In the East Godavari area besides a pucca veterinary dispensary at Mayavaram, three aid centres have been established at Kapileswarapuram, Mandapeta and Anapathi. In Gandhigram also a veterinary dispensary was opened. In South Kanara and Palghat three centres are functioning.

Increasing importance is paid to irrigation in the project areas. The East Godavari project area has made some achievement in this direction by sinking artesian wells and tube-wells.

A number of primary health centres, maternity and child welfare centres has been opened in the project areas.

The problem of health and sanitation has received the immediate attention of the health staff.

In the field of communication much headway has been made. 14 pucca roads are being formed in the K.C. Canal area. 4 metalled approach

roads to the villages have just now been completed in Gandhigram area. 26 miles of road have been formed in South Kanara. 20 miles of road in 35 villages have been repaired in Lower Bhavani area.

Larger number of adult schools have been opened particularly in the Lower Bhavani area. In fact Adult Literacy and recreational activities form one of the main activities in the project area.

The New Enthusiasm

In Madurai at Mannadimangalam there was a derelict tank, 199 acres in extent and having under it 500 acres of ayacut. The tank was full of noxious weed and a village feud extending over quarter of a century rendered the tank quite useless to the community, for nobody came near to clear it and make it useable. The Community Project scheme came and worked a miracle. The regional committee formed under the scheme set right the quarrel and the erstwhile enemies vied with one another in clearing the tank of water hyacinth. The tank today is a symbol of the villages brimming with the new spirit.

Offer of Rent Free Buildings

In all these project areas, the newly opened veterinary institutions, primary health centres, maternity centres are housed in rent free building. People have come forward voluntarily to offer houses for such purposes.

At schools the boys, girls and the teachers are enthusiastic in contributing their share of the community work. In many schools in the Project areas boys themselves have repaired the roads leading to their schools or to the Harijan Colonies.

The very encouraging results achieved so far have paved the way for the extension of the community Projects to more areas in the country this year. The Community projects can now be confidently looked forward to switch on a new era—the era of 'Operation Activity'.

Backward Classes

The Government have reconstituted the Backward Classes Advisory Committee to advise them on matters connected with the amelioration of the Backward Classes in the State.

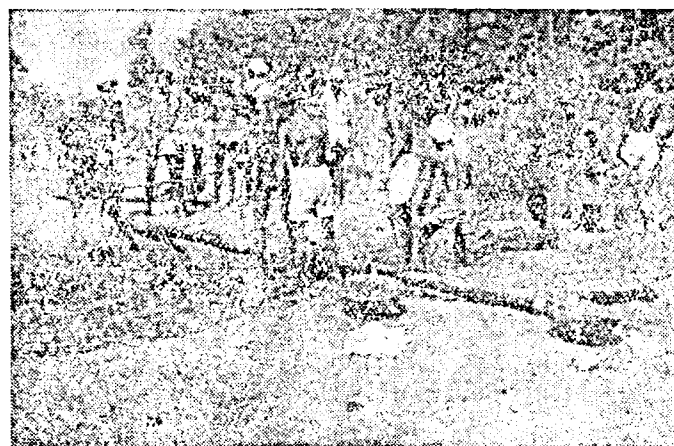
The Minister for Education and Harijan Welfare is the Chairman of the Committee, which includes Sri S. Pakkiriswami Pillai, Madras, Sri V. Balakrishnan, Tiruchirappalli, Sri R.V. Swaminathan, Ramanathapuram, Sri Dinakara Swami Thevar, Madurai, Sri S. S. Ramaswami Padayachi, South Arcot, Sri Appu, Malabar, Sri Ethirajulu, South Arcot, Sri Venkataramana Gowda, South Kanara, Sri K. Vinayakam, Chingleput, Sri N. S. Veerabhadra Thevar, Madurai, Sri V. M. Ghatikachalam, Madras, Sri S. Narayanappa, Anantapur, Sri G. Latchanna, Visakhapatnam, Sri T. Nageswara Rao, Guntur, Sri Pagadala Lakshmiah, Tenali, Sri Pragada Kotiah Guntur, Sri Seshanna, Kurnool, and Sri K. B. Narasappa, Madras.

The Secretary to Government, Rural welfare Department, and the Director of Harijan Welfare are the ex-officio members of the Committee.

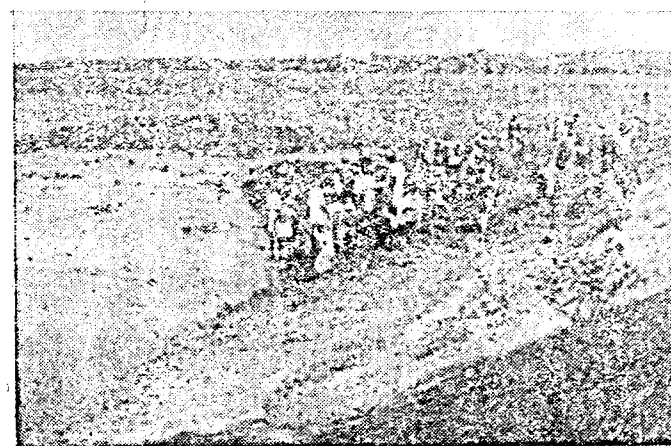
The Director of Harijan Welfare is the Secretary of the Committee. The term of office of the non-official members is one year.



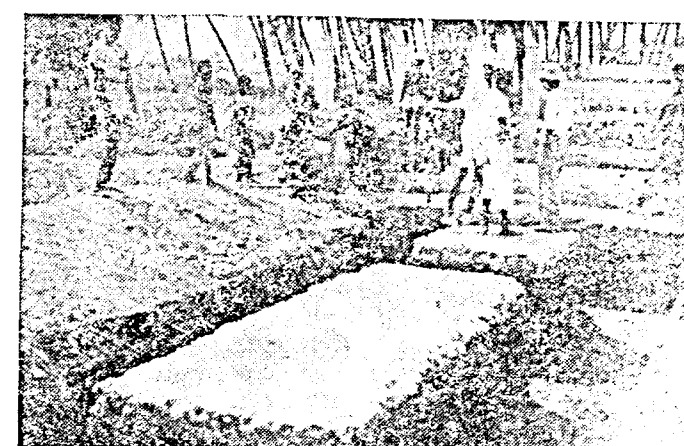
Harijans repairing a road.



Well digging in progress.



Students repairing a road.



Foundation of a maternity centre.

Rural Welfare Activities

A brief note on the salient features of the activities of Rural Welfare Department in the areas selected for Rural Welfare work during June 1953

Tiruchirappalli District—M u s i r i firka.—One building to house Board Elementary School was constructed by the villagers themselves at Tiruppattur at a cost of Rs. 10,000. Srimathi Amiruthammal of Ayyampalayam donated Rs. 10,000 for a maternity centre at Ayyampalayam. A Firka Tournament in Volley Ball, Badminton and Chadugudu was conducted.

A road to a length of 2 miles was formed. A sum of Rs. 1,955 on Village Communications and another sum of Rs. 178 on Rural Water Supply were spent. Fourteen charkas were introduced.

Vellakoil area.—Twelve mass sanitation drives were conducted. In five hamlets and 7 cheries, 26 compost pits were opened, 40 tons of compost was collected, 2 community latrines and four soak pits were constructed. Ninety-nine Vadanarayana stumps and 127 glyricidia cuttings were planted for green leaf manuring.

Thirteen charkas were introduced. One Grama Seva Sangam was organized.

Vengalam and Valikondapuram firka.—Trench latrines were constructed in Poolambadi, Krishnapuram, Valikandapuram, Agaram and Tiruvalandurai.

766 charkas have been introduced. Khadi worth of Rs. 178-8-5 was sold. 517 hanks of yarn were produced.

Anantapur District.—A road to a length of 7 furlongs was laid, 31 sanitation drives were conducted. Two trench latrines were constructed; 30 compost pits were formed. Khadi worth Rs. 113 was sold.

Tanjore District.—The construction of a school building with a donation of Rs. 25,000 was made in favour of the District Board, by Sri Vaiyapuri Mudaliar of Manakudi under execution by the Rural Welfare Department. Sirthaveki Vaikal, a new drainage channel at Talanayar Vth Sethi was excavated by the efforts of the villagers.

A tank at Vadugur was excavated at a cost of Rs. 1,200 for which Government grant was only Rs. 500, the balance being met by the villagers. Every house in the village participated in the excavation. 20 charkas were introduced; 78 charkas were repaired; 11 congregational spinnings were conducted. 70 compost pits were dug; 47 manure pits and 5 soak pits laid; seven tons of night soil compost and 423½ tons of other compost were removed from the fields.

61 trench latrines, 12 septic trench latrines were constructed.

Guntur District.—In Guravareddipalem and Doddavaram firkas 12 compost pits and 4 soak pits were dug; 30 tons of compost was removed to fields; 32 individual and 12 mass sanitation drives were conducted. Khadhi worth Rs. 588-9-8 was sold. 200 yards of cloth were woven by self-spinners; 800 hanks of yarn were spun; and 15 spinning demonstrations were held. Twenty-two bags of grain were distributed to the poor villagers who lost their sheds by fire accident.

In Ongole firka, 11 compost pits were dug; 10 manure heaps were rectified and 364 tons of manure were removed. Contour bunding was done in 3 acres of land. Five new charkas were introduced; 14 charkas were repaired. Eight spinning demonstrations were held. 10 lb. of slivers were sold and 360 hanks of yarn was collected. 25 individual and four mass sanitation drives were conducted.

Chittoor District.—58 compost pits were dug. 16 mass and 18 individual sanitation drives were conducted. Ammonium sulphate worth Rs. 4,000 was distributed under intensive manuring Scheme. 540 books were circulated. One radio set was installed.

Bellary District.—One tank work was taken up for repairs at a cost of Rs. 1,063 for the Harijans who contributed their share in the shape of labour. The ryots of Ramadurgam contributed Rs. 3,000 to construct a building for a dispensary, the Government grant being Rs. 500 and the district board grant, Rs. 3,000.

47 sanitary drives were conducted. 31 soak pits were rectified; and 58 compost pits were formed. Khadi worth Rs. 215 was sold.

North Arcot District.—52 compost and 122 manure pits were dug; 597 tons of compost was collected; 33 other type latrines were constructed; 17 insanitary pits were filled up;

359 persons used the reading rooms; 408 books were circulated; 1,333 persons were benefited by the libraries. Two school buildings were constructed.

South Kanara District.—In Kumbila firka, the Japanese method of cultivation is being popularised and two demonstration nurseries have been raised. The Peralda Grama Seva Sangham is constructing a building for the Leprosy Clinic at a cost of Rs. 5,000. A new aided School was opened at Badur Padavu by the efforts of the villagers. Khadi worth Rs. 179-4-6 was sold.

In Manjeshwar firka an area of 14.25 acres of waste land was brought under cultivation by the effort made by the Grama Sevaks. Twenty-nine compost pits were dug, 9½ lb. of vegetable seeds were distributed. Two charkas were distributed. Khadi worth Rs. 54-5-1 was sold. Fourteen leaching and four other type latrines were constructed.

In Mulki firka, 14 compost pits were dug. One sanitary pit was filled up.

In Sullia firka 3 acres of waste land were brought under cultivation and 34 compost pits were dug. 3,313 plants were planted. 22 bee-hives were introduced. Six Wardha type and 4 leaching type of latrines were constructed. A site has been selected to settle houseless persons in Sullia. The Grama Sava Sang, Bellary, has remitted Rs. 1,000 towards part contribution for the Gowri Hole Causeway.

South Arcot District.—In Kurinjipadi area, 26 manure pits were dug and 62 pits were rectified. An extent of 29.13 acres were bundled to prevent soil erosion. Sesbania nurseries were raised in 9 cents. Eight charkas were introduced. 264 hanks of yarn were produced, Khadi worth Rs. 94-8-9 was sold.

Kurnool District.—105 compost pits, 82 manure pits and 4 soak pits were dug. 620 lb. of manure was collected; 168 manure pits were set right; 75 mass

sanitation drives were conducted. 68 Adult night classes were conducted. Four new branch libraries were opened in Kurnool centre. 428 books were circulated to the public for reading. 76 spinning demonstrations were conducted. Khadi worth Rs. 320 was sold.

The staff of Kurnool Centre distributed 1,440 lb. of paddy; 840 lb. of redgram. They organised 16 plots covering 200 acres of land for Japanese method of cultivation. They organised four units of cub-packs.

Nellore District.—156 compost pits were dug, 205 old ones were set right; 788 tons of compost was carted to the fields; 86 cattle yards were spread with litter for collection of urine manure; 136 sanitary drives were conducted; 25 soak pits; 61 sewage drains and 26 wells were cleaned. 200 vegetable seeds packets were distributed. 91 spinning demonstrations were held. 54 hanks of yarn were spun. 392 books were distributed and 334 persons benefited by the libraries.

Coimbatore District.—In Tirupur centre, 74 compost pits were dug; 479 tons of compost was carted to the fields; 117 cherries were cleaned; 472 glyricidia cuttings were planted. A sum of Rs. 3,717 was spent under Rural Water Supply and another sum of Rs. 3,824 was spent under Village Communications. 8,300 tamarind plants were raised in a special nursery.

In Vellakoil area, 18 mass sanitation drives were conducted; 9 soak pits and 5 common trench latrines were constructed; 49 compost pits and 15 manure pits were dug; 30 tons of compost was collected. 1,000 glyricidia seedlings were planted. A sum of Rs. 331 was spent under Rural Water Supply. Under the Charka Pilot Scheme started as a Relief Work, the Harijans produced 513 hanks of yarn.

Ramanathapuram District.—One old well was repaired at Kattachinnanpatti at a total cost of Rs. 510-1-0 and of which only Rs. 382-9-0 was borne by the Government and the balance was met by the villagers.

26 old wells were repaired. A sum of Rs. 382-9-0 was spent in sinking and repairing of wells of which the villagers contributed Rs. 127-8-0 in the shape of labour. 2,312 books were

purchased and 3,500 persons were benefited by libraries. 300 trees were planted.

Cudappah District.—Two short camps were held during the month at Torrivemula and Vaddirala villages. 21 spinning demonstrations were organised. Meetings exclusively for ladies were also held.

Salem District.—156 manure and compost pits were dug and 680 tons of compost was collected, 45 insanitary pits were filled up, 10 trench latrines and 23 cess-pools were constructed, 600 persons used the reading rooms. 752 books were circulated by the libraries. 514 trees were planted. 4 bee-hives were set up and 15 lb. of honey was extracted.

Chingleput District.—One well work was undertaken at an estimated cost of Rs. 3,300 of which the villagers contributed Rs. 1,068 by way of labour. A road from Thiruvengadam-Kannakamma Chatram road to Karanaizampet for a length of five furlongs was formed at a cost of Rs. 3,200 of which villagers contributed Rs. 800.

18 compost and 47 manure pits were dug. 80 tons of compost manure was collected.

Japanese method of cultivation was demonstrated in 20 villages. Sesbania

plants were planted in 310 acres and 180 glyricidia plants were also planted. 499 soak pits were dug. Five Wardha type and 3 other type latrines were constructed. 2,057 patients were treated by the Madras Medical College Wing which attends P.kkam village on every Sunday.

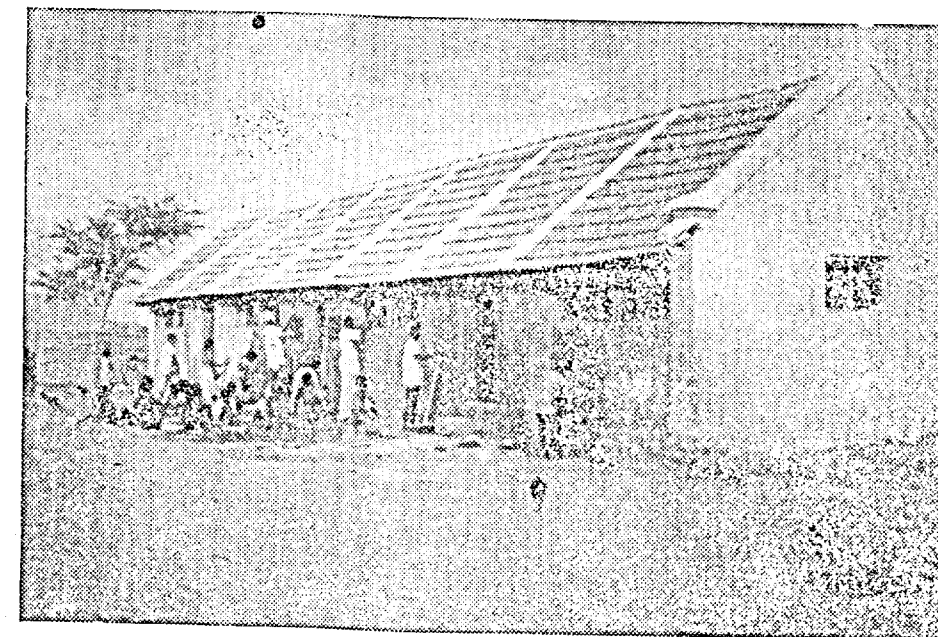
One reading room constructed by the villagers of Meppedu at a cost of Rs. 1,508-3-0 with a Government contribution of Rs. 500 was opened.

50 acres of forest land was demarked for being given to poor Harijans for "Kumri cultivation" as a measure of afforestation as well as providing lands for cultivation to landless poor. Tournaments in rural games were held.

Malabar District.—43 compost pits and 840 tons of compost was produced. 13 lb. of green manure seeds were collected and an amount of Rs. 500 was disbursed as "Takkavi loans" to the ryots. 15 charkas were introduced and Khadi worth of Rs. 438 was sold. 24 trench latrines were constructed.

In Payyanur and Madayi areas, two foot bridges were constructed.

West Godavari District.—75 compost pits were dug. 71 tons of compost manure was carted to the fields. 92 insanitary pits were filled up. 13 maternity cases and 145 patients were



Example of self effort.—Students build their own school building in one of the villages in Madurai District.

attended to. 26 adult night schools and one basic education school were started. 450 persons used the reading rooms. 175 books were circulated by the libraries. 170 trees were planted. 23 charkas were introduced. 107 charkas were repaired. 1,631 hanks of yarn were spun. 25 spinning demonstrations were held.

Krishna District.—The villagers of Pothireddipalli and Velpucherla villages were constructing buildings for the village library and reading room at an estimated cost of Rs. 1,000 each, the Government grant being only Rs. 500 for each building and the balance contributed by the villagers in the shape of labour.

The villagers of Veleru have launched a proposal to instal a pumping project on the Eluru canal to irrigate about 500 acres of dry land at their own cost and the estimated value of the investment put forth by the villagers for the proposal is Rs. 2,00,000 and they were briskly collecting the contributions in cash.

Japanese method of cultivation was being popularised.

Srikakulam District.—53 sanitation drives were conducted; 337 tons of improved paddy seeds was supplied to the farmers by the Agricultural Department. 100 spinning demonstrations were conducted. 38 new charkas were conducted. 1,563 books were distributed to the readers in the villages by the Central and Branch Libraries.

East Godavari District.—30 compost pits were dug; 41 were set right; 19 sanitation drives were conducted. 234 tons of manure was taken to the fields. 57 spinning demonstrations were held. 18 charkas were introduced. 116 old charkas were repaired. 862 hanks of yarn were spun.

Madurai District.—The Grama Sevaks Constructive Workers' Day was observed at Lalapuram, hamlet of Kallikudi. With the help of the grama-sevaks the villagers started the work of deepening a Teppam which had been partly deepened.

149 unhealthy pits were covered up. 16 trench latrines were constructed. 57 cheris were cleaned. 137 cess pools were provided. Charkas at

concessional rates were issued to 16 ryots. 2,473 hanks of yarn were produced.

Ninety compost pits and 91 ordinary manure pits were dug. 374 stumps and seedlings were planted. Sesbania seedlings were planted in 14 acres.

Visakhapatnam District.—A sum of Rs. 7,022 was spent under Rural Welfare Supply. 56 mass and 89 individual sanitation drives were conducted. 82 hanks of yarn were spun. 88 spinning demonstrations were held. 91 compost pits were dug.

The Nilgiris District.—135 compost pits were dug. 1,153 out-patients were treated and 19 maternity cases were attended to. 650 seedlings were planted. 888 hanks of yarn were spun.

In Kundachappai village a drainage of about one furlong and a road to a length of $\frac{1}{2}$ furlong and in Ajjoor, backyards to three houses were constructed by the villagers. Three schools at Manihatti, Thatthurban and Nanjanad costing Rs. 60,000 was constructed, the cost being entirely met by the villagers.

Tirunelveli District.—The villagers contributed Rs. 1,090 towards the cost of Rs. 2,090 incurred in deepening six village wells in the firkas.

Street drains to a total length of one furlong and 60 feet was completed. In the drought-affected areas, the womenfolk were increasingly taking to handspinning in the charkas.

The Collector's discretionary grant for the above was only Rs. 500 whereas the villagers' contribution Rs. 2,500 for the expenditure.

Eighty-eight charkas were sold during the month.

Executions

Rajamanickam of Vaniyambadi village in Tirupattur taluk, North Arcot district, who was sentenced to death by the Sessions Judge, North Arcot, for having stabbed and killed a fellow-villager on August 22, 1952, was executed on August 5, 1953, in the Central Jail, Vellore.

College of Indigenous Medicine

Provision has been made for a condensed G.C.I.M. Course in the College of Indigenous Medicine in order to enable the Licentiates in Indigenous Medicine to obtain the G.C.I.M. Diploma.

Candidates, seeking admission to the course, should be L.I.Ms. who have had private practice for three years or had put in a service of three years as rural medical practitioners or as medical officers in Government or Local Fund dispensaries.

Candidates will be taught for two years. They will be taught along with the second year and final year G.C.I.M. students. Special class will be arranged for teaching those subjects which are not taught along with the G.C.I.M. students.

The curriculum of studies for the course will be as follows:—

First year—Subjects of Indigenous Medicine:—(1) Pre-Medical subjects; (2) Fundamental principles of Indigenous Medicine; (3) Materia-Medica (General); (4) Materia-Medica (Special).
Subjects of Modern Medicine: (1) Botany, (2) Organic Chemistry; (3) Anatomy; (4) Physiology.

Second year—Subjects of Indigenous Medicine:—(1) Hygiene; (2) Pathology; (3) Toxicology; (4) Medicine; (5) Surgery; (6) Midwifery.

Subjects of Modern Medicine:—(1) Pharmacology and Therapeutics; (2) Hygiene and Public Health; (3) Pathology including Bacteriology; (4) Medicine; (5) Surgery including Ophthalmology; (6) Midwifery; (7) Medical Jurisprudence.

A fee of Rs. 150 per annum will be collected from each student. The examinations, the minimum marks for a pass, the papers, etc., shall be the same as those prescribed for the G.C.I.M. course.

This action has been taken on the basis of the recommendations of the Special Committee of Indigenous Medicine, constituted in 1952.

Coonoor Municipal Council

The Government have directed that the Coonoor Municipal Council be superseded for a period of two years. Sri A. J. John, Commissioner, Coonoor Municipality, has been temporarily appointed as Special Officer of the Coonoor Municipality.

The Hill Stations of the South

To a visitor on holiday in India, the attraction of the place selected depends upon the climate, scenery and recreations available. It is no wonder if a holiday visitor to the South would choose one of the two most outstanding hill stations of Madras State, viz., Ooty in the Nilgiris and Kodaikanal in the Palni Range.

The Nilgiris, the 'Blue Mountains', are a range of hills tinged with the hue that their name suggests; the blue haze overhanging the range can be seen from the plains below. Rising from the surrounding country almost precipitously the hills are separated from the Mysore plateau by the deep ravine through which passes the Moyar river. Two other rivers flow through the hills, the Pykara flowing to the north and over the edge with a tremendous drop and the Avalanche-Kundah flowing east along the foot of the hills.

The Discovery of the Nilgiris

The earliest expedition to the Nilgiris was in 1602, by a Portuguese priest, Ferreiri who has recorded his conversations with Toda priests and the gifts he gave their families. Incidentally it is believed that it was this expedition that disclosed the existence of Todas, the earliest inhabitants of the Nilgiris. Though Dr. Buchanan, commissioned by Government of India to explore commercial and agricultural conditions in and about Mysore, visited the hills, yet it was only two hundred years later in 1812 that an attempt at a detailed study of the hills was made by two Europeans under the instructions from the then Collector of Coimbatore. Their reports were far from encouraging as their accounts were that the hills were 'extremely cold and unhealthy from continual covering of mist and clouds'.

Led by Mr. Sullivan, a former Collector of Coimbatore, another expedition was undertaken in 1819. It is believed that the real foundation of the Nilgiris as a hill resort, was laid by this Madras Civilian.

The earliest mention of the name of 'Wotokymund' is in a letter from an unknown person to the Madras Gazette in 1821. The author, it is stated, penetrated the hills as far west as Mukarti Peak. The 'Stonehouse', the erstwhile

summer Secretariat of Government of Madras, was the first house to be built in Ootacamund, in the heart of the Nilgiris.

During the last hundred years the Nilgiris have undergone a change by the construction of buildings, conversion of forest areas into tea and coffee plantations, and the gradual adaptation by man, for his pleasure and profit, of the facilities offered by Nature.

An Engineering Marvel

The growing importance of the hills and the selection of Ootacamund as the summer capital of the Madras Government (now the idea of going in summer to Ooty has been abandoned) made it then expedient to consider the means of making the hill stations more accessible. The fastest transport available then in the hilly regions was only a bullock-cart and hence the laying of a good road was considered not useful.

Engineering skill came into play and the first portion of the railway from the Mettupalayam to Coonoor was opened for traffic in 1899. Insurmountable difficulties were overcome to achieve this engineering marvel; gorges had to be bridged, tunnels had to be driven through rock, a railway line laid on precipitous hill sides and against the face of precipices. The train today makes a gruelling and continuous climb of twelve miles to Coonoor pushed by a special engine from behind the carriage, and engaging with the rack between the rails.

In 1908 the railway was opened right through to Ootacamund 12 miles farther on. The rack gear was found no longer necessary in this route as there was an easier gradient.

The Queen of the Hill Stations

OOTACAMUND, familiarly known as 'Ooty', richly deserves the title of the Queen of Hill Stations. Situated on the summit of a plateau at an altitude of 7,500 feet, the air is delightfully keen and bracing and the atmosphere clear.

Ooty can be reached by several routes. From Madras it can be reached by train; the Nilgiri Express takes you up to Mettupalayam where you have to change to the Mountain

railway which traverses the Ghats section. There is also a good motorable road up the Ghat, running almost parallel to the railway, and taxis ply on this route. A more interesting route would be to reach Bangalore, change for Mysore and take the 100-mile-bus-route running through the heart of the verdurous Kanara forest. By air, you could fly up to Coimbatore from where you could motor the distance of 53 miles; buses also ply between Coimbatore and Ooty.

Nestling in a valley surrounded by hills—Dodabetta, Elk, Snowdon, Church, Fern, Cairn and several others—Ootacamund presents the appearance of a vast park with its broad, well-kept roads which traverse a country of beautiful gardens and extensive stretches of turf studded with ornamental trees.

A Sportsmen's Paradise

Climate in Ooty has its own special attraction. The mean temperature for the year from sun rise to sun set, is 57.3 degrees. The sun is never scorching as the day temperature never exceeded 61.66 degrees and never goes below 54.33 degrees; although during winter months the night temperature touches, sometimes, the freezing point. The southwest monsoon sets in about the middle of June lasting about two months. The season lasts from March to October, during which period the hill station transforms itself into a Sportsmen's paradise.

Nothing is wanting for a holiday-maker in this Hill station; Horse Racing, golfing, tennis, fishing, hunt-meets, shooting and wild game are all attractions of the season in Ooty. Wild beauty, there is in abundance, with varied picturesque landscape, lovely picnic spots in the countryside in and around Ooty.

The Botanical Gardens which celebrated its centenary two years ago is the foremost among the beauty spots of this place. The origin of these Gardens is attributed to Mr. Mc Ivot, formerly of the Kew Gardens of London. It was he who originally laid out the gardens a century ago. Planned initially as a vegetable garden, it later became one of the finest

nurseries of rarest plants. It passed into the hands of the Government in 1855 and underwent many changes both in design and layout.

The annual flower show held usually in May is a great colourful event, which attracts a large crowd.

The lake at Ooty, two miles from the town, constructed originally as an irrigation tank is another beauty spot. Surrounded by tall blue gums, this lake affords excellent facilities for boating and fishing.

Highest Hill in the Nilgiris

Crowned by an observatory, fallen into disuse, the Dodabetta hill is a popular picnic spot. It is the highest hill in the Nilgiris and the second highest in South India, the first being the Anamudi peak in the Anamalais. The hiker would be amply rewarded on reaching its top, for, a delightful scenery for miles and miles around, unfolds itself. The top of this hill is 8,640 feet above sea level.

Snowdon, 8,299 feet, is the next highest peak around Ooty but its climb is not altogether an easy one.

Elk Hill, 8,092 feet, is a prominent wooded hill to the south of the town and is well worth a visit for the sake of its cool and shaded forest paths and the view from the top.

Cairn Hill, 7,619 feet, is south of the Lake. The hill is covered by a thick Reserved Forest.

A visitor to this Hill station could ill afford to miss the other beauty spots, the chief among them being the lovely Glen-Morgan Lake, and the Avalanche commanding a wonderful, wild scenery.

A Thrill to the Visitor

Glen-Morgan lake is the "balancing reservoir" at the top of the pipe-line which leads to the Power House of the Pykara Hydel system. A funicular railway for 6,000 feet, descent down which is a great thrill to the visitor, takes one to the Singara Power House right below the precipice. Pykara is the earliest and largest hydro-electric works in South India.

Driving along the picturesque Mysore Road, for a distance of 16 miles from Ooty, the Mukerti peak, the top of which very few have conquered, is

reached. The peak is considered sacred by the Todas, the earliest inhabitants of this hill, but now fastly becoming extinct. Along the route to this peak one could see huts with astonishingly small opening, housing the Todas who still preserve their ancient traditions. They are a purely pastoral people living mainly on the produce of their buffaloes.

The lake around the Mukirti Dam is a sanctuary of rare fishes.

A green and soft downs of Ooty is a special attraction to the tourists. A 18-hole golf-course is a delight for a golf enthusiast.

Obtaining a licence from the Nilgiri Game Association one could hunt in the thick forests around Ooty which offer good game.

An Ideal Health Resort

COONOOR, the second largest of the three hill stations in the Nilgiris, is an ideal health resort, having a more equable climate than Ooty. Twelve miles from Ootacamund by rail, Coonoor stands on the lower ridge of the main plateau at an altitude of 6,000 feet.

The climate of Coonoor is mild and genial, neither hot in summer nor cold in winter. The north-east monsoon sets in about the middle of October and lasts for about two months.

Like Ooty, Coonoor also possesses lovely landscape and affords excellent recreation facilities.

Lady Canning's seat which commands a panoramic view of the estates, the loveliest point of this place, is six miles from the town.

The Sim's Park of Coonoor, situated in the heart of the town is a favourite resort for visitors and though smaller than the Botanical Gardens of Ootacamund, it is a pretty garden with big trees, and a little pond ornamenting it.

The Pasteur Institute, where research work on rabies is carried on is situated in this town. Thousands of patients affected by the disease through this place for treatment. Nutrition research is also being carried on in this Institute.

The other spots are: Kateri falls, the Dolphin's Nose, and Catherine falls.

A Quiet Hill Station

KOTAGIRI, the third among the Nilgiris' Hill Stations, eighteen miles from Ooty, is often described as a 'little pearl in the ear of the Nilgiris'. It is reached by a 14-mile road journey from Coonoor Railway station by bus or car.

Situated 500 feet higher than Coonoor and 800 feet below Ooty, Kotagiri offers an excellent climate half way between that of Coonoor and Ooty. It is a quiet Hill Station with natural surroundings even richer and more beautiful than those of Coonoor and Ooty. It is an ideal place for those who seek quiet seclusion and peaceful rest.

WELLINGTON, two miles from Coonoor, is a military station. It has a first-rate 18-hole golf course.

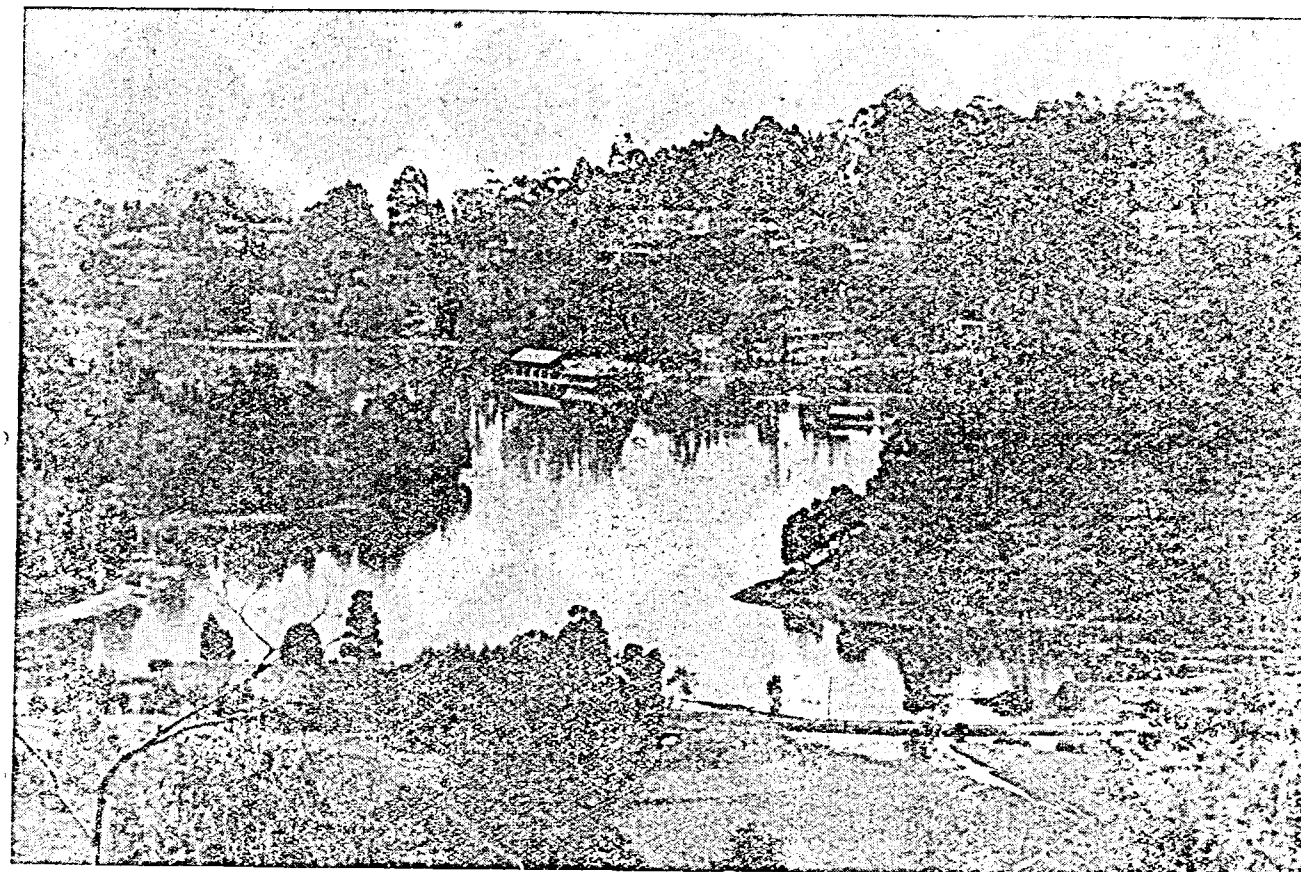
ARAVANKADU, which lies half way on the road from Coonoor to Ooty, is another small quiet settlement. The Government Cordite Factory is situated here and gives the place its importance.

LOVEDALE and KETTI, are two other hill stations served by rail. They also possess lovely scenery and are favoured by many visitors.

A Jewel among Hill Stations

If Ooty is the "Queen of Hill Stations", KODAIKANAL may be described as a "Jewel among Hill Stations". Kodaikanal, one of the healthiest hill stations of India, stands on the southern crest of the upper Palni Hills in Madurai district at an elevation of 7,000 feet above sea level. The range is an offshoot of the Western Ghats and falls into two distinct natural divisions, the upper Palnis and the lower Palnis. The Lower Palnis consist of a confused jumble of peaks separated from one another by steep wooded valleys. The upper Palnis vary in height from 6,000 to 8,000 feet and consist largely of considerable plateau made up of rolling downs covered with coarse grass.

The discovery of Kodaikanal is attributed to the American Missionaries settled in Madurai. In 1820, a group of them in order to escape from the heat of the plains, founded a colony in the hills. A year later Lt. B. S. Ward surveyed the Palni Hills travelling from Periyakulam (a town in Madurai



The bewitching Kodai lake.

district) by way of Vellagavi (a small hamlet said to have been a refuge by a former Poligars of Vadakarai. Soon the hill became popular as a summer resort. The Collectors of the District evinced interest in this hill station and carried out many improvements. Mention should be made of the efforts of Mr. Vere Levinge, Collector of Madurai, who made this place a real paradise by planning the lake and constructing several roads and bridle-paths in 1860.

To reach Kodaikanal until about thirty years ago was an up hill task. A fatiguing journey of forty-eight hours through wooded hills by bullock carts and dhories had to be made to reach the hill station. Now a pucca road has been laid from the rail head of this hill station—Kodaikanal Road Railway Station; Kodai is reached within three hours by bus or by car.

The Exceptional Winter.

Kodaikanal, popularly known as "Kodai", enjoys a climate that is neither too warm nor too cold. Of the

hill stations, Kodai is said to record the lowest maximum in summer and highest minimum in winter. The 'season' months are April, May and June and pleasant showers are experienced during these months. November also is a very pleasant month on the Kodai Hills.

The winter in Kodai is exceptional. Though visitors flock to this hill station in summer, it is the winter months that are best suited in point of health. The air is crisp and cold and humidity is at its lowest then.

Constituted into a Municipality in 1899, Kodaikanal for a long time was the least populated of all municipalities having only about 2,000 inhabitants.

Lake—Chief Attraction of Kodai.

The chief attraction of the place is the lake. Till 1863, the place was a swamp with a small stream running through it. Due to the efforts of Mr. Vere Levinge, Collector of Madurai, a lake was formed by banking up the

stream. A fine three-mile road running round the lake was formed.

Coaker's walk, named after Lt. Coaker who prepared the map of Kodai, runs along the very brink of the steep southern side of the Kodai basin. The view of the plains stretching for miles and miles is considered by many as unrivalled. On a clear cloudless day, the ancient city of Madurai—at a distance of fifty miles—can be seen.

Several delightful, picnic spots of Kodaikanal afford a visitor exhilarating enjoyment.

Caves and Chasms.

The Pillar rocks, three masses of granite four hundred feet high, stand on the edge of the same side of the plateau as Coaker's walk but about three miles farther on. The rocks are reached by a fine road rising through beautiful scenery, studded with pine trees and blue gums. In and around Pillar rocks, are several caves and

TOURIST TRADE

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MADRAS INFORMATION

chasms into which the more adventurous can descend. The glades and cool spots around here are favourite places for picnics.

The many waterfalls in this hill stations are also ideal picnic resorts. The "Fairy Falls" just below the observatory at a distance of two furlongs; "Silver Cascade" on the Law's Ghat Road; "Bear Shola Falls" and "Glen Falls" on the way to Viltipatti are some of the delightful spots where the visitor finds Nature in all its beauty.

Dolphin's nose is five miles from the lake on the way to Vellagairi, a hill village. It is a curious rock projecting horizontally over a wooded valley and the most adventurous venture on its flat projection. Another beautiful spot for excursions and picnics is the Baregum lake.

Perumal peak, 7,329 feet high commands the finest view of the country around, but its climb is difficult.

Great Contribution to Solar Physics.

The Government Solar Observatory, the only one of its kind in India, is situated on the topmost point of the Palni Hills. The observatory has made great contributions to Solar Physics. Here the sun is photographed daily in calcium and hydrogen lights. A 12-inch telescope is installed in this observatory, a visit to which can be made on Fridays between 10 a.m. to 12 noon, by previous appointment with the Director.

Big game can be found within a few miles of Kodaikanal. Owing to lack of facilities, riding is not popular.

Summer Resort in Salem.

Though the Nilgiris and the Palni Hills with their charming centres of Ooty, Coonoor, Kotagiri and Kodaikanal, have their own attractions for a holiday seeker, the smaller hills of the Madras State also offer attractive features as holiday or health resorts to the tourist or visitor.

One such centre is YERCAUD, in the Shevaroy Hills in Salem District. The Shevaroy Hills cover an area of 150 square miles. The highest point in the hills is Bransfills Hills, 5,400 feet above sea level. The hills have extensive coffee and rubber plantations.

Yercaud is a very popular summer resort for those from the plains in and around Salem. The place is connected with the Salem Junction by a

regular Motor Bus service. Fourteen miles from Salem, Yercaud is situated at an elevation of 4,600 feet.

Yercaud enjoys a climate of very even temperature. The town gets the full benefit of both the South-west and North-east monsoons, the rainfalls resulting from them being considerable. The hottest months in this place are March, April and May.

The discovery of this hill station is attributed to Rev. J. M. Lachler and Mr. Brett, Sub-Collector of Salem.

The Todanad Mynalai Multipurpose Rural Co-operative Credit Society

The Todanad Mynalai Multipurpose Rural Co-operative Credit Society No. K. 850 (Thummanatty Post) in the Thunerir firka was registered on April 20, 1923 and started work on May 5, 1923. Todanad Mynalai is a hamlet in Thummanatty village, eight miles from Ootacamund on Ootacamund-Kotagiri Road. At present there are 53 members in the society with a paid up share capital of Rs. 2,114.

The society has taken shares in the Coimbatore-Nilgiris Co-operative Central Bank for Rs. 300 and in other co-operative institutions for Rs. 25. The maximum credit limit of the society is Rs. 16,000. The individual maximum credit limit is Rs. 500.

Road to Rural Prosperity

(Continued from page 19)

supplement the income from the small holdings. Here comes the need for vocational training such as carpentry, smithy, brick-making and other allied occupations. And these figure prominently in the practical course of training, the object being that when the trainees go to the villages they should be able to teach these basic crafts to the rural communities.

Last but not least, promotion of village panchayats and village participation for common weal is another task the trainee is set. Meetings of villagers are organised by the trainees so that their problems become vocal and agreed remedies could be found.

After hours of hard work, in which the dignity of manual labour counts most, the trainees return in the evening to have some recreation in games or relaxation in their reading.

They visited the hill station in 1841 and built its first house.

A Growing Hill Station.

HORSELYKONDA in Madanapalle Taluk of Chittoor District is a hill station of the State in an undeveloped state. The place was first discovered by John Horsely, a member of the Madras Civil Service, in about 1850. Recently a road has been constructed to this picturesque hill station which is 4,000 feet above sea level.

During the year 1952-53 the society borrowed from the Central Bank Rs. 18,499 and the amount due to the Central Bank as on date is Rs. 15,858.

The Reserve Fund of the society was Rs. 2,169-10-0 as on June 30, 1952. The net profit during 1951-52 amounted to Rs. 326-4-0.

The society is undertaking multipurpose activities. 53 hundi boxes were distributed among the members of the society and thrift deposit of Rs. 352-7-0 has so far been collected through them.

During the year 1952-53 a subsidy of Rs. 100 was granted to the society for the purchase of medicine chest and the society has so far rendered medical aid to 40 persons.

Community Listening

(Continued from page 23)

under every sort of handicap, and only great imagination and sustained effort and co-operation at the transmitter and community ends; to keep up the interest, will bring results.

In the end it has to be said that the rapid expansion of community radio listening facilities in Madras State during the last five years has been the largest single factor that has contributed to the vast overall increase in the radiomindedness of the people in the State as reflected in the steep rise in the private receiver licences held by the people, not only in the towns but also in the villages of the State. Madras is now almost on par with Bombay in the number of private radio sets and is bound to become shortly the first State in India in the utilisation of radio broadcasts, thanks to the Community Radio Listening.

—By Courtesy, A.I.R., Madras.

NEWS AND NOTES

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MADRAS INFORMATION

Kalavar Gramasangh



View of the Community Centre of the Kalavar Gramasangh, opened by Dr. R. Nagan Gowda, Minister for Agriculture, on February 14, 1953.

Kalavar is a small village in Coondapur Taluk of South Kanara District. The occupants of this village are primarily agriculturists. There are a few artisans.

In order to help the villagers, the Kalavar Grama Seva Sangh was organised by the Co-operative Department. The sangh started functioning from September 20, 1948 with 80 members and a powerful and influential body of persons as managing committee consisting of the President of the co-operative society and the Panchayat Board, the Potail and Shanbogou of Kalavar, the Temple Trustee and other big landlords. Sri K. Sanjiva Shetty who combined in himself the office of the President of the Kalavar Co-operative Society and the Kalavar Panchayat Board, was elected as the President of the Gramasangh. He has been responsible to a large extent for keeping the gramasangh active.

One of the activities of the gramasangh is to provide proper medical facilities in the village. The nearest hospital for Kalavar and neighbouring villages was situated 6 to 9 miles away and the sick and infirm particularly among the poor were experiencing hardships to get proper medical aid. The gramasangh, after strenuous efforts, got a rural dispensary opened by the District Board at Kalavar on October 28, 1950. The present doctor of the dispensary is Sri K. Ramanna Shetty, L. I. M. About 25 to 30 people are daily treated at the dispensary for all kinds of ailments.

As a result of the pressure put on the District Board by the gramasangh, the rural medical facilities at

Kalavar will be further improved by the addition of a permanent and qualified midwife.

Kalavar lacked postal facilities. The gramasangh moved and got a branch post office opened at Salvadi.

The Gramasangh then turned its attention to the construction of a Community hall for the benefit of the public. The President of the Gramasangh Sri K. Sanjeeva Shetty, persuaded one of the landlords in the village, Sri K. Mahaballa Shetty to give a free gift of 15 cents of land in a Central place in Kalavar for the Gramasangh. The Gramasangh collected Rs. 3,000 from the public as subscriptions and secured an equal amount as subsidy from Government and constructed a beautiful building with provision for meeting hall, library, dispensary. The building was inspected by the P. W. D. Engineers recently and valued at about Rs. 7,500. It was opened on February 14, 1953 by Dr. Nagan Gowda, Minister for Agriculture in the presence of the local M. L. As and a large body of distinguished guests both officials and non-officials.

The Gramasangh library has purchased 93 books at a cost of Rs. 250. The books relate to biography science

and fiction. The library has received so far Rs. 245 as free grant from Government for purchase of library books.

Besides medical and educational activities, the Gramasangh has played its part in recreational activities too. Under its auspices, open dramas in 1951-1952, and harikatha in 1953 were held.

The Gramasangh's activities did not end here. It pressed the Panchayat Board to buy a pumpset for lending it on hire to the ryots and to own and operate a public radio for recreational purposes. It also moved the Revenue and P. W. D. authorities in the district to take up tanks and wells improvement and so far 7 tanks have been improved and 3 wells have been dug. These tanks and wells are expected to provide water to raise second crop over 100 acres of single crop area and result in an additional yield of 2,709 maunds of rice.

Kalavar was a village steeped in ignorance, and poverty before the Gramasangh was started. Every change for their better or was received suspiciously and resisted stoutly.

The Gramaseva Sangh has brought in postal facilities radio music, news papers, dramas and books on literature and added colour, zest, interest and excitement to the village life.



Professor Humayun Kabir, Additional Secretary, Ministry for Education, Government of India, laid the foundation stone for the Swatanthra Nagar Community Centre, Madras City, during his recent visit to the State.

Production of Solar Cookers

India is blessed with an exhaustible source of energy in the form of solar radiation which is available almost throughout the year. This can form an important natural wealth if means for utilising it can be developed. The solar heat received in one hour by one acre of land is equivalent to the heat obtained by the combustion of approximately ten maunds of coal. Even a small state like Jodhpur which constitutes only about one-thirtieth of the area of India, receives solar energy equivalent to the present energy consumption of the entire world.

The actual utilisation of solar energy, however, presents a number of problems because collecting the energy from large areas tends to be expensive. During the past three years, the National Physical Laboratory of India has been engaged under the guidance of its Directors, Dr. S. S. Bhatnagar and Dr. K. S. Krishnan in working on the utilisation of solar energy. Dr. M. L. Ghai, Assistant Director in-charge of the experiments, with the help of his colleagues, has been able to develop a device popularly known as "Solar Cooker" which can be used to cook food with solar energy alone.

The Solar Cooker.

The Solar Cooker developed is extremely simple. It consists merely of a reflector of appropriate shape and surface, mounted on a suitable stand, on which it can be adjusted with convenience. The reflector receives the solar rays and concentrates them directly on the utensil in which the food is cooked. Any metallic utensil can be used to cook food. It is only necessary to blacken the bottom of the utensil, because a blackened surface absorbs the solar heat more efficiently.

The cooker is capable of boiling a pound of water within 10 to 15 minutes, depending on the sunshine. Most of the vegetables can be cooked in 20 to 30 minutes.

Summer and Winter.

The solar cooker can be used in summer as well as in winter, from early morning to late evening. Its performance in the mornings and evenings is nearly the same as at noon. The performance in winter is also nearly as good as the performance in summer. The performance is however affected by the presence of clouds, highwinds, dust, or smoke, which cut down the clarity of the atmosphere and reduce the brightness of sunshine. Under these conditions the cooking takes longer time.

Although all types of utensils can be used with the cooker, the performance

of the cooker is improved by the use of a pressure type of cooker, or a utensil with lid tight enough to prevent the escape of water vapours and having some side insulation.

Advantages.

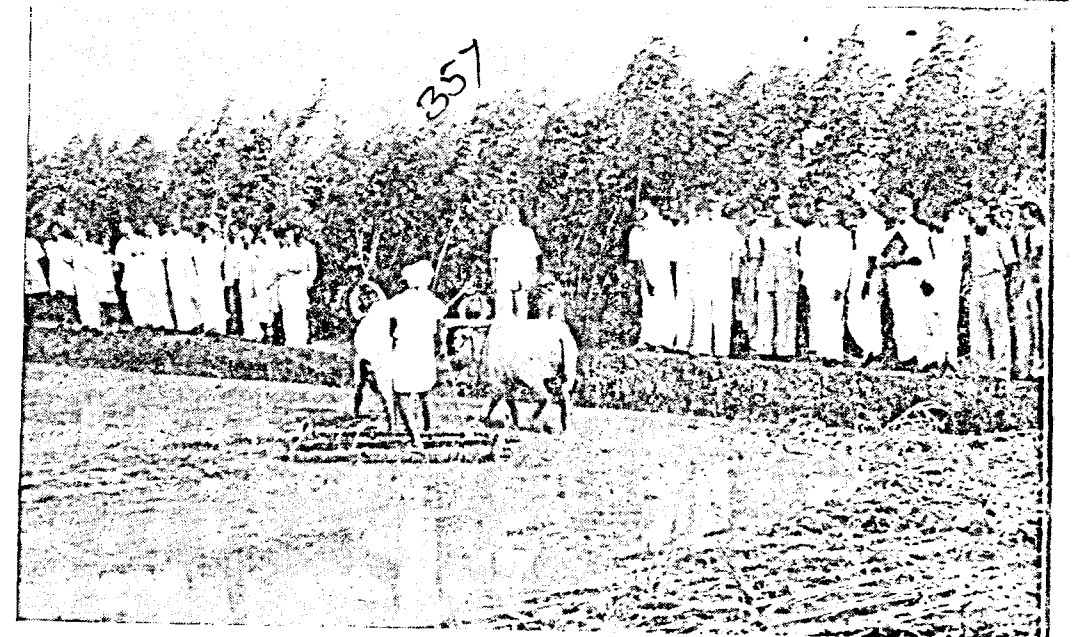
As a device for cooking food, the solar cooker has a number of advantages over other methods of cooking. The main advantage is that it does not require any fuel and as a result there are no recurring expenses of coal, electricity or gas. There is only a small initial investment which is recovered within a few months by the savings in fuel. Secondly, it is an extremely neat and clean method as it involves no smoke or ashes and no handling of coal or wood. Thirdly, the use of solar cooker is extremely safe. There is no flame or risk of fire, no electric shock, or danger due to gasification.

It is understood that a variety of cloth produced from mill waste cotton yarn or from a mixture of mill yarn, mill waste cotton yarn or both with Khadi yarn by private dealers at Tiruppur and other places is being sold on a large scale as Government Khadi in the City of Madras and other places. It is hereby notified for the information of the public that there is no guarantee that the Khadi sold by private dealers is genuine Khadi, that

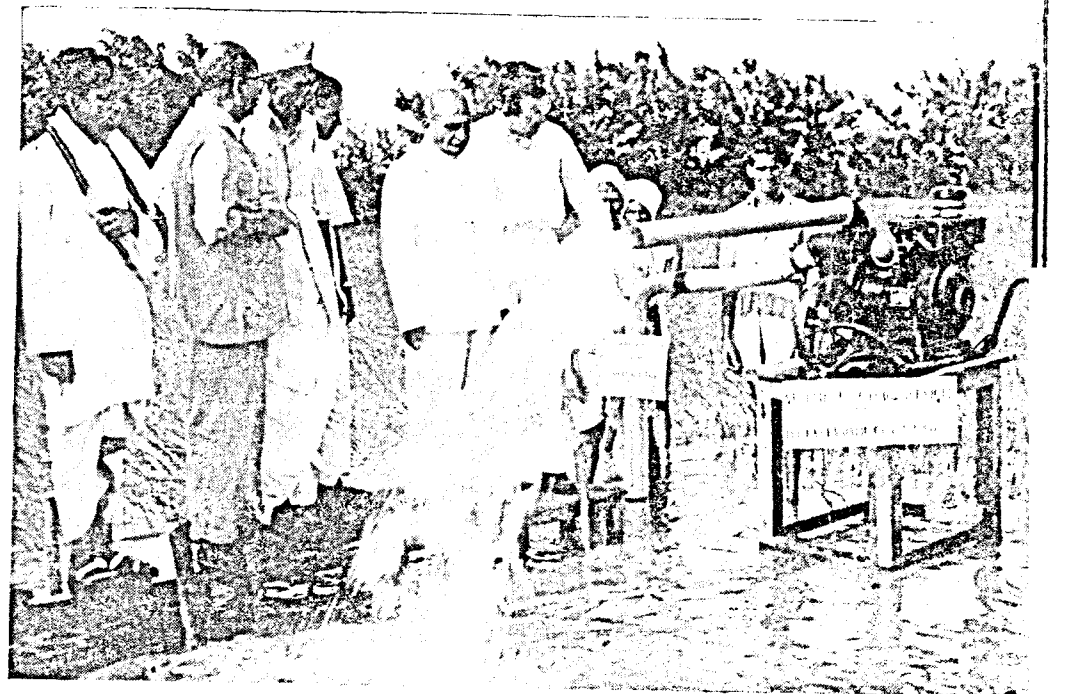
Government khadi is sold only at the Government Intensive Khadi Centres and by their authorised agencies such as the Madras Industries Association, Mount Road, Madras, and that all Government Khadi goods bear the Government stamp containing the name of the Government centres at which they are produced. Those who wish to purchase Government Khadi should look for the Government seals on the cloth.

UNION MINISTER'S TOUR

Dr. P. R. Deshmukh watching, with the officers of the Agricultural Department, the puddling operation in a field in Tanjore District, during his recent visit to the State.



Dr. P. R. Deshmukh, Union Minister for Agriculture, and Dr. R. Nagan Gowda, State Minister for Agriculture, witnessing the working of a Filter point pump set.



RADIO FOR TRANSPORT WORKERS

Government of Madras presented a radio to be installed in the canteen of the Government Transport workers at Chromepet. (Left) View of the workers' meeting. (Right) Mrs. Mathew, wife of the Transport Commissioner, switches on the radio.



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Gandhi Day



Great progress had been achieved in 'discovering the right things in the wrong order' as some eminent person put it. Man learnt a great deal of how to control nature without learning how to control himself. Now, a man shot up in India and alone among the politicians of the world stood up and reminded men about God. He spoke not in the indirect language of reference, but in the silver tones of direct appeal. Civilization had come to mean something that was devoid of its most essential content, the civilizing of the human mind, restraint of passions and desires through the power of the inner spirit. To balance this dangerous condition Gandhi declared from every platform which had the privilege of being accorded to him that man's life should be guided by Religion.

Many others felt the same as he, but they were afraid that the emphasis on interest in the spiritual significance might mean a set-back. Being interested in national unity they feared that regression to dogmatic religion which might be the result of any appeal for Religion. They therefore contented themselves by referring to the Supreme Being occasionally and without conviction. They talked vaguely about the Religion of all religions, without names and forms. A filtered refinement of this kind however, served no positive purpose. It is not logic but emotion that makes the true substance of religion which is essentially faith, hope and compassion. Gandhiji did not utter newly composed unitarian prayers, but boldly cried out Ram! Ram! and asked people to sing the name of Raghupati Raghava. He dared to be an old-fashioned *bhakta*. He was not ashamed of repeating either the Gita or Upanishads as they were handed down. Religion to Gandhi was not just the grammar of religions. It was an intense and positive part of his being. He steadily gathered a hearing for his message and at the end of his sustained fight against negativism and for the re-ascendency of religion in the concrete shape in which each one was brought up, he found an ample strength and stood firm as a *bhakta* chanting the Upanishads and the Gita to the literate and the illiterate and in particular to all those who were in active politics.

India had a tremendously powerful man who preached God and used the force of political revolution for making people turn again to God—not the reverse, using religious slogans for the sake of politics, as some others did before him and had failed.

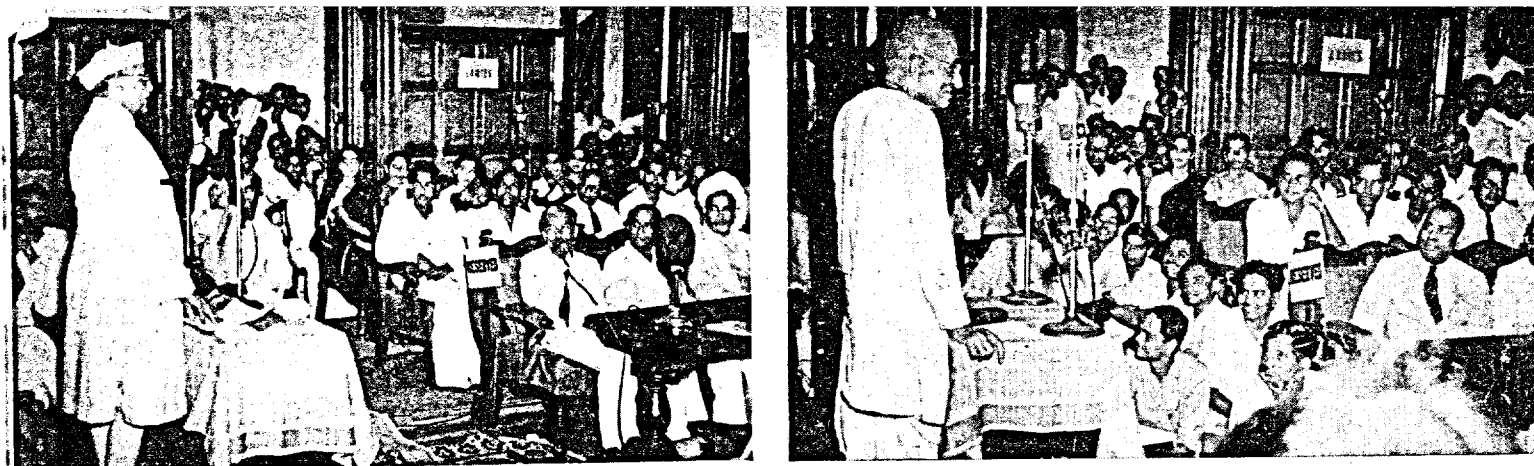
The 2nd October is Gandhi Day and it should mean the re-ascendency of Faith and the way of Karma Yoga in all our activities.

*Isaavasyamidam sarvam yatkinchajagatyaam jagat
tena tyaktena bhunjiitha maagridha kasyaswiddhanam*

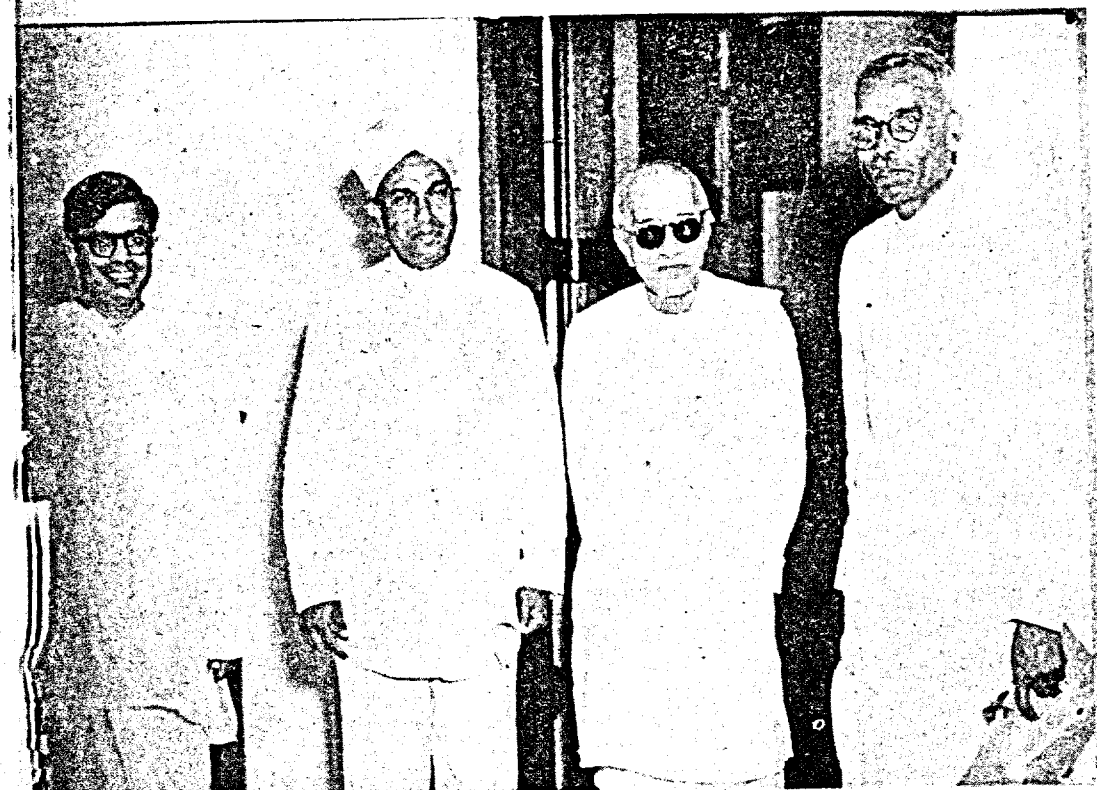
*Kurvanneveha karmaani jijiivishetchatam samaah
Evamtvayinaanyathetosti nakarma lipyate nare.*

"God pervades everything, big and small in this Universe. Do all that you do, enjoy all that you enjoy, dedicating everything to God and not letting your mind desire what another possesses and live your hundred years. Thus and not otherwise can man work and yet not be touched by sin."

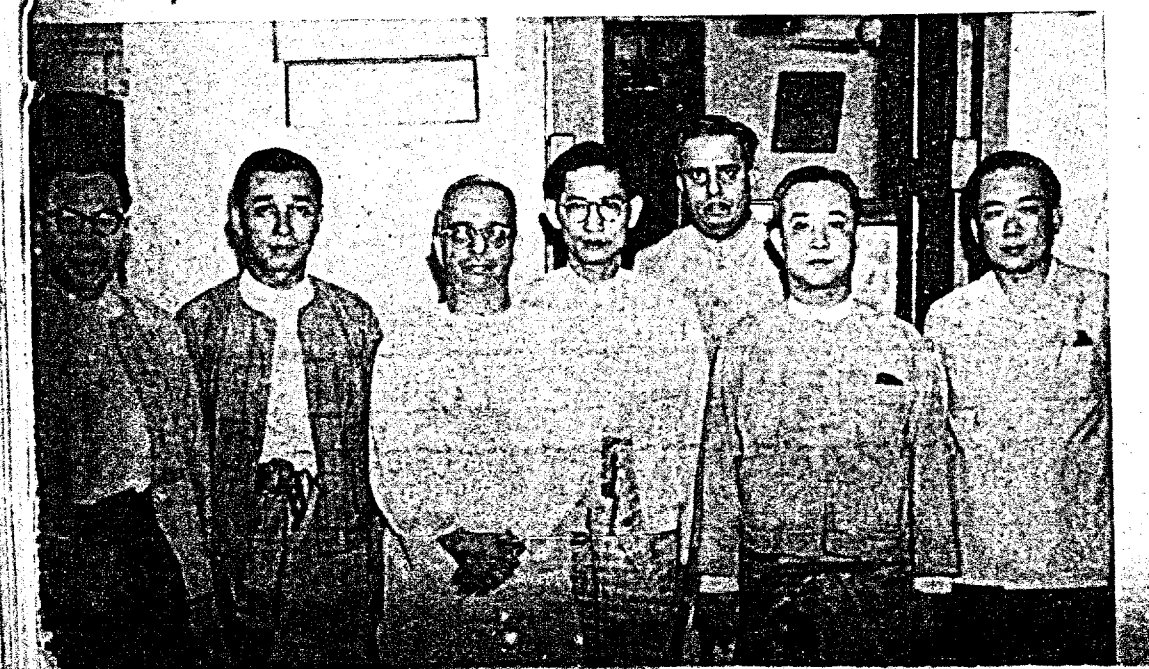
C. Rajappalachar



MADRAS SECRETARIAT ASSOCIATION: (Left) The Governor of Madras inaugurates Service Week. (Right) The Chief Minister delivers valedictory address.



Mysore Chief Minister Sri K. Hanumanthaiya called on the Chief Minister, Sri C. Rajagopalachari, in connection with the integration of some of the taluks of Bellary district with Mysore State.



The Burmese Study Mission, on tour in India for studying the role and scope of Trade Union activities, called on the Minister for Industries and Labour, Dr. U. Krishna Rao, during their visit to the State.

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"WE SEEK TO SERVE AND NOT TO COMPETE"

October 1953

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The Birth of A New State

Chief Minister's Blessing

All joys and griefs are relative. 'A' may be very well off in the cold analysis of 'B', but yet 'A' may be most miserable and that is a hard fact, for which A's calculations cannot be a substitute. X may be foolish in his attachments and appraisements; in Y's opinion X must be very sad and unhappy. All the same X is supremely happy! This happiness is a fact, which no metaphysician can dislodge: X's opinion about it does not matter the least bit. As Socrates said to Theaetetus—long before Einstein found a formula for it—nothing appears the same to one as to another man. Even to the same man nothing appears exactly the same at one time as at another. Six is more by a half compared with four, and fewer by a half than twelve. The

same six changes in magnitude according to what the comparison is made with. And comparison is a constantly occurring event that cannot be ignored. There is a continually changing difference in the relevant comparison as men and time and circumstance change and differ. And that makes joy or grief, happiness or discontent.

It is undoubted that Andhras are happy for the partition. Quite a large number of men may adversely criticise the cutting up of one of the most advanced States of India with an administrative history of which any one may be proud. But this does not matter; it does not reduce the joy of deliverance and new birth.

The first of October 1953 is Deliverance day for Andhras, although when

the passion is over and the thing seized has lost its warmth, there may be nothing more issuing from it than a sort of local autonomy, of not very great significance after all. There is joy all the same and joy is a reality, although it cannot be precisely analysed.

May the spiritual exaltation arising out of this feeling of independence develop fresh heights of unselfishness and co-operation and patriotic energy! A nascent patriotism can achieve wonders setting at nought all precedents and calculations. There is a force inherent in new birth which is something above calculation. May Andhra citizens prove it and earn the admiration of neighbouring peoples and Andhra's achievements stir others everywhere to greater efforts in constructive fields!

In a search for reasons for Andhra discontent over the merged condition or for their joy over the partition, men may clutch at untruth and make the worse appear the better reason. But this search is as vain as it is unnecessary. The desire and the joy of fulfilment are inherent and need no explanation. There is a centrifugal force that eternally seeks in nature to balance the centripetal. In merger there is a loss of individuality, which is definitely painful. The pull apart succeeds; then begins the pull that seeks again to merge, wherein is something to work for and joy in achieving it. This is the eternal law.

Like a bride going to her husband's home Andhra goes and the Tamil people bless her as mother blesses her brave daughter.

—Message to "The Indian Express."

—Message to "The Hindu."

New Opportunity for Selfless Service

The new State is a new opportunity for all young men and girls to conduct themselves as to grow in the course of time to deserve the appellation of wise patriotic citizens of Andhra. A previous generation had to lose education

to wrest freedom. But now the work is different and calls for intense attention and development of restraint.

—Message to "Government Arts College Magazine," Anantapur.

"LET THE SPIRITUAL EXALTATION DEVELOP FRESH HEIGHTS OF PATRIOTIC ENERGY" — Rajaji.

No Progress without Unity

Prime Minister's Message

The following message has been issued by the Prime Minister on the formation of the Andhra State:—

"After long waiting and much argument, at last the Andhra State has come into being. Let us now forget that argument and send all our good wishes to this new member of the family of States in India. Not only that, but let us help this new State to the best of our ability to make good.

"It has been unfortunate that, during these last stages, there has been some lack of goodwill between Tamils and Telugus over the partition of what used to be known as the Presidency of Madras. Every parting is an upset both physically and mentally, and I can well understand the regret that this brings. But once we have decided upon something, we should do it handsomely and with all the grace we can. There can be no doubt that, for long years past, the Andhras had wanted a separate State and that wish of theirs had been recognized. But all manner of difficulties came in the way and the realization of it was delayed. Now it has come and it deserves all our goodwill.

"I am no lover of provincialism or anything that comes in the way of the building up of the conception and the fact of a united India. That does not mean a dead uniformity or too much centralization. I believe in local autonomy and as large a measure of decentralization as possible. But we have also to remember that there is no progress to-day without that essential unity and a considerable measure of centralization. Not only do we weaken politically if we think too much of the parts and less of the whole, but it becomes difficult to plan for economic progress. One of the primary tasks for us to-day is the real emotional integration of India.

"I hope that the formation of new States and the reorganization of the present structure of India will not weaken in any way this process of integration of hearts and minds.

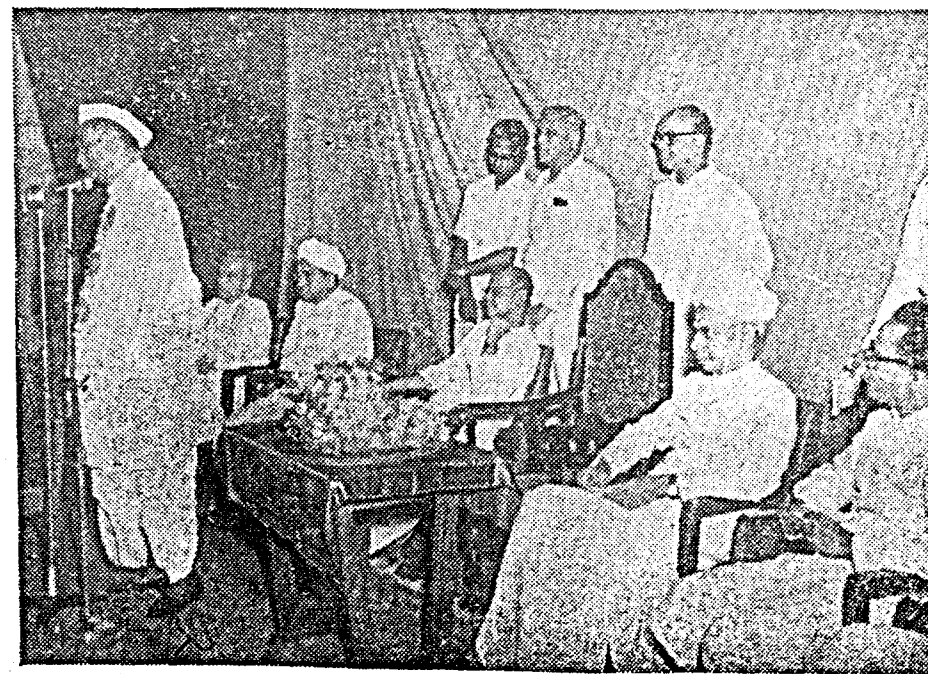
"To the residuary State of Madras, with its long history and its pre-eminence in many ways, I should also like to send my good wishes on this occasion."

—Jawaharlal Nehru.

Tamil Festival in Union Capital

The President, Dr. Rajendra Prasad, inaugurated the Sixth Tamil Festival in New Delhi on August 29. The Festival has been organized by the Delhi Tamil Sangham under the auspices of the Tamil Academy of Madras. The three-day programme included an Exhibition of Tamil Manuscripts, Periodicals, and specimens of Tamilian art and culture, musical recitals and Bharata Natyam performances.

Picture shows the President speaking at the inauguration. Among those seen seated on the dais are Dr. S. Radhakrishnan, Vice President of India, who presided over the inaugural session, and Dr. K. S. Krishnan, Chairman of the Reception Committee.



A Scheme of Transliteration: Tamil-Roman

By SRI C. RAJAGOPALACHARI, Chief Minister, Madras

A scheme of transliteration of tamil for purposes of quotation or reference in the ordinary course should not be mistaken as a movement for replacing tamil script by roman. I do not believe in replacing the established script closely associated with any language and with which the literature of that language has grown by something new into which sounds should be fitted and association created anew. I am of the view that neither roman nor devanagari can replace the tamil script. There is a movement for romanising all the languages of the world, but the object of this article is different. It deals only with the minor difficulty of transliterating tamil quotations and tamil words occurring in the course of an article or book in english or say for purposes of transmitting a message by telegram.

Schemes of transliteration for such limited purposes as above referred to have been worked at for some time past by several scholars, editors of newspapers and others interested in the subject with varying degrees of self-satisfaction and public acceptance. The sounds of tamil consonants vary, with reference to adjoining letters and with the consonant's place in the word, initial, medial or terminal. These varying sounds should not be represented in roman characters on a routine basis, i.e., using the roman character corresponding to the basic tamil letter without reference to the actual tamil sound, e.g., வடை should be transliterated 'vadai' and not 'vatai'. மகன் if transliterated 'makan' would be absurd. 'Magan' or 'mahan' would be the right way to put it in roman character. அடங்கல் written as 'atankal' would be wrong. It should be 'adangal', so that the reader may pronounce it properly and those who hear him may recognize the word. பச்சை transliterated 'pachai' would be not understandable, பதவரை appearing as 'patavurai' would also be quite wrong, 'kampu' for கம்பு or 'tampi' for தம்பி would be equally absurd.

The international phonetic scheme presents difficulties when applied to tamil for the purposes in view here. The diacritical markings are generally not available in the printing presses that have to deal with ordinary work. Again, there are features in tamil that

are not met by the international scheme. Short and long 'a' as well as short and long 'e' make a great difference in tamil. In the Indo-Aryan languages there is only one 'e' and one 'a'. But in the Dravidian languages the difference in quantity makes a real difference in the word. There are short and long forms for these two vowels 'e' and 'o'. 'Kol' cannot stand both for கொல் and கோல்; nor can 'En' stand for both என and ஏன், or 'Eru' for both எரு and ஏறு. Again, 'z' is denoted in the phonetic-international by 't' with a diacritical mark, leaving the plain 't' without any diacritical for த or ன. But plain roman 't' is nearer to 'z' than to 'த' = 'ச'.

Then there are special difficulties in the case of certain letters in tamil such as ண, ஞ, ற and the doubled ற். These sounds do not occur in the letters denoted by roman characters. Hence the use of diacritical marks becomes unavoidable. But it is well known that such marks are inconvenient to every one concerned. It would be good not to depend on more than the barest minimum of diacritical marking in any scheme of tamil transliteration for the purposes we have in view. It would be safer to find substitute devices wherever possible. The roman character 'h' comes in very handy for this purpose when dealing with these tamil letters. It is already very much in use as 'th' for த. I propose 'nh' for ண, 'lh' for ன and 'rh' for ற. The non-Tamil reader in trying to give some significance to the 'h' in these combinations will automatically approximate the tamil sounds of ண, ன and ற. த in tamil is the 'th' in the english words both, that, weather, gather, panther, esther.

Dealing with vowels, I am glad what I once suggested has caught on, viz., the doubled 'a' for ஆ long 'a'. *maan* மான்; *manam* மானம். This principle can be extended without inconvenience to 'ii' and 'uu'. But the prevailing sounds of certain doubled vowels in common in english words create difficulties: 'ee' and 'oo' in english words are long 'i' and long 'u' respectively. These are just the two vowels which in Indo-Aryan phonetics are always long and never short, but in Dravidian languages including

Tamil, occur both short and long and must be provided for as already explained. The obsession of the english pronunciation of words with a double 'ee' and a double 'oo' is too strong to be overcome. *Seen, been, keen, feet, moon, soon, fool*, etc., have created too obstinate an obsession. We cannot therefore double the 'e' and the 'o' in our scheme of transliteration to denote long 'e' and long 'o'. *மின் min*, *மின் miin* may be tolerated, but *போல் pool*, *போர் poor*, *கோல் kool*, *வேல் veel*, *வேர் veer* will create much difficulty.

We have therefore to suffer a diacritical mark to distinguish the long 'e' and 'o' and this may be the apostrophe or single inverted comma—po'r போர் mo'r மோர், ve'dam வேதம், e'n ஏன், vettive'r வெட்டிவேர். This would be the only occasion for a diacritical in our scheme.

The Tamil people have got used to 't' for 'd' and 'th' for 'த' and this may be adopted as an integral part of our scheme of transliteration. International scholars would raise their brow at this. But transliteration of Tamil for our limited but daily recurring purposes must cut across the practice of international scholarship in more than one respect. த and ட as rendered in the prevailing international scheme will give rise to considerable confusion in reading and understanding Tamil written in roman.

The scheme I suggest is given below in full. I feel it would enable an unsophisticated outsider conversant only with the roman script to learn within a very short time to read ordinary Tamil with the nearest approach to the enunciation of a Tamilian. This is after all the true test of adaptability and appropriateness:

அ	ஆ	இ	ஈ	உ	ஊ
a	aa	i	ii	u	uu
எ	ஏ	ஐ	ஒ	ஓ	ஔ
e	e'	ai	o	o'	au
க	ங	ச	ஜ	ஞ	ட
k	ng	ch	j	c	ñ
த	ந	ப	ம	ய	ர
th	n	p	m	y	r
வ	ழ	ள	ற	ன	ற்
v	zh	lh	rh	n	tr
ஷ	ஸ	ஹ	ஃ		
sh	s	h	h		

Voiced Consonants

க = g

ட = d

த = dh

ப = b

Sibilants

பசு = pacu

சுகம் = sukam

சும்மா = cummaa

வாசுதேவன் = Vaasudhe'van

aspirate க when it approaches

the sound of ஹ = h

பவைன் = pahaivan

குற்றியலுகரம்:

This is a very special Tamil form of the vowel 'u'. It is a truncated 'u', and distinguishes Tamil probably from all other languages in the world, including Telugu and Kannada. The terminal vowel 'u' takes a half expressed form as in எகைத், நான்கு, இந்த, மருந்து. The terminal 'உ' is curtailed by the Tamilian in a peculiar way which if not done discloses the speaker at once as a non-Tamil. If one sounds the terminal 'u' occurring in Telugu or Kannada as in Tamil it indicates to those born in Telugu or Kannada that the speaker is a Tamilian who tries to speak Telugu or Kannada. This truncated 'உ' called குற்றியலுகரம் by Tamil grammarians may I think be represented by 'w' instead of 'u'. Thus:

marundhw = மருந்து.

aindhw = இந்த.

enakkw = எனக்கு.

adhw = அது.

madhupaanam = மதபானம்.

balhu = பூ. (Here the 'u' is full.)

virhagw = விருகு.

maadw = மாடு.

kaadw = காடு.

unakkw = உனக்கு. (The first 'u' is full. The terminal 'u' is not.)

This terminal weak 'உ' gets lost when joined on to the succeeding vowel in running enunciation.

Illustrations of Scheme

ரோமாபுரிச் சக்கரவர்த்தி மாகக்க அரிலியருடைய ஆதிம சிந்தனைக்குறிப்புக்கள் பிறர் படிக்கவேண்டி எழுதிய ஒரு குரல் அன்று அவர் இறந்து பல நூற்றாண்டுகளுக்குப்பின் கையெழுத்து எஞ்சியுள்ளதைப் புத்தகமாகப் பிரசுரிக் கப்பட்டது. ஒரே காலத்தில் எழுதியது மலை.

Ro'maapurich chakrav.rththi maarkka are'liayurudaiya aathuma

chinthan.ik kurhippugalh pirhar padikka ve'ndhi ezhudhi oru nuul anrhw. Avar irhandhw pala nuu-tra.nhdugalhu.kwppin kaiezhuththu e'dugalh kidaiththup puththagamaaga prasu.rikappattadhw. Ore' kaalaththil ezhudhiadhumalla.

தெய்வம் தொழா-அள் தொழநன்

தொழுதெழுவான்

பெய்யனப் பெய்யும் மழை.

—குரல்

Dheyvam thozhaa-ah kozhunan

thozhudhezhuvaalh

peyyenap peyyum mazhai

—Kurhalh.

"The true wife thinks not of God when she rises in the morning. She offers her worship to the husband and that is enough. The very clouds will obey and pour the rain at her command."

The Vedanta as well as Hindu practice have forms of worship which enable the devotee to see the Supreme Deity in every object of love or adoration. Husband-worship is not a neglect of God but the choice of a particular medium for realizing the Supreme Spirit.

சிறை காக்கும் காப்புவன்

செய்யும் மகளிர்

நிறை காக்கும் காப்பித் தலை.

Cirhai kaakkum kaappevan

ceyyum magalhir

nirhai kaakkum kaappe' thalai.

"Of what use is that purity which is brought about physical restrictions placed on women? Their own conscience is the best watch"

உற்ற நெய் நே ன்றல்

உயிர்க்குறுகண் செய்யாமை

அற்றே தவத்திற்குரு.

Utra no'y no'nrhal

uyirkkuruhanh ceyyaamai

atre' thavaththirhkuru.

"Penance consists in the fortitude with which the pain that falls to one's lot is borne and in the avoidance of causing pain to sentient beings. This is the substance of penance, nothing else."

All false notions of super-natural benefits arising out of self-inflicted pain are discounted herein quietly, and a rational and catholic doctrine of patient suffering is indicated.

அற்றதறிந்து கடைப்பிடித்து

மாறல்ல

துக்க துவரப் படுத்து.

Atradharkindhwa kadaippidiththu

maarahalla

thuykka thuvareppaciththu.

"Make sure that the previous meal has been digested and wait till you are quite hungry. Then eat what you have found to agree with your health."

maarahalla kadaippidiththu: Some good things are not good for every one, nor are they good at all times or when eaten in excess. Hence the wise man uses his own personal experience and judges what is suitable and rejects what does not agree with him.

thuvareppaciththu indicates that the mere craving to eat something is not enough to show that the stomach is ready, but one should wait for a good sharp hunger.

Administration of Libraries

Reviewing the administration of libraries during the year 1951-52, the Government have observed that there was an increase in the number of libraries and reading rooms from 2,515 to 2,840 and from 867 to 1,112, respectively. The total number of visitors to these institutions was 17,400,499 and the number of volumes used was 2,295,950.

The other salient features of the Government's review are:—

State Central Library.—The State Central Library, namely, the Connemara Public Library, Madras, continued to render useful service to the public. The total number of readers and the volumes consulted were 79,658 and 183,523, respectively.

Children's Library.—The Children's Library in the office of the Director of Public Libraries proved more popular among the children. There was an attendance of 13,066 during the year under review, as against 4,223 in the previous year. In addition to the reading of the books in the premises of the library, books for home-reading were issued free to the children enrolled as registered borrowers on the guarantee given by their parents or guardians.

Contribution by Government.—A sum of Rs. 2,71,703 was sanctioned during the year towards the contribution payable by the Government to the Local Library Authorities.

Appetite and Balanced Diet

Many machines are provided with gadgets which indicate when the fuel is about to run out. This is a warning to the driver of a machine who promptly feeds the machine with fuel.

Similarly, within limits, appetite is an index to the body's need for food. Appetite of children for sugar and sweets is great and it indicates to a certain extent their real need for a concentrated fuel necessary to keep up with their incessant activity.

Appetite can be ruined if it is excited too much with spices, pickles and flavourings, or curbed unnecessarily in an effort to reduce one's weight. It then ceases to be a guide. The natural appetite is intimately related to taste and smell which lose their acuteness when appetite is satisfied. Over-eating and under-eating upset the harmonious functioning of the human body and many digestive troubles are due to the bad habit of devouring food without properly masticating it and enjoying its taste. The appearance and smell of food excite the secretory nerves which supply the salivary glands and the stomach and make available the salivary and gastric juices for digesting food. When there is no appetite, these juices are scanty. To take food, therefore, in the absence of appetite is to put food into a stomach which is not prepared for it.

Balanced Diet

Foods are of three kinds, body building, protective and energy foods. Unlike the machine, which is inanimate and therefore, does not grow, the human body consists of living tissue. To function efficiently it has to maintain a certain minimum growth. Body building foods like milk, cheese, meat, fish and eggs, help the tissues to grow. To children and expectant mothers, body building foods are essential.

Protective foods give the body the power to resist disease. These foods are rich in proteins, vitamins and mineral salts. The most important of these are milk, butter and cheese, which are body builders too, green vegetables and fruits. All the body building foods are, to some extent, protective foods as well.

The energy requirement of the body varies with its state of activity. Even when the body is at rest, the energy cannot fall below a certain minimum because a certain amount is necessary for essential functions, such as breathing, circulation, maintenance of body temperature, etc. Above this minimum, the more active the body, the greater its energy need.

Some foods are just energy foods. They have little or no body building or protective value. Examples of these are wheat bread, polished rice, sago, tapioca, sugar and jams.

But body builders, such as meat, cheese, whole wheat bread and jaggery are energy foods as well. In addition they have a certain amount of protective value.

The composition of a balanced diet is indicated below. The quantities are daily totals required by an adult. Vegetarians can replace fish, meat and egg, by stepping up their consumption of milk and milk products.

Type of food.	Quantity.
Cereals	14 oz.
Pulses	3 "
Green, leafy vegetables.	4 "
Root vegetables ..	3 "
Other vegetables ..	3 "
Fruits	3 "
Sugar and jaggery ..	2 "
Vegetable oil, ghee, etc.	2 "
Fish and meat	3 "
Eggs	1 egg.
Milk	10 oz.

Planned Parenthood

(Continued from page 9)

The reliability and practical utility of the rhythm method is the subject of controversy. Whether this method is capable of wide application in the Community with adequate results has now been made the subject of experiment in this country.

Government's Efforts

Government have constituted two committees to study the problems relating to family planning and population control. The ideal contraceptive has not yet been attained. The methods known to day are generally harmless and they give a fair degree of protection. Further research is needed to develop better methods, methods that will be simple and inexpensive enough to meet the needs of the great masses of the people in this country as well as elsewhere. Government will have to encourage the production of contraceptive materials in our own country and take steps to maintain their standards and control their sales. The United Nations' Population Commission has given top priority to a study of the various aspects of the population problem. The Government of India have extended their co-operation to the United

Nations for undertaking special studies in this field in our country.

In the interests of National Economy as well as family welfare, we have to undertake a large scale public education with a view to impart a general understanding and acceptance of the idea of planned parenthood and create a social atmosphere favourable to the use of the family planning services. The General practitioners, particularly women doctors, will have a leading role to play in imparting contraceptive information. It is necessary, therefore, to provide practical instruction and training in contraceptive and sterilisation techniques to the medical students and the members of the medical profession. Health visitors also will have to be given training courses to prepare them for service in family planning centres. Planned parenthood must be recognised as a subject of national importance. In planning for a progressive improvement in living standards the implications of the growth of population need careful consideration. The State must formulate a population policy and implement it without delay.

—Address to the Rotary Club, Madras, on August 18, 1953.

Vitamin 'A' Lengthens Life

We are all aware that vitamins are essential to life. And yet the number of people who realise the importance of vitamins in diet and who understand the part each vitamin plays in keeping human body in a state of health and fitness is not large.

Take Vitamin A. It has a tremendous job to do in our bodies. A normal diet plus extra Vitamin A is known to have lengthened the life span. The extra years thus gained are not to be pictured as added to old age. Rather, it appears that something like an extra decade can be added at the prime of life if the diet is governed by the new knowledge of nutrition. Life becomes longer because it is lived on a higher healthy level throughout.

Long before anybody knew about vitamins, doctors used to prescribe cod liver oil to build up strength and resistance, particularly for people subject to cold, coughs, weak bones and decaying teeth. Today we know that it is the Vitamin A and Vitamin D in these fish oils which increase the body's ability to resist infection—especially infection of the eyes, ears, nose and throat.

Sources of Vitamin A

It is also found that besides fish oils, fruits like papayas, apricots, prunes and mangoes are the richest sources of Vitamin A. Good sources of Vitamin A are bananas, milk, melons, dates and oranges. Green and yellow vegetables like spinach, turnips, lettuce, carrots, sweet potatoes and beans are also good sources of Vitamin A. Tomatoes contain much of this vitamin. Butter and yolk of eggs are good sources of Vitamin A, but none of the white vegetables or fruits. It is not present in white potatoes, white corn, white onions, etc.

To a certain extent this vitamin is stored in the body. To get the best results, it needs to be taken in the following quantity daily:—

	UNITS.
Infants and children.	7,000
Adults	8,000
Expectant mothers.	9,000

A child starts life with a low vitamin A reserve. A nursing mother cannot provide the required quantity of vitamin A to a baby as her milk is not normally rich enough to build up the reserve quickly. In addition

to mother's milk, each baby should have to begin with 3,000 to 7,000 units a day.

The units of vitamin A contained in 4 ozs. or quarter pound of various food items are given below:—

Milk	118
Cheese	273
Cod Liver Oil ..	2,000
Meat	1,300
Papaya Ripe ..	2,020
Mango Ripe ..	4,200
Mango Green ..	1,860
Dates	600
Green Chillies ..	454
Cauliflower ..	330
Coriander (Dhania) ..	1,570
Carrots	2,000
to	4,000
Spinach (Palak) ..	2,600
Cabbage	2,000
Amaranth (Chowlai ki Bhaji) ..	14,000
Mint (Podina) ..	2,700
Tomato	320

Deficiency Signs

The first visible signs of a mild Vitamin A deficiency is lowered resistance to infection, dryness of the skin, poor appetite, loss of vigour, diarrhoea, imperfect vision, particularly at night, which is called night-blindness, and various kinds of digestive disturbances.

A severe deficiency of Vitamin A may lead to loss of weight, retarded growth in children, defective denture and enamel formation, physical weakness, impaired insulin secretion, improper muscular functions, tendency to kidney and gall stone formation, respiratory tract infection and completely dry cornea, leading to blindness. In extreme cases, it may lead to sterility.

Milk as a regular item of your diet and plenty of yellow and green vegetables and fruits available in the season, also help in making up for the deficiency in Vitamin A.

DONATIONS TO MADRAS STATE CYCLONE RELIEF FUND

	RS.	A.	P.
Sri Sarangapani, Managing Editor, "Tamil Murasu", Singapore, Malaya	28,543	8	3
The Panchayat Board, Kaveripatnam	100	0	0
	28,643	8	3
Total miscellaneous contributions below Rs. 100	116	7	6
	28,759	15	9
Donations received and credited to the account up to August 11, 1953	7,72,393	12	9
Donations (cheques) received and sent for collection and will be credited on realisation	15,341	0	9
Total	8,16,494	13	3

DONATIONS TO THE MADRAS STATE FAMINE RELIEF FUND

The Military Secretary to the Governor of Assam, Shillong.	2,882	12	6
The Honorary Treasurer, Rayalaseema Famine Relief Fund, Collector's Office, Tiruchirappalli	149	7	0
	3,032	3	6
Total miscellaneous contributions below Rs. 100	NIL		
Donations received and credited to the account up to August 11, 1953	11,81,950	15	11
Total	11,84,983	3	5

Planned Parenthood

By SRI A. B. SHETTY, Minister for Health, Madras

All over the world, public interest in the population problem has been growing. It is being increasingly realised that a rational control of population on a national and international scale is a necessity on economic as well as political grounds.

The population of most European countries went on growing rapidly throughout the 19th century. This great expansion of population was due mainly to a fall in death rates. In recent decades, since about 1910, there has been a considerable slackening in the rate of population growth in Great Britain and Western Europe and a less striking decline in the United States and other overseas countries with populations of European descent. Thus instead of the fear of over-population, which was dominant during the 19th century, the prospect of the decline of population in the near future has received a great deal of attention of late in the Western countries.

The Awakened Public Interest

The awakened public interest in the population problem found expression in the appointment of a Royal Commission on Population in Great Britain in 1944. The report presented by this Commission to the Parliament in 1949 has thrown considerable light on the population trends in Britain and their probable consequences, and the Commission has recommended measures to encourage families to be large enough to replace themselves. The decline in the rate of population growth has been brought about by a large fall in the number of births. There has been an increasing reduction in death rates as a result of advances in environmental sanitation, medical knowledge and living standards. Consequently, a marked change has taken place in age-distribution. Death rates have fallen at all ages, but the greatest reduction has been at the younger ages. The proportion of old people has increased while the proportion of young people has fallen heavily. The number of births has become reduced at a much faster rate than the number of deaths. The number of births depends almost entirely on two factors (1) the number of married couples

and (2) the rate at which married couples have children. The families of five, six or seven children have been substituted by one or two child families.

Salient Feature in Modern History

This decline in family size since the last 75 years has been a salient feature in the modern history of population in Britain. It began first in the higher occupational categories and then it spread slowly to the lower strata of society. The deliberate and extensive practice of methods of family limitation has been mainly responsible for keeping down the rates of child bearing. Birth control propaganda exercised a powerful influence on the public mind in the closing years of the 19th century. In Great Britain, as in other countries, parents and members of large families found that they were at an unmistakable disadvantage compared with others. The economic and other handicaps of parenthood combined with other social and cultural forces prepared the way for family limitation. The wealthier and more enlightened classes set the fashion by having smaller families. Other social groups followed this example.

In recent years, there has been a rise in the number of annual births in Great Britain and other countries. This upward trend in Great Britain has been traced to a substantial increase in the number of young married couples and wartime circumstances. In spite of this large increase of births, the size of family stands at about 2.2 children per married couple.

It is difficult to predict the probable trend of population in future. They expect that the spread of the practice of family limitation and improvement in contraceptive methods will trend to reduce further the average family size, though only slowly and that after 1977 the total population in Great Britain may begin to decline slowly. There will also be a further shift in the balance of the population towards higher ages.

Old People on the Increase

The slackening of population growth and the increase in the proportion of old people in the population has

become a phenomenon most common to western countries. In southern and eastern Europe the rate of increase in population has not yet fallen appreciably while in Asia it has markedly accelerated. The increasing adoption of the practice of birth control makes the growth or decline of the population increasingly dependent on the number of children which individual men and women decide to have.

With social and economic changes, the population problem will also be always changing. The science of population or demography, as it is now called, has made great progress since the first world war. A proper understanding of the population question requires special studies on a variety of subjects. The Royal Commission has recommended that provision should be made for continuous study on this subject and that the results of it should be given due weight in the making and administration of a national population policy.

In India we have high birth rates and high death rates and the survival rate is high enough to make our population grow at a much faster rate than the means of subsistence and defeat all efforts to raise our miserably low standard of living. According to the 1951 census, our population is 362 millions which means an increase of 43 millions in the last decade. At this rate, our population will go up by another 50 millions by 1960 and it will double itself in about 35 years.

Growing Recognition in India

Of late there has been a marked interest in family planning in this country and a growing recognition of its need and value for the health and welfare of the individual family as well as for the national economy. A National Family Planning Association has been functioning for some time in Bombay and it held its first All-India Conference in that city in December 1951. The Third International Conference on Planned Parenthood met in the same place in November 1952. Birth control clinics have been opened by the medical services of the Army and the Air Force in several centres. The Famine Industry Commission of 1945

has pointed out that in relation to the existing stage of our industrial and economic development, India is over-populated and that whatever success may be achieved in increasing food production, ultimately a decrease in the rate of population growth is not only desirable but also necessary.

The Health Survey and Development Committee also has stressed in its report of 1946, the need for preventing the growth of population from becoming a serious menace to the standard of life of the community. The Planning Commission too have urged the need for a population policy. The increase in pressure of population on natural resources retards economic progress and limits seriously the rate of extension of social services and the improvement of living standards. The recommendation made by the Planning Commission about the need for family planning, for limiting our population growth and the Prime Minister's statement in support of it have served to focus public attention on the vital importance of family planning for the economy of the nation.

Two-fold Objectives

Family Planning or Planned Parenthood, as it is called in America, has a two-fold objective. Frequent and ill spaced child births undermine the health of the mother. A high birth rate under conditions of poverty and malnutrition is inevitably connected with a high rate of infant mortality and a high incidence of disease among children. Planned Parenthood is, therefore, a step in the direction of improvement in health, especially of mothers and children. The strain of pregnancy and child birth endangers the life of a woman suffering from diseases like tuberculosis, heart disease, diabetes and chronic nephritis. In such cases, and in cases of mental deficiency or insanity, procreation has to be prevented by an absolutely sure method. Sterilisation by means of an operation on the husband or wife provides such a method. In men, sterilisation can be done by a minor operation called vasectomy under local anaesthesia. A large majority of married couples in Western countries are using contraceptive measures for medical and economic reasons or for other personal reasons. Parents with a family of several young children are at an economic disadvantage as compared with those with one or two children.

The support of a fair sized family makes it difficult to give the children as good a start in life as in the case of children of small families. The new fashion in smaller families began with the higher income groups and among them, the better educated and the more intelligent have smaller families on the average than others. In this country also, the practice of family limitation has slowly spread among the well-to-do and the educated classes. This practice will not proceed apace among the mass of the population in this country, because of the low economic condition of the poorer classes and their lack of education.

Need for Family Limitation

People must realise the need for family limitation on a wide scale. The Planning Commission has suggested that we must first create a sufficiently strong motivation in favour of family planning in the minds of the people and then provide the necessary advice and service based on acceptable, efficient, harmless and economic methods. Advice on methods of family planning for married persons should be made an integral part of the service of Government hospitals, maternity centres and other public health agencies. A sum of Rs. 65 lakhs has been allocated by the Central Government for a family planning programme. Contraceptive teaching should be recognized as one of the health services of the nation. Rational birth control must have its place in preventive medicines in precisely the same way as have ante-natal and post-natal work.

A large proportion of babies are born to parents who do not want them and they make frequent attempts to end unwelcome pregnancies by resorting to abortion. If contraceptive advice by medical people is made easily available these women will not be driven to have recourse to abortion by crude methods which are detrimental to health, if not dangerous to life itself. It is said that in England the clinics run by local authorities are permitted to teach contraceptive methods under closely defined restrictions on grounds of health only. The Royal Commission on Population has recommended that such restrictions should be removed and the giving of contraceptive advice to married persons should be made part of a national policy for the purpose of family welfare.

The incidence of involuntary sterile unions has been estimated at 10 to 15 per cent in other countries. We have no statistical data in India in regard to this matter. Sterility is a big problem for the Gynaecologist. There are cases of absolute sterility but they form only a small percentage. Cases of low fertility or impaired fertility constitute a fairly large percentage and many of these cases can be treated with satisfactory results. Most of the voluntary birth control clinics in Britain now pay as much attention to the investigation and treatment of involuntary childlessness as to their original purpose of giving advice on contraception.

Diminution in Birth Rate

It has often been said that improvement in economic and social status brings about a diminution in the birth rate of the population. In western societies economic advances have been generally associated with the lowered fertility. In a recent brilliantly written book on the "Geography of Hunger" arguments have been advanced to show that the birth rate is highest among the ill-fed and lowest among the well-fed all over the world. Experiments on animals indicate that a high protein intake leads to a high percentage of cases of sterility. The birth rate falls as the consumption of the protein rich food such as meat, milk and eggs increases. The author of this book contends that the only real and effective method of birth control is to improve the diet, to raise the standard of living and education of the nations with high birth rates.

The postponement of the age of marriage is another of the measures generally suggested for lowering the birth rate because women are markedly more fertile in the 15 to 25 age period than in the later years. The remarkably late average age of marriage has held in check the growth of population in Ireland. The Rhythm method has been given much publicity of late and Dr. Abraham Stone came to India at the end of 1951 as a W. H. O. consultant particularly on this method of family planning at the request of the Government of India. The rhythm theory is based on the assumption that a woman can conceive only at the time of ovulation which takes place in the middle of the monthly cycle. Abstinence during this fertile period prevents conception.

(Continued on page 10)

Medical Relief Wing

The Medical Relief Wing of the Madras Medical College, Madras, was started on August 17, 1952. The wing is run by the students of the Madras Medical College, under the able guidance of the staff members of the Government General Hospital and Madras Medical College.

The aim of the wing is to render free medical aid to the villages which are completely bereft of it and make them self-sufficient regarding their medical needs, to provide free medical services in the slums of the City, to eradicate the preventable diseases, and to educate the villagers about sanitation and hygiene.

The centre of activity of the Wing is Pakkam, a village situated about 22 miles away from the Madras City and 5 miles from Avadi. The village has been selected, for it came under the Firka Development Scheme and no adequate medical facilities were available within about 10 miles of the village.

Every Sunday a batch of Doctors and students go to the village in the

College bus at about 2 p.m. and return by 8 p.m.

The activities of the wing are:

Examination of the patients; treatment of Medical and Minor Surgical (Serious cases are brought to the General Hospital in the bus); treatment of Leprosy cases.

Laboratory examination of blood, urine, etc., and health check, including the examination of the entire population, and treatment of cases in the early stages.

One of the highlights of the activities has been the running of a camp for 20 days during the summer holidays when a batch of 30 students and two doctors stayed at Pakkam. A hook-worm survey was conducted to estimate the incidence of hook-worm disease which is quite common in the rural areas. Observations indicated that the village is relatively free from that disease.

A routine health check-up was undertaken and about 200 people were examined. The main diseases that

came to notice were a high incidence of leprosy, various degree of under-nourishment, and skin diseases. Practical demonstrations in digging three-bore hole latrines were conducted by the campers; and every evening health propaganda was done by means of lantern slides and cinema shows.

Health Check-up Centres

The Government have ordered the opening of a Health Check-up Centre at the Government General Hospital, Madras, as soon as arrangements for accommodation in the second floor are completed in the Hospital.

The Health Check-up Centre or Clinic will be open for one day in a week between 3 to 6 p.m. for all those who are not entitled to free treatment in Government Hospitals. Not more than 5 persons will be examined in one day. Persons, seeking a general check-up, will have to come with a requisition from their private medical consultants, to whom the results of the medical examination will be sent. Patients, requiring the check-up, should register their names two days before the day of examination. Registration will have to be done by personal contact or by letter to the Resident Medical Officer, General Hospital, Madras. A fee of Rs. 20 per patient will be levied.

Facts and Figures

Night and day, an average of 150 railway wagons per hour leave the Indian collieries loaded with coal, for the consuming centres in India or for the ports for export.

The total value of Indian exports of cotton manufactures and yarn rose from Rs. 58.65 crores in 1951-52 to Rs. 70.07 crores in 1952-53.

In 1951-52 the total profits earned by Indian Shipping Companies in their coastal and overseas trade amounted to about Rs. 250 lakhs.

During the second half of 1952-53, the Government of India paid Rs. 9.80 crores as dearness allowance to their civilian staff excluding the railways.

The number of workers employed in the various tea estates in India is a little over 10 lakhs, of which about 4.8 lakh persons work in the tea estates of Assam.



MEDICAL RELIEF WING: Medical Students attending on a child.

New Concepts on Unemployment

By SRI J. M. LOBO PRABHU, I.C.S., Secretary to Government, Development Department

While there is a general alarm at unemployment, which has touched even the Planning Commission, there has been no corresponding outburst of thought on the subject. Whatever has been written on the subject, when it is, not exploratory, repeats old theories and remedies. Not till we can look at the problem factually, is it possible to extricate the causes and find the cure for the existing climate of unemployment?

The first important fact in the economics of the day is the Revolt of the Consumers. Not since the war, which increased both employment and incomes, has consumer resistance manifested itself in a more pronounced way than it is doing today. In nearly all sectors of the population, there is a reluctance to spend. This affects both trade and industry. Traders are reluctant to maintain their usual demand in the face of a greatly reduced turnover. Manufacturers are faced with accumulating stocks on one hand and failing finances on the other. The result is that marginal units of production and distribution are closing down on one hand while new enterprises are in many instances still-born. In spite therefore of increased potential for production, the pace of economic life has slowed down involving unemployment of some old hands and non-employment of a quickly growing class of new workers.

Consumer's Revolt

The reasons for the Consumers' Revolt are twofold, first the high level of prices and second the low level of purchasing power. The paradox is that since monetary changes were made at the end of 1951, the price level to the consumer has continued to be high while the price level to the producer fell to a great extent. The high level of prices to the consumer is a result of various factors. It was inherited from the war years when shortages pushed up the prices under conditions in which the consumers did

and could pay. These prices encouraged new units to come into existence at very high capitalization which tended further to stabilise the peak levels reached. The employers and the employees both gained, the former being indifferent to what they paid to their employees so long as there was a demand for their production.

There is a tendency now to regard the payments made to the organized workers as disproportionate not only to the cost of production but also to the incomes of other sectors. It is argued that as workers in organized industries are only about 2.5 millions, the higher wages and working conditions assured to them, are at the cost of the remaining population. In highly industrialized countries where the majority of the population receive the same benefits, the higher wages paid, cancel each other as they have the largest common denominator. The tendency therefore is to complain about the trend of labour policy in so far it has increased prices, which has reduced on one hand the markets, and on the other industrial expansion. Mr. Aneurin Bevan in addressing a large meeting of workers at Madras brought out this fact picturesquely by saying that a great part of his father's wages went into the capital of the industry which can now afford to pay the wages then lost. He stated, that in attempting industrialization after achieving political democracy, India was trying a new and difficult experiment. It is not possible at this stage to reverse the gains of the workers. It may be possible to induce them to invest part of their wages back into the industry which would not only increase the capital required but also reduce the pressure of these wages on articles in short supply. Cost of production also continues to be high because cost of industrial raw material has risen out of proportion to the increase in prices of other items. This may be because there was no control over the prices of industrial raw materials as there was control over the prices of food, which affected the purchasing power of a large agriculturist sector and of certain manufactured articles which affected the finances of industrialists.

Purchasing Power

In respect of purchasing power, the monetary policy restricting currency and credit initiated at the end of 1951 involved for a considerable period a fall in the prices of food articles and industrial raw materials. From this loss of purchasing power, the cultivators do not seem to have recovered even though prices of food have subsequently risen by the withdrawal of food subsidies. In some areas, seasonal conditions have been adverse, drought and floods being equally disastrous. In essence, however, the purchasing power of the agriculturists though considerable in the aggregate is very small individually being made up of margins, varying both with the size of the crop and the prices of the season. None-the-less it, is only by steadying and increasing the purchasing power of the agriculturists, that the income and employment in the industrial and the tertiary sectors can be maintained and improved. These two sectors though they loom conspicuously in respect of problems of employment are really functional of the agricultural sector which both buys and sells to them. The first problem therefore is of increasing the income from agriculture and allied occupations. The concept here is the marriage of the available labour with the available opportunities.

Mr. Aneurin Bevan when he was in Madras told me that he was shocked at the disparity of conditions between the towns and the villages. He thought that this disparity was fraught with danger for the future, unless it was quickly reduced by introducing in the villages as many as possible of the amenities available in towns. The Five-year Plan and the Community Projects Scheme suggest improvements in the working and living conditions of the villagers. The achievement so far has not been considerable in extent or intensity. It has been suggested that the Five-year Plan proceeds from the top with reference to what Government can do and not from below with reference to what the people can do. The suggestion is that planning should be to employ the entire labour available in the villages on projects which would

Address to the Economics Association of Pachaiyappa's College on September 3, 1953.

improve working and living conditions. The finance for this will be to some extent self-generated as increase in services and goods involves a corresponding increase in peoples' wants and means. In respect of this, Keynes has the "multiplier theory" according to which any new expenditure by Government increases consequential expenditure and employment in a four-fold measure. Otherwise, it is suggested that finance should be from created money which to the extent it increases the earning and spending capacity of the people has a self-generated cover.

Organising Available Labour

The question of organization for mobilising the entire labour available is very important. So far the grants made by the Planning Commission and the Community Projects Organization have been related to contributions which the beneficiaries concerned are willing to make. This is very sound in theory because unless people are prepared to pay for a thing, they may not require it and in any case they do not value it. But on this basis it is not possible to proceed very far or very fast. The contributions which local bodies, local organizations or individuals can make are very small compared with the tasks to be done and the labour available for them. It is idle to expect that labour itself could be offered as a contribution because most of this labour belongs to classes who depend on it for their living. The tendency has been for this labour to demand even higher wages for governmental projects than for private projects. This may in order to enable wages to be obtained for a few days to cover the long stretches of unemployment. It was calculated by the Fiscal Commission that there is work in unirrigated villages for only three and half months and in irrigated villages for about double that period. This would imply that there is in every village ample labour which during periods of unemployment may be willing to work to rates below those paid by Government and even by private employers. To obtain this labour at wages related to supply and demand is a task which Government cannot attempt. It is best left to private contractors who should take on at rates related to what workers will accept during the time of their unemployment.

What is required therefore is a countrywide plan of public work which will fully employ the population during their period of unemployment. A beginning may be made on roads which more than anything else will bring the villages nearer to the towns and on agricultural improvements, particularly reservoirs which will bring the income of the agriculturist more in level with that of the worker in towns. Such a system being in conformity with normal practice will be more economical and expeditious than the system of public expenditure through official or semi-official agencies. It can also be easily extended throughout the country, supervision of the work done being left to the existing agencies. This is the concept of marriage of available labour with available opportunities.

Deficit Financing

The question of finance remains. In this, it was a year ago that I pleaded at the National Development Council that deficit financing was the only means of implementing the Five-year Plan. Since then the current budget of the Government of India has accepted the deficit financing as a principle for planning. Since then also Mr. Bernstein of the International Monetary Fund has supported deficit financing to an extent related to the increase in production. Since the end of 1951, there has been a 12 per cent increase in production but the currency in circulation has actually decreased by the same percentage. According to Mr. Bernstein's formula, the currency now in circulation can be increased through printing notes by 25 per cent, that is by about 300 crores.

Will not this cause inflation? The figures given below should dispel any notions that the volume of currency is related to the cost of living:—

Year.	General index.	Currency.
		RUPEES IN CRORES.
1947-48	308.2	1,227
1948-49	376.2	1,231
1949-50	385.4	1,128
1950-51	409.7	1,163
1951-52	434.6	1,189
1952-53	330.6	1,114
June, 1953	405.4	1,138

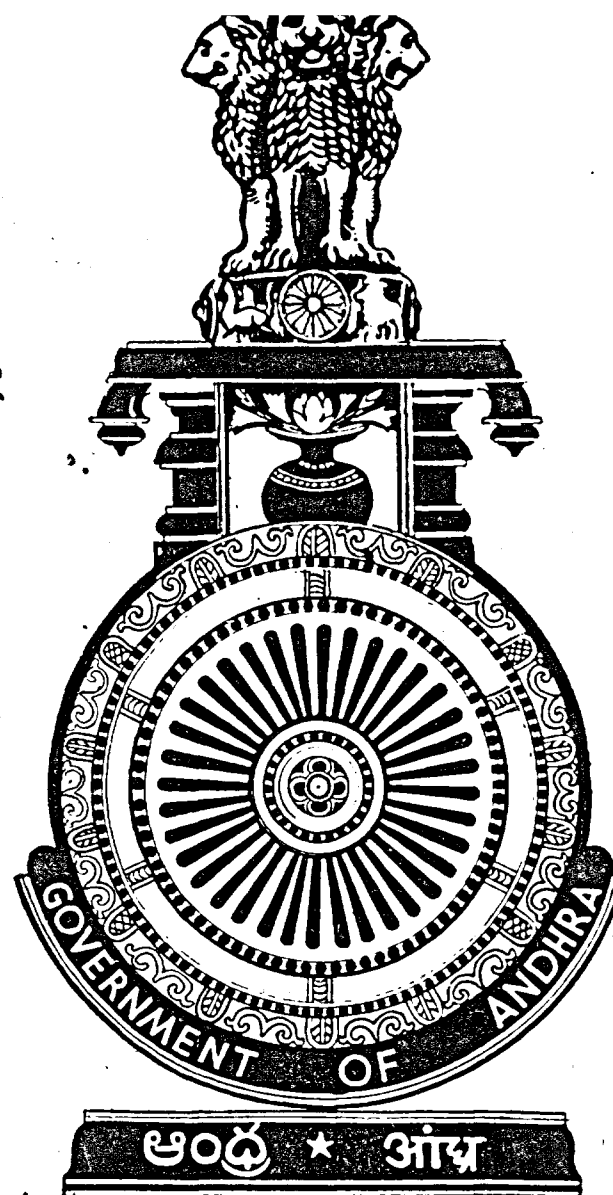
At the same time, the injection of an unusual quantum of money in advance of the production it will activate, may

increase the pressure of money on the goods and services available with some inflationary effect. This has to be checked, at least in the beginning, from both the commodity and the money ends. From the commodity end, though it is impossible to think of returning to the controls now happily given up, it is necessary to maintain the price line for essential articles. The simplest and also the easiest method is to declare a ceiling price, and to buy up all stocks at that price, whenever prices turn higher. The liability to surrender stocks, which should be enforced without let or hindrance, and even on information to be rewarded, will sufficiently warn the producers and traders of the necessity of keeping within the price line.

Food, cloth, sugar, cement, iron, if subjected inexorably to the fixed price line, will in their turn influence the general market. This form of control which acts more by influence than by actual interference is most economical of the administration necessary. It is based on an unmistakable understanding that hoarding at prices above those fixed will be detected and penalised with loss of prices paid above those fixed. It does not interfere with natural incentives and arrangements, so necessary to ensure full production and free distribution, the price line being effective, like the law of gravity, only against those who ignore it. Planning, like stable finance, certainly requires control of prices, but this control should have the majesty of a natural law, which automatically punishes infringement and is, therefore, quietly and generally respected.

At the money end, the simplest form of control is to earmark part of the new issue as encashable only against articles, which are not in short supply, and are necessary in the general interests of the country. I had designated this kind of money as "Development Currency," the ordinary notes being overprinted "Development" with the year, say, five years ahead, when they will be exchangeable against ordinary currency. While it has been admitted that this currency, if kept for redemption against ordinary currency, will be a form of compulsory savings and that it will not increase the pressure against articles in short

(Continued on page 32)



THIS IS ANDHRA

A patriotic population of two crores, two great rivers among the biggest in India, and an industrious rice-growing peasantry willing and knowing how to make full use of the waters—music and song and religion that keep the people happy—this is Andhra. God willing Andhra can set an example to those from whom they have parted and that example God willing again, can bear good fruit.

—C. RAJAGOPALACHARI

(Message to The Hindustan Times and The Andhra Patrika.)

Left: Andhra State Emblem with Asoka Pillar Lions on top, Dharma Chakra and Purnakumbham at the base. These are based on the carvings of the Amravati Stupa in Guntur District to symbolise the Andhra Tradition and Culture.

Below: The Partition Committee presided over by Sri C. M. Trivedi, Special Officer, Andhra Affairs.



Lower Bhavani Project Canals

Constructing a huge well planned reservoir is only the first phase in solving the irrigation problem of a State. It is the efficient and a well knit canal system that does the real job of carrying the bounteous water to the thirsty fields. This article deals with the canal system of the Lower Bhavani Project.

The canal system of the Lower Bhavani Project covers an area of 207,000 acres. The main canal takes off from the right flank of the reservoir at Bhavani Sagar some 10 miles from Satyamangalam in Gobichettipalayam taluk of Coimbatore district.

The canal is aligned on contour. All irrigation is on its left only. The canal is designed to discharge 2,300 cusecs at full supply level at the head. Its normal width in the head reach is 111 feet, full supply depth 8.6 feet; fall 0.415 feet per mile and velocity 2.37 feet per second. Dowel banks are formed on top of banks to guard against erosion of the edges, with chutes at 100 feet intervals on the slopes for drainage. The left bank will carry a fair weather motorable road 12 feet clear between dowels. The top width of the right bank will, however, be only 8 feet.

The off-take of the canal was originally proposed to be located in the earth dam portion of the reservoir. In actual execution it was shifted to the masonry dam portion contiguous to the river sluices and the pen-stock pipes. This change involved an extra length of 3,060 feet of an approach canal.

The Dharapuram Canal.

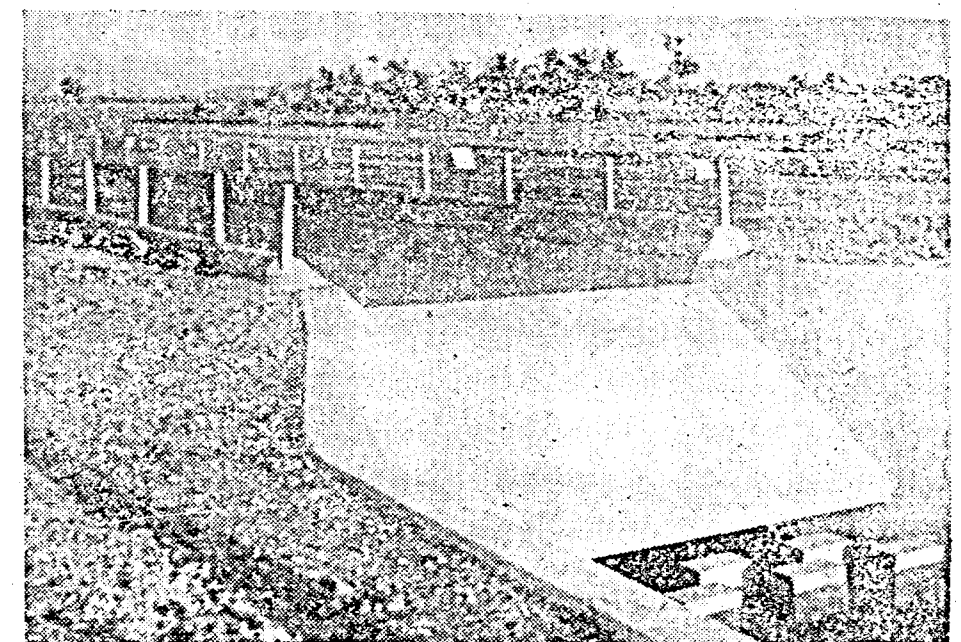
As originally conceived the canal should have tailed into Kakkuvuri, a tributary of the Noyyal river after traversing a distance of about 89 miles. All the area of 207,000 acres was to have been located in Gobichettipalayam, Bhavani and Erode taluks according to the original conception. Subsequently, however, the Government decided to give succour to a famine-affected area in Dharapuram taluk lying on the other side of the Noyyal valley by extending the main canal and affording irrigation facilities to an extent of 25,000 acres cutting out an equal extension canal, popularly known as the Dharapuram Canal.

As the canal traverses an undulating country, it has to cross several spurs and valleys. The course of the canal is rather sinuous, straight reaches being few and far between. At bends the radius is restricted to ten times the bed-width as a minimum. The canal goes in deep cutting in the spurs, and in the valleys, in high embankments.

The banks are formed with the spoil from canal excavation and with burrow earth wherever necessary to obtain a free board of 3 to 6 feet above full supply depth, depending upon the height of embankments. The free board is 3 feet up to 15 feet height of banks, 4 feet from 15 to 20 feet, 5 feet from 20 to 25 feet and 6 feet above 25 feet. The top soils for an average depth of about 1½ to 2 feet consist of red earth or gravel, the subsoils below being disintegrated rock of different degrees of hardness overlying soft and hard rock. It is only the top soils that contain a very small percentage of clay, as low as 5, and about 15 per cent of silt, the subsoils being coarse grained and pervious. The zone system is therefore adopted for the bank formation with a central core with the top soils called the 'Hearting' and the 'Casing' is formed with the subsoils.

As the finer fractions of the soils with which the 'Hearting' is formed constitute only about 20 per cent and as the subsoil in the canal cuttings is of open texture and coarse-grained, the transmission and percolation losses of irrigation water are likely to be considerable at least for some years to come. It is expected that some staunching will take place in due course by the deposition of what little silt can be picked up from the reservoir. To prevent undue losses, however, in high embankments in localities where the soil and subsoil are particularly deficient in fines, clay lining or other suitable arrangements has been proposed.

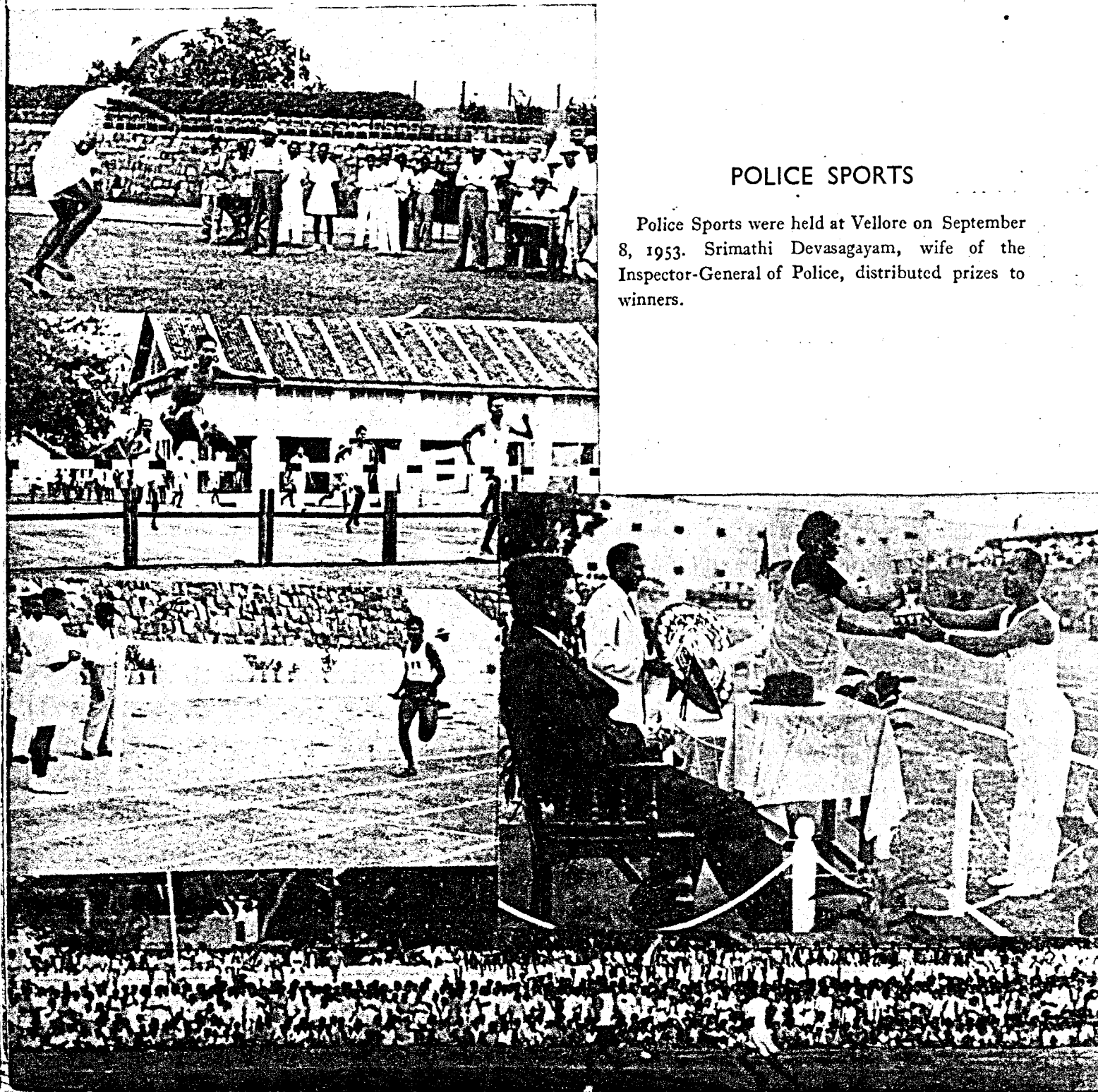
Where the cutting is very deep and extensive lock cutting has to be done, the canal has been flumed to about half its width, to minimise the rock cutting. The approach transition has play of 1:2 and the departure transition 1:10. Such fluming involves a loss of head due to the ruggedness of the surface in rock cutting and the higher velocity with which the discharge has to pass through the flume. To minimise the loss of head, however, the velocity is limited to about 4 feet to 4½ feet per second with a drop of about 0.75 foot in the bed in the throat.

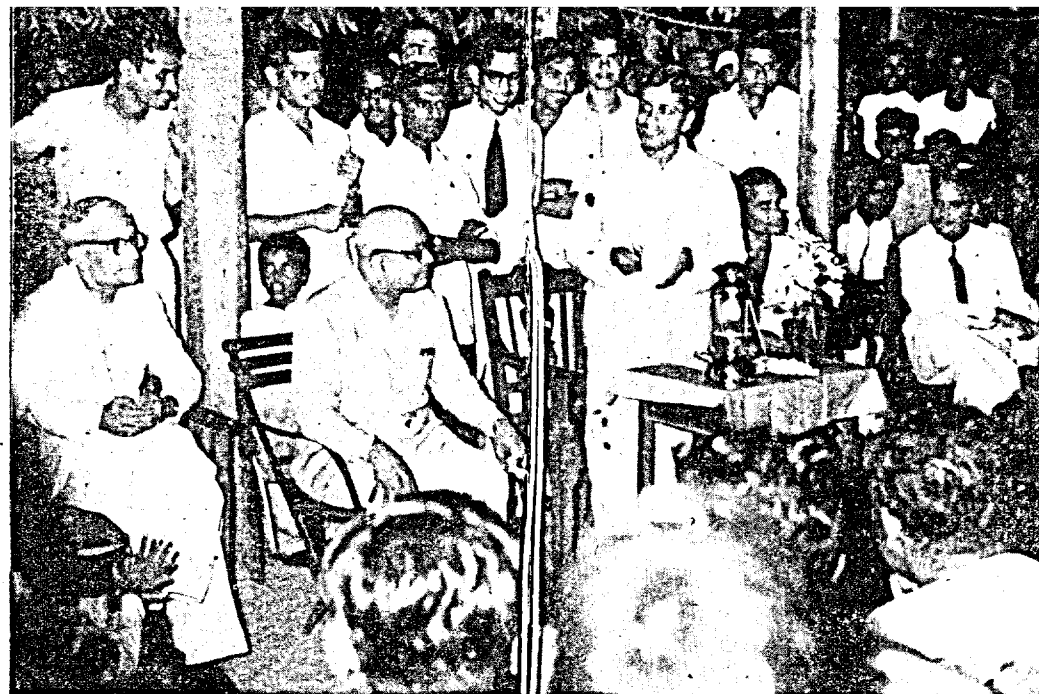
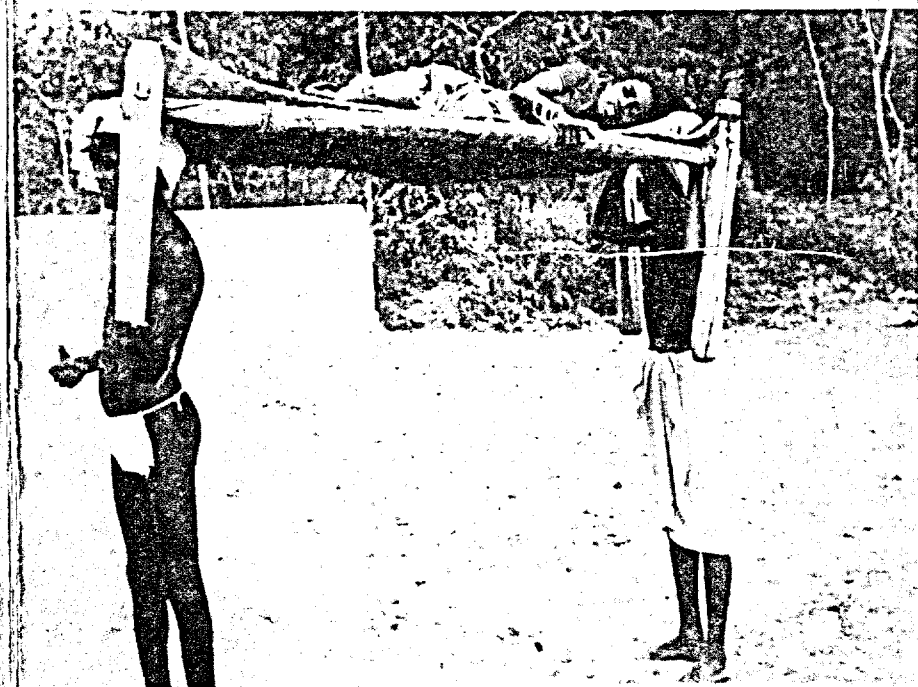
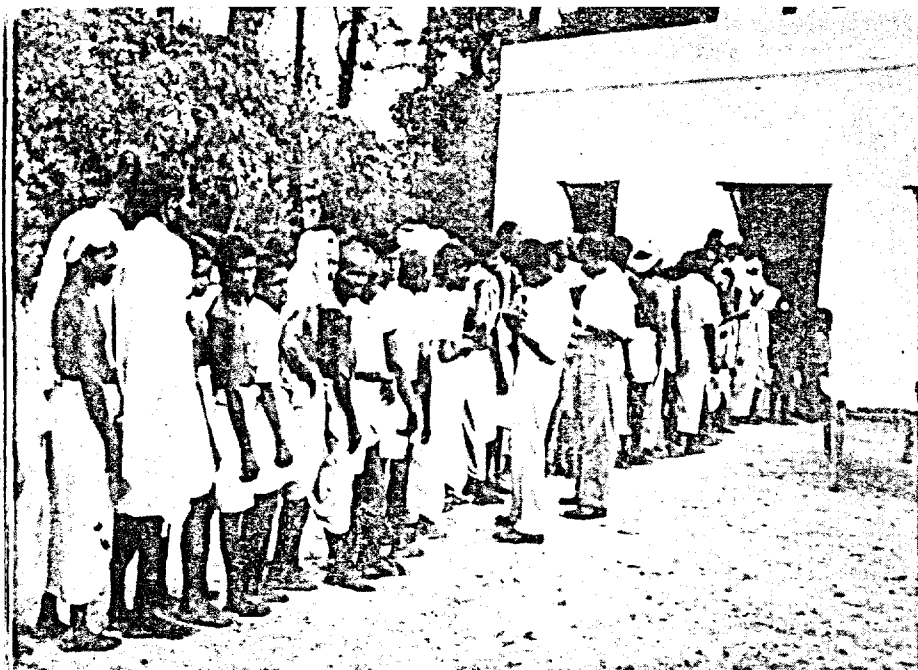


LOWER BHAVANI CANAL SYSTEM: Energy dissipating arrangements at exit with reinforced concrete roof and baffles in stilling chamber.

POLICE SPORTS

Police Sports were held at Vellore on September 8, 1953. Srimathi Devasagayam, wife of the Inspector-General of Police, distributed prizes to winners.





MEDICAL RELIEF WING

Twenty-two miles from Madras City is Palam, the centre of activity of the Medical Relief Wing, which has just now completed a year of useful activity. The first anniversary was celebrated on September 6, 1953. Pictures on this page depict some of the activities of the wing.

Centre :

Top : Collector of Chingleput who presided over the anniversary celebrations addressing the gathering.

Bottom : Patients receiving medicine.

Left :

Top : Long queue waiting for medical inspection.

Centre : An improvised stretcher.

Bottom : The future doctors busy writing prescriptions.

Right :

Top : A dentist at work.

Centre : Injection is no pain.

Bottom : Free milk to all active children.



Where the surface of cutting is very rugged the sides are lined with masonry or concrete and the hollows in bed are filled with concrete to reduce the frictional loss.

In the valleys, the embankments are pretty high though generally short in length. Special precautions are therefore taken by way of consolidation of the hearting and also some portions of the casing. The slopes of the banks are suitably flattened and berms provided. Riprap is dumped on the inner slopes to 2 to 3 feet thickness. Key trenches have been dug below the 'Hearting section' and the central trench taken down to hard rock or other impervious stratum and well consolidated as a precaution against undue seepage along the junction plane between the new bank and the virgin ground and to have a good bond with the foundation. A cover of at least 3 feet of dry earth over the saturation gradient which is assumed as 1 in 4 is provided. An outer toe of loose dumped rock-fill is formed with the stones obtained from canal excavation. This would facilitate drainage and also make for stability.

The banks are formed with earth deposited in layers of 7 to 8 inches. As the bulk of the earthwork is done by manual labour, each layer receives a certain degree of compaction, in the labourers having to tread on every layer for the deposition of the succeeding layer. Besides, where the banks do not exceed 12 feet in height, consolidation is done with hand rammers made of cast iron, where the bank exceeds 12 feet in height, stone or concrete rollers of 3 tons capacity hauled by bullock power or Field Marshall tractors are used. In heavy embankments of height exceeding 15 feet consolidation is done with power rollers of 10 tons capacity.

Camps and Buildings

Camps and buildings form a necessary adjunct to any irrigation project. The buildings in the Canal area have been planned with a long range view and built with an eye to their permanent utility.

Project Houses with two suites of rooms have been built at Satyamangalam, Gobie ettipalayam and Erode, three central places of importance in the commanded area. Besides these, rest sheds of the Dormitory type have

been constructed along the canal line roughly at intervals of 10 miles, to afford accommodation for subordinate officers camping in the locality. Quarters are built for the regulating staff spaced roughly at intervals of 6 miles along the length of the canal. These come in handy now as store-sheds for the safe custody of valuable construction materials. Quarters for officers have been built only in places where they will be required for the permanent maintenance staff after the completion of the Project.

The Main Canal crosses a number of roads. Bridges have been constructed at all these crossings. They are designed to take up the loading specified by the Indian Roads Congress.

Where the canal crosses an important road at an angle the bridge is built skew. The bridges are of the 'Reinforced concrete deck-slab type' without beams, the maximum spans adopted in the canal system being 20 feet. In some cases, the underside of the slab is curved to give the appearance of an arch. This gives an aesthetic effect besides adding strength at the supports.

There are as many as 197 off-takes from the Main Canal and 64 from the Extension canal. The distributaries would cover a total length of about 500 miles. Seventeen of them are major ones carrying a discharge of over 20 cusecs up to a maximum of about 350 cusecs.

The distributaries are aligned as far as possible on the ridges. The country fall being of the order of 1/200 generally and in exceptional cases even as steep as 1/100 or 1/50 numerous drops are required to negotiate the country fall.

The drops designed in the smaller distributaries are of the well-type generally. Where the discharge is less than 10 cusecs a cheap type with a cross bund and pipes inserted in it has been evolved.

In two reaches in the Chennasamudram distributary, the biggest branch in the canal system, the country fall is so steep, that, if the conservative methods were to be followed, several drops would have had to be constructed coming at close intervals. Instead, the steep fall is negotiated by a lined chute conforming to the slope of the ground and avoiding

the several drops, as this alternative was found to be much cheaper.

Canal Works

The Canal works are executed on what is known as the job-work system. There are no major contractors as such. The job-worker, in most cases, is one among the labourers with little or no capital. Payment for work done is made almost every week. The adopting of this system, in effect, tantamounts to the Government taking upon themselves the additional burden that generally falls on the contractors' shoulders. But the advantages are many. In the first place it makes for economy. Judging from the general trend of the rates quoted on invitation of open tenders, the savings due to the adopting of the job-work system can be put down at not less than 20 per cent. The quality of the work is assured. Another important factor which is likely to be lost sight of, is the opportunity such a system affords the Departmental officers to develop initiative and powers of organisation and control.

The execution of the canal works was taken up on hand in January 1949. The construction programme drawn up at the time of the sanction of the Project was scheduled to cover a period of six years. But the pace has been hastened and at the increased rate of progress it has been found possible to give supply to an extent of about 5,000 acres in the head reach of the canal during 1952-53. The canal work are expected to be completed in all respects in 1953-54.

Canal irrigation of the magnitude contemplated in the Lower Bhavani Project for raising irrigated dry crops is practically new to this area, where such irrigation has been done and is being done mostly only from wells for quite a long time. Irrigation experiments were therefore considered desirable for determining:

- (i) the optimum sizes of field plots;
- (ii) the optimum sections of field water courses;
- (iii) the method of irrigation by turns; and
- (iv) the special steps necessary to ensure efficient irrigation during nights without waste of water.

(Continued on page 22)

Maximisation of Production

By SRI M. SATYANARAYANA, B.A., B.Sc. (Ag.), Deputy Director of Agriculture

After decontrol, paddy attained its proper level in the parity of prices in a free market. It now figures as a commercial crop of the plains, foremost in its net return, under a system that is developed with the help of the underground water-shed, occurring in different layers and tapped as artesian and sub-artesian supplies and through the less expensive medium of filter point tube wells operating from the upper strata in the water-shed. The cropping calendar for the year evolved with these supplies of underground water, either independently or with assistance by irrigation from the surface river systems, provides for a first crop with MTU. 3 paddy from June to October, a second crop with MTU 20 paddy from February to May and an intermediate mixed crop of Sunhemp or *Pillipesara* along with *Sesbania speciosa* between November and January. In this system the paddy strains MTU. 3 and MTU. 20 possess high potential productive capacity. *Pillipesara* and sunhemp in the intermediate season provide the fodder respectively on the sticky or loamy soils, while *Sesbania speciosa* figuring in mixture with these, supplies the green matter to recuperate the soil, in this programme of production of 25 bags (2 Imperial maunds each) of paddy from the first crop and another 25 from the second crop.

Survey of the Underground Water

The rock formations of the Agency Tracts of the Godavari districts comprise primarily the charkonites and the condollites: and with the structure of the sand stones leave a good underground water-shed in this area. Of late, this is greatly exploited in the sinking of reinforced concrete wells and the lifting of water with prime movers. As Virginia tobacco is produced at cheaper cost from the virgin soils of the Agency compared to the crops in littoral, paddy for some years, has to struggle against this Virginia tobacco in the returns to dislodge the Virginia tobacco from the tract.

In the hinterland of the upland and the delta in these districts runs an artesian bed lying between 325 to 350 feet from the ground level. From existing evidence, it is now confined to

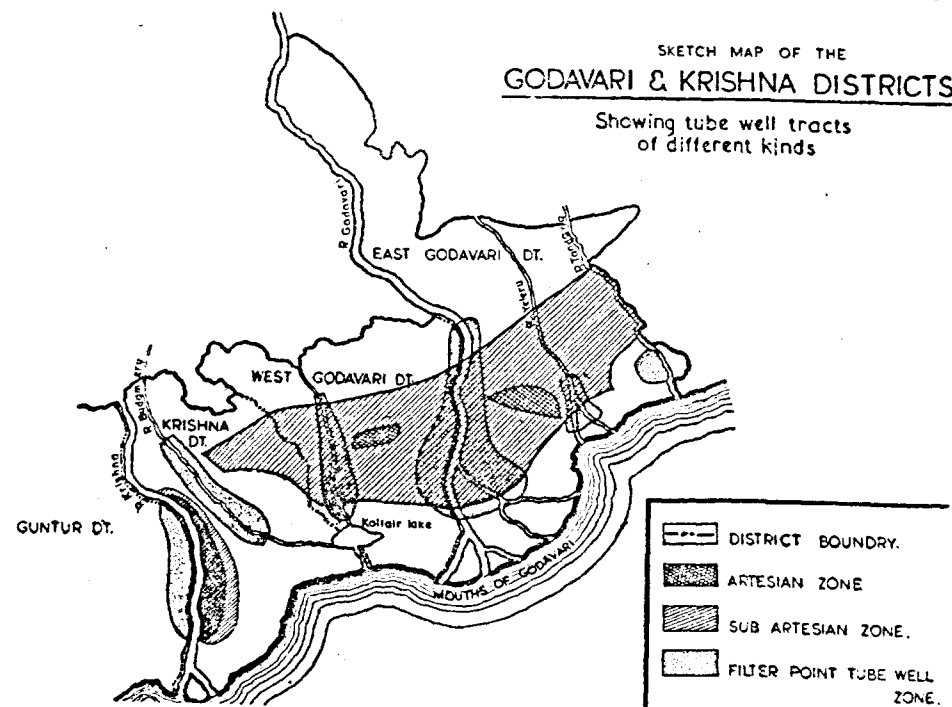
an area of 25 square miles lying between Chebrole, Ungutur and Badampudi; and to another area in between Rajahmundry and Samalkot, covering 150 square miles. With the help of the power drill now operating in Kistna district and capable of boring to 300 feet a day, more spot for artesian deliveries can be discovered.

The sub-artesian bed in these districts is very vast in its extent running from Gudivada to Tuni along the railway line and with belts of land varying from five to ten miles from the course of the rivers Godavari and Kistna and their mouths and along the courses of the rivulets Tandava, Yeleru, Thammileru and Budameru. This area is nearly 3,900 square miles. The sub-artesian water shed is roughly contained in two layers anywhere between 30 to 200 feet from ground level, the major part of it being confined to between 60 to 70 feet from the ground level. When in bores this water-shed is touched, the water gets pushed up through them to 12 to 20 feet from the ground level.

Filter Point Tube Wells

Of the third kind is the water-shed that is now utilised with filter point

tube wells. It occurs as coarse sand in bands of different widths alternated by silt or clay right up to 45 feet from the ground level. Though floods in the rivers and rivulets of these districts occurring through millions of years and unhampered by flood banks of the artificial projects, there have been accretions horizontal and vertical bringing about the banded sandy strata as now observed on the lanka lands. The deposition of the silt or the sand is the result of the velocity of the flood of the time. These sandy banded strata fully metamorphose the surface cropping, in value, extent and magnitude of production on the employment of the device of the filter point tube well. In the experience of the past one year and the phenomenal returns already enjoyed, ryots observing the existing filter points are putting them up in large numbers with the help of private boring sets. The installation of the points dispenses with the construction of wells specially in loose soils where it is not possible to build up the well wall. In the course of the past one year the filter point greatly attracted the attention of the ryot. In one taluk of Ramachandrapuram, in East Godavari district, the number rose from 2 to 150. In these



three districts, of the Division there are nearly 400 such points. It may spring no surprise if the number swells to a thousand per district, in the year following.

In many a tract in these districts water from the sub-artesian water shed and water from the banded sandy strata of the filter points remain unmixed and independent of each other. Where both the sources of water supply occur in the wells, the lift irrigation with pumps brings about a static water level which is the result of the discharged supplies from the two sources herein mentioned and the discharge of the pump effecting the delivery. Instances have also been known where the percolation water from the banded strata has run down the throat of the sub-artesian bores. In all places where old wells have cracked, as in the Nagaram Island of the Godavari Central Delta, filter points may be installed in the sandy bed in the wells, ultimately to do away with the well itself.

Water Divining

As against the perspicacity of the gifted individuals, stratigraphy, deduction and induction have been scientifically employed for water living. A knowledge of stratigraphical geology, deduction from observations of existing wells; and induction by visualising the face of the country prior to the advent of the projects, with relevant records and maps dealing with courses of the river

mouths the channels and drains, have all been employed in divining the tracts fit for the installation of the points.

In this connection, Walch "History of the Engineering Works of the Godavari Delta" and sketch maps of the Zinco survey office indicating the water courses of irrigation and drainage have been of immense help and greatly assisted in giving cent per cent success in divining. Such tracts for instance are the Thulyabhaga, Vridha Gautami, Kausika, Gostanadi mouths of the river, portions of which having been converted into drains and portions into canals under the projects. Such tracts for instance are the upper reaches, not contaminated by the tidal water, of the age-long drains,—the Gonteru, the Yenmadurru, the Nakkala, the Bhageswaram, the Gorinkala, the Teki and so forth.

Villages in the upper reaches of their courses and alongside old channels of the pre-ancut system, flowing as gradient channels from the river, as the Apparao Channel, the Venkayya, the Veyyeru have all been notified for propaganda for the installation of the filter points and success has been met with through the filter point tube wells. Most of them have four-inch suction and three-inch delivery and possess capacities of discharge ranging from 5,000 to 10,000 gallons per hour.

Tracts of similar kind are also met with, with banded sandy strata in the

village of Jallur in the Yeleru basin of Pithapur taluk and in Kavalapadu and Tuni of the Tandava basin.

Correspondence in Regional Languages

The Government have ordered that the experiment of conducting all official proceedings and correspondence in Tiruchirappalli and East Godavari Districts within each district in the regional language of the District concerned should be continued for a further period up to the end of December 1953.

The question of further continuance of the experiment has been left for decision by the Andhra and the Residuary Madras States.

Lower Bhavani . . .

(Continued from page 20)

For this purpose, a plot of 20 acres was taken in the first instance and experiments were conducted on 10 acres for raising millets and cotton on the remaining 10 acres in one season and over a wider area in the second season. Several sizes of plots and field water-courses were laid out and 'V' notches fixed at points of off-take for measurement of discharges. These experiments were started in 1950 and continued till April 1952 when they were closed down. The farm was located in an area which is analogous to the Project area and which is now fed by the Mewani Distributary of the Tapeppalle channel taking off from above the Kodiveri anicut across the Bhavani. The experiments were conducted for two seasons during 1950-51 and 1951-52.

As the studies made during the two seasons were considered sufficient to arrive at the statistical data to evolve which the experiments were taken up, the experiments were closed down in April 1952.

When the Project becomes a fait accompli it would help considerably to increase the production of food-stuffs and raw cotton. If the fertility of the soil is built up in the course of some years, the yield from the area in a year of plentiful supply of irrigation water, can be of the order of 1,00,000 tons of millets reckoned on two crops and about 15,000 tons of cotton kappas.

Crop Reports

Bengalgram

The area sown with bengalgram in Madras State in 1952-53 is estimated at 94,100 acres. Compared with the actual area of 88,800 acres for the previous year and the average area of 105,900 acres for the previous five years, the present estimate shows an increase of 6.0 per cent and a decrease of 11.1 per cent respectively. The increase in area this year is mainly due to favourable seasonal conditions at the time of sowings.

The crop is not grown in the districts of Tanjore, Malabar, South Kanara and the Nilgiris. An increase in area is estimated in the districts of Srikakulam, East Godavari, West Godavari, Krishna, Guntur, Bellary, Anantapur, Salem and Tirunelveli and a decrease in the other regions of the State except in the districts of South Arcot, Chittoor, North Arcot, Tiruchirappalli and Ramanathapuram where the area was the same as that of last year.

The crop has been harvested in most of the districts. It is reported to have been affected by inadequate rains in the districts of East Godavari, West Godavari, Krishna, Kurnool, Anantapur, Cuddapah, Chingleput, North Arcot, Salem, Coimbatore, Madurai and Tirunelveli. In Bellary district the crop was reported to have been affected by pest and cloudy weather at the time of pod formation. The yield per acre is estimated to be below the normal in all the regions of the State. The seasonal factor for the State as a whole works out to 74 per cent of the normal as against 68 per cent of the normal estimated for the previous year. On this basis, the yield is estimated at 15,600 tons. Compared with the estimated yield of 13,400 tons for the previous year and an average yield of 15,900 tons for the previous five years, the present estimate shows an increase of 16.4 per cent and a decrease of 1.9 per cent respectively.

The wholesale price of bengalgram per standard maund of 82-2/7 lb. or 3,200 tols on May 9, 1953, was Rs. 20-2-0 in Kakinada. Compared with the price which prevailed in the corresponding period of last year, this reveals an increase of 25.3 per cent.

Potato Crop

The potato crop is grown mainly in the Nilgiris district and to a small extent in Salem and Madurai districts.

The area under the crop up to May 25, 1953, is estimated at 19,400 acres. Compared with the final area of 18,690 acres for the previous year, this shows an increase of 3.8 per cent. The increase in the area under the crop is generally attributed to better rains in the current year in the planting season. Information in regard to winter and summer crops is given below.

Winter crop.—The area under winter crop of potato is estimated at 1,450 acres as against the final area of 1,380 acres for the previous year, representing an increase of 5.1 per cent. An increase in area is estimated in the Nilgiris district and a decrease in area in the Salem and Madurai districts.

The yield per acre is estimated to be below the normal in all the three districts. The seasonal factor for the State as a whole works out to 88 per cent of the normal as against 79 per cent estimated for the previous year. On this basis, the total yield works out to 4,000 tons as against 3,450 tons estimated for the previous year, representing an increase of 15.9 per cent.

Summer crop.—The area under summer crop is estimated at 17,950 acres as against the final area of 17,310 acres for the previous year representing an increase of 3.7 per cent. An increase in area is estimated in the Nilgiris district and a decrease in Madurai district, the area in the Salem district under the summer crop being little or negligible. The condition of the standing crop is reported to be generally fair.

The wholesale price of potato per standard maund of 82-2/7 lb. or 3,200 tolas at Madras on June 6, 1953, was Rs. 19-13-0. As compared with the price which prevailed in the corresponding period of the previous year, this is an increase of 15.4 per cent.

Sugarcane

The area planted with sugarcane in the Madras State during 1952-53 is estimated at 263,100 acres. Compared with the final area of 282,280 acres for

the previous year and an average area of 236,040 acres calculated for the five years ending with 1951-52, this is a decrease of 6.8 per cent and an increase of 11.5 per cent respectively.

An increase in area is estimated in the districts of Srikakulam, West Godavari, and South Kanara and a decrease in all the other districts of the State except in the Nilgiris where the area under sugarcane is little or negligible.

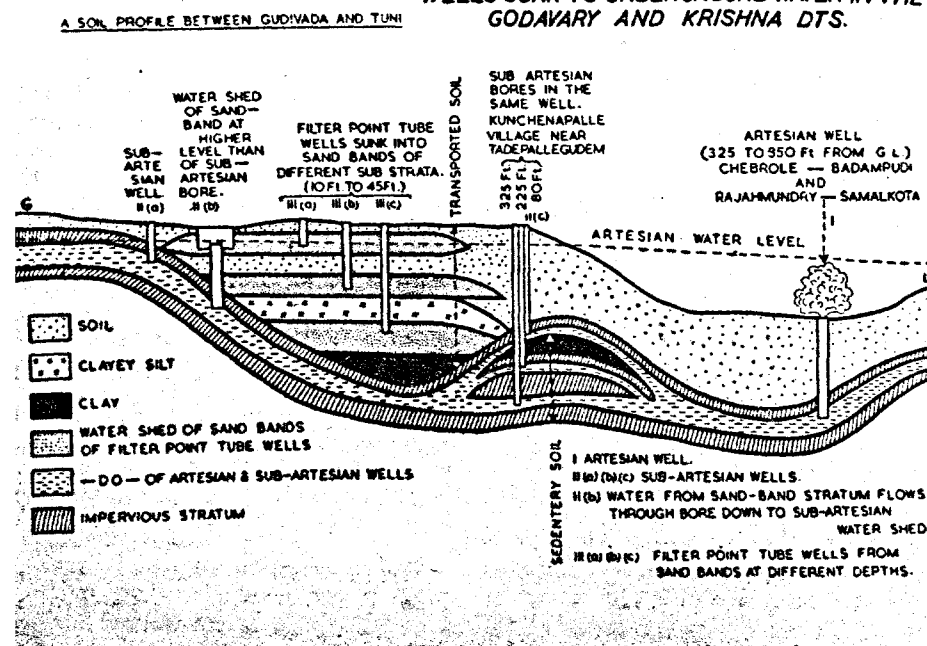
The present estimate includes an extent of 37,000 acres under ratoon sugarcane in the districts of Srikakulam (5,000 acres), Visakhapatnam (5,000 acres), East Godavari (6,000 acres), West Godavari (6,500 acres), Krishna (2,500 acres), South Arcot (2,500 acres), North Arcot (3,500 acres), Coimbatore (1,000 acres), Tiruchirappalli (4,000 acres) and Madurai (1,000 acres).

The crop has been harvested or is being harvested in many districts. The crop is reported to have been affected to some extent by inadequate water-supply in parts of Visakhapatnam, Krishna, Bellary, Anantapur, Cuddapah, Chingleput, Chittoor, North Arcot, Salem, Coimbatore, Madurai, Ramanathapuram and Tirunelveli districts. The crop was seriously affected by the cyclone towards the end of November 1952 in the district of Tanjore. The yield per acre is estimated to be normal in West Godavari and Malabar districts and below the normal in all the other districts of the State.

The seasonal factor for the State as a whole works out to 85 per cent of the normal as against 86 per cent estimated for the previous year. On this basis, the total yield works out to 6,405,530 tons of cane, the gur equivalent of which is 700,040 tons as against 6,874,860 tons of cane with a gur equivalent of 752,680 tons estimated for the previous year representing a decrease of 7.0 per cent. Compared with an average yield of 5,963,800 tons of cane with a gur equivalent of 651,690 tons for the five years ending with 1951-52 the present estimate shows an increase of 7.4 per cent.

The average wholesale price of jaggery per maund of 82-2/7 lb. or

WELLS SUNK TO UNDERGROUND WATER IN THE GODAVARY AND KRISHNA DTS.



3,200 tolas at important market centres on May 9, 1953, was Rs. 27-3-0 in Mangalore, Rs. 22-12-0 in Tiruchirappalli, Rs. 22-3-0 in Cuddalore, Rs. 21-6-0 in Bellary, Rs. 21-5-0 in Adoni, Rs. 19-12-0 in Salem, Rs. 19-11-0 in Visakhapatnam, Rs. 19-3-0 in Rajahmundry, Rs. 19 in Chittoor, Rs. 18-3-0 in Vellore and Rs. 16-5-0 in Kakinada. Compared with the prices which prevailed in the corresponding period of the previous year, these prices reveal a rise of 169.3 per cent in Visakhapatnam, 133.1 per cent in Rajahmundry, 127.5 per cent in Tiruchirappalli, 100.1 per cent in Salem, 90.2 per cent in Bellary, 85.0 per cent in Mangalore, 81.9 per cent in Vellore, 71.7 per cent in Kakinada, 58.6 per cent in Cuddalore, 52.0 per cent in Chittoor and 29.6 per cent in Adoni.

Cotton

The area under cotton in the Madras State for the year 1952-53 is estimated at 1,798,000 acres. Compared with the finally recorded area of 1,768,000 acres for the previous year and an average area of 1,623,800 acres calculated for the five years ending with 1951-52, this is an increase of 1.7 per cent and 10.7 per cent respectively. The increase in area is generally attributed to early rains at the time of sowings in the Deccan districts.

The area estimated is the same as that of last year in the districts of Srikakulam, Krishna, South Arcot and South Kanara. An increase in area is estimated for the districts of Visakhapatnam, East Godavari, West Godavari, Guntur, Kurnool, Bellary, Anantapur, Cuddapah and Salem and a decrease for the other districts of the State. The area under cotton is little or negligible in the districts of Chittoor and the Nilgiris.

The main or first picking of cotton are over in all the districts. The crop was affected by drought in the districts of East Godavari, West Godavari, Anantapur and Bellary and by inadequate rains in the districts of Krishna, Kurnool, Cuddapah, Nellore, Chingleput, North Arcot, Salem, Coimbatore, Tiruchirappalli, Madurai, Ramanathapuram and Tirunelveli. The crop was also affected by pests in the districts of North Arcot, Coimbatore, Tanjore, Madurai, Ramanathapuram and Tirunelveli.

The yield per acre is estimated to be normal in the districts of Malabar and

South Kanara and below the normal in all the other districts of the State.

The seasonal factor for the State as a whole works out to 78 per cent of the normal as against 98 per cent for the previous year. On this basis, the total yield works out to 326,400 bales of 392 lb. lint (including yield from kar pickings) as against 411,100 bales estimated for the previous year and an average yield of 363,000 bales for the five years ending with 1951-52 representing a decrease of 20.6 per cent and 10.1 per cent respectively.

Variety.	Area in '00' acres.	Corresponding yield in '00' bales of 392 lint.	
		1952-53.	1951-52.
Irrigated Cambodia	1,482	1,521	865
Dry Cambodia	1,634	1,694	358
Total, Cambodia	3,116	3,215	1,223
Uppam in the Central districts ..	81	91	12
Nadam and Bourbon	16	18	..
Total, Salems	97	109	12
Tinnevellies*	5,455	5,488	1,033
White and Red Northern	1,120	1,083	114
Mungari (Deccan)	3,400	3,193	347
Westerns	4,030	3,825	409
Warangal and Kakinadas	736	739	123
Chinnapatti or short staple	26	28	3
Total	14,767	14,356	2,029
Grand total	17,980	17,680	3,264

* Includes Karunganni cotton grown in the Coimbatore district and Uppam, Karunganni and mixed country cotton grown in the south.

Redgram

The area sown with redgram in the Madras State in 1952-53 is estimated at 387,000 acres. Compared with the actual area of 403,300 acres in the previous year, it is a decrease of 4.0 per cent. Compared with the average area of 363,000 acres during the previous five years, it is an increase of 6.6 per cent. The decrease in area this year is largely due to want of adequate rains at the time of sowings.

The crop is mainly grown in the districts of Visakhapatnam, East Godavari, Guntur, Kurnool, Bellary, Anantapur, South Arcot, North Arcot, Salem, Coimbatore and Tiruchirappalli. An increase in area is estimated in the districts of Srikakulam, Visakhapatnam, Krishna, Guntur, Bellary,

The estimated area and yield of cotton by varieties in the current year together with the corresponding figures for the previous year are given below:

The wholesale price of cotton lint per standard maund of 82-2/7 lb. or 3,200 tolas as reported from certain important market centres on August 2, 1953, was, Rs. 76-13-0 for White Northern, Rs. 73-10-0 for Red Northern, Rs. 102-11-0 for Coimbatore Cambodia, and Rs. 88-15-0 for Coimbatore Karunganni.

Cuddapah and Malabar and decrease in the other districts of the State.

The crop has been harvested in most of the districts. It is reported to have been affected by inadequate rains in East Godavari, Krishna, Guntur, Kurnool, Anantapur, Cuddapah, Nellore, South Arcot, Chittoor, North Arcot, Coimbatore, Tanjore, Madurai and Ramanathapuram districts. The yield per acre is estimated to be below the normal in all the districts of the State. The seasonal factor for the State as a whole works out to 76 per cent of the normal as against 75 per cent of the normal in the previous year. On this basis, the total yield works out to 36,000 tons (cleaned grain) as against

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Sugarcane Crop Competition

By SRI S. V. PARTHASARATHY, Sugarcane Specialist, Sugarcane Research Station, Anakapalle

The Government of Madras sanctioned the sugarcane crop competition scheme for the second year in succession with a view to enthuse the cane cultivators to enter into an healthy competition for maximising cane production.

During the year 426 plots were enlisted for the competition. In the prize plots, the highest yield was 107.12 tons of cane in the Samalkota factory zone and the lowest was 56.77 tons in Hospet.

The average yield per acre for all the prize plots worked out to 79.22 tons while the estimate for the development zones of the State was 33.22 tons against the State average of 25.58. Considering these yields it can be said that the development work in sugarcane pulled up the average yield of the State.

Even this increased yield of the development zones by 29.3 per cent is only 31.0 per cent of the maximum potential and 41.9 per cent on the average potential for the Madras State. The achievement of high yields by the competitors was not without a plan for the cultural schedule for the cane crop. In this the potentiality of the variety Co. 419 plays the largest role. The manurial and seed rate, spacing and other cultural schedules as worked out from the research stations of the State form the background on which the individual competitors built the schedules for their holdings. Therefore the maximising of production by these competitors by the adoption of scientific schedules is a point of importance to be noted by all the cane cultivators and they should not take it that the prize winners got their prizes as a matter of chance.

Advent of Coimbatore Seedling

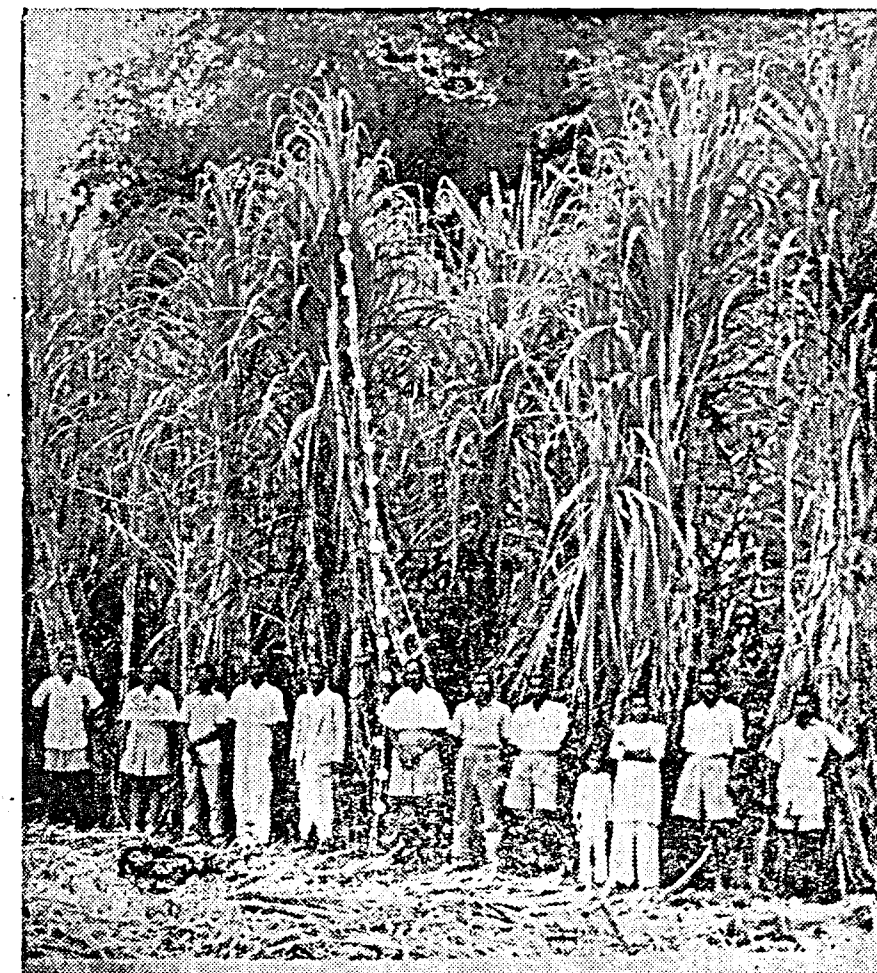
The advent of the Coimbatore seedling canes revolutionised the sugarcane industry and such high yields as realised in the competition would not have been possible but for these canes. Advantage of this potentiality of these improved varieties is not taken by all the ryots as they now adopt easy methods of cultivation. The right

approach is to give better treatment to the varieties and record better results which is not being done at present. These varieties which are better yielders are better feeders also and hence the maxim "better varieties and better farming practices should go together" should be publicised and put into practice on a large scale. It is said in some quarters that the cost of production of cane in this State is higher than in other centres. The results of this competition proved conclusively that the cost of production can be cheapened considerably by increasing output per unit area. It is desirable that all the cane growers achieve the objective of cheapening

the cost of production of sugarcane and incidentally sugar or gur by adopting scientific technique in cultivation and maximising cane production.

It should also be kept in view that in the process of achieving high cane yields juice quality is not unduly sacrificed. Then there will be harmony between the cane suppliers and the factory owners and this will result in the production of cheap sugar. For achieving cheap sugar for internal consumption or export market, intensified development is needed. Financing such development is sure to give adequate

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Sri Bona Pappa Rao (fifth from the left) won the first prize in the Sugarcane Crop Yield Competition. The prize winner produced 107.12 tons of cane per acre in the Samalkota Factory Zone which exceeds the previous record of 102.4 tons by 5 tons.

Agricultural Titbits

Two Crops of Paddy in Single Crop Wet Lands

The practice of following a short duration crop with a long duration one, was tried from 1932-33 in single crop wet lands in Godavari Delta as in the Southern districts, but it has become difficult to fix up a suitable strain in the inter-season, i.e. from October to February. But during 1952-53 season, the varieties SLO-16, NK-60 and MTU-20 were planted as short duration crop in the sarwa season followed by Eswarakora as the inter-season paddy variety. Eswarakora was found to be quite resistant to "Turpu gali" (East Wind) apart from pest attack. The performance of this variety is quite satisfactory and it recorded an acre yield of 15 to 17 bags of 166 lb. each in the inter-season. About 20 to 30 per cent increased yields could be obtained by growing two crops of paddy in over a single crop of paddy in the main crop season.

Paddy Strain for Late Planted Conditions

In Visakhapatnam district, belated planting of paddy is a common feature, as the supply of water for planting is entirely dependent on the receipt of monsoon. Whereas the usual season for planting in the district is July-August, it is not uncommon that plantings are done so late as October. Due to uncertainty of planting period, very often the seedlings overstay in the nursery, as seed beds are sown at the usual sowing time, while the planting gets delayed with late receipt of rains. With a view to select a suitable strain that can stand the above conditions, trials were conducted at the Sugarcane Research Station, Anakapalle, during the years 1951 to 1953. Twelve reputed strains of paddy (including those of other stations), viz., AKP 2, AKP 4, AKP 11, CO 3, CO 18, CO 25, ADT 8, ADT 18, PTN 16, ASD 5, T 672 and GEB 24 were tried using seedlings of two different ages, viz., 35 and 40 days in case in two series of different dates of planting, viz., first week and third week of October. The trials that were conducted during the years 1951-52 and 1952-53 have revealed that planting in the first week of October gave increased yields of 17-40 per cent over the third week planting. Fifty

days old seedlings used at planting time gave slight increase in yield over 35 days old ones. Among the strains, CO 25 was the best in performance in both series. It is a late maturing variety coming to harvest in the middle of February with a duration of 170 days.

"Early Cane" Varieties

"Early" varieties of sugarcane are generally noted to be rich in sugar but poor in yield. Heavier manuring is known to step up yields but depress quality. But when applied, early the evil influence of heavy manuring seems to be lessened. For improving cane yields without sacrificing quality, early planting and heavier and earlier manuring should go together.

Production of Gogu Fibre

In Guntur district, Gogu (*Hibiscus species*) is cultivated in a variety of soils, but predominantly in light soils (sandy soils to sandy loams as a pure crop in the "Punasa" season July to November for culinary purpose and fibre production). The common varieties grown are Yerra gogu (*Hibiscus cannabinus-var-purple*) and Tella gogu (*Hibiscus cannabinus-var-Howard*). Since the two varieties are very poor yielders of fibre, introduction and trial of high yielding varieties of gogu was taken up in the College Farm, Bapatla, since 1951. The results of the trials in the two consecutive seasons indicate that Pusa or Kasi gogu (*Hibiscus-sa'da Priffa-var-allistna*) followed by Kaki gogu (*Hibiscus cannabinus form intensica*) recorded double the yields of local varieties. The thinned out plants and the fruit-borne portion of the stem cut at harvest were fed to cattle. The observations indicate that the cattle relished Tella gogu and Yerra gogu better than the rest.

Control of Pests

Fruit-rot of chillies.—Fruit-rot in chillies occurs in almost all the districts. The rotting starts after the fruits are set. White patches appear on the fruits which later develop the black dot like fungal fructifications in concentric circles. The fruits mature early and get shrivelled. Sometimes they are shed on the ground. Perenox $\frac{1}{2}$ to $\frac{3}{4}$ oz. in one gallon of water is

normally used for the control of this disease occurs in combination with thrips an insect pest—combined spray of Agroicide Perenox is given. But sometimes the fruit-rot is not controlled either when sprayed alone or in combination. One such instance has occurred in the Srikulam district. The chilli crop in Budumuru in the Srikulam taluk was sprayed with Agroicide Perenox spray in the proportion of 1 oz. Agroicide plus $\frac{3}{4}$ oz. of Perenox in a gallon of water. The crop recovered from thrips attack but the fruit-rot was still in evidence and was presenting an unhealthy appearance. Thinking that a spray with urea might pick up the crop, a combined spray of "Urea Perenox" in the proportion of 1- $\frac{1}{2}$ oz. of Urea plus $\frac{3}{4}$ oz. of Perenox in one gallon of water was sprayed. Examination of the crop after a fortnight showed improvement with good foliage. After a month the fruits were collected from the sprayed and unsprayed plots. While sprayed plot had practically no damaged fruit, the unsprayed had them in plenty. Hence, it is suggested that the Urea Perenox spray may be tried for the control of fruit-rot in chillies instead of mere Perenox.

Control of cardamom thrips.—Among the various pests on cardamoms, thrips (*Taenio thrips cardamomi*, 'R') is the most serious one. This pest is mainly responsible for the fall in yield experienced by most of the planters in South India.

Thrips are small brownish black insects. The insect feeds and breeds in large numbers in all parts of the plant such as leaf sheaths, leaf spindles and floral parts. During rainy weather, insects living in leaves migrate to the flowers which afford them better protection against bad weather. The insect feeds on plant sap and consequently the flowers and tender capsules dry up. The fruits that survive the attack develop a characteristic scabbing. The fruits are malformed containing only a few chaffy seeds in bad cases.

Various insecticides were tried against this pest in the Cardamom Research Station, Singampatti. Gammexene D-025 was found to be very efficacious. This insecticide is in a dust form and easily available. It costs about 4 to 5

annas per pound. The insecticide should be dusted again and again once a month regularly. About 3 to 4 lb. of the insecticide will be required for one round of operation over one acre. The first dusting in a plantation may be done to the whole plant from top to bottom. It is enough if the subsequent dustings are confined to the bottom where particles are present and where damage caused affects the planter. The good effects of dusting will be lost if the operation is not repeated regularly.

Another insecticide in liquid form has also been found to be very effective. It is "nicotine" of vegetable origin. It is available from chemists as a 40 per cent solution. 5 c.c. of this concentrated solution has to be mixed with one gallon of water and $\frac{1}{2}$ oz. of soft soap added to the solution. This gives a 0.05 per cent solution for spraying. About 20 gallons of this spray will be needed for an acre for one round of spraying. This liquid insecticide should also be used once a month regularly as Gammexene. The spraying gives a more thorough treatment than Gammexene dust. But there is the difficulty of obtaining water for spraying. It is found that the difficulty is pronounced when water has to be carried through a long distance. In other places where water is readily and easily available, it is better to spray the plantation with 0.05 per cent nicotine sulphate. Most of the cardamom planters are now using Gammexene for controlling thrips.

Warfarin K 5-A New Rodenticide.—Warfarin, the latest find amongst the various rodenticides, was evolved in the U.S.A. and has practically replaced all other rat poisons. It is a chemical based on coumarin and is odourless and practically tasteless. Its greatest asset is that it does not cause bait-wariness and will continually be eaten as long as there are any rats in the locality where the baits are placed. It does not require the clab rate pre-baiting technique essential in the case of poisons like zinc phosphide and white arsenic, since rats do not exhibit any shyness to take warfarin baits from the very first day. Another important feature in its favour is that the dosage used against rats is so minute, that it does not cause harm to men, cattle, dogs or poultry who may accidentally feed upon it. As against these favourable factors, there

are certain disadvantages also. The material is about 50 per cent costlier than zinc phosphide but in view of the permanent riddance from rodents which warfarin is able to effect, it must be considered cheaper in the long run. Death from warfarin is not immediate as with zinc phosphide and usually takes place 4-7 days after injecting the poison. This may lead rats to think that warfarin is not effective but it is not so. Rats die even after taking a single dose of the poison. So far, it has not been possible to get sufficient quantities of warfarin for field scale operations. The material has now been made available in fairly large quantities in some districts under the trade name Warfarin K-5 a proprietary preparation of Murphy & Co., England. It contains 0.5 per cent of Warfarin and for actual use one part of it is to be further added to 19 parts of any bait like puffed rice, fried rice, etc. The material costs Rs. 7-5-0 as compared to Rs. 4-12-0 to Rs. 5 for zinc phosphide. It is hoped that with the introduction of warfarin K-5 a new chapter in the successful control of rats will open in most of our districts.

Spacing Sesbania Seedlings

In an experiment to find the tonnage of green manure produced under different spacings of planting Sesbania seedlings in paddy field bands and inside the fields, the following conclusions have been drawn: (1) Sesbania seedlings planted 2 inches apart give the maximum tonnage of green leaf. Sesbania seedlings planted 6 inches apart along field bund give the same yield as seedlings planted 2 feet away from field bunds.

Calf Management

A cow or a she-buffalo in an advanced state of pregnancy should be housed properly, with plenty of space and should be fed in plenty to give due nourishment to the foetus. At the time of calving the cow should be attended to in order to know whether there is any difficulty in calving, and if so, remedial measures should be taken. After calving, the nostrills of the calf are to be squeezed of the moisture and the mother allowed to lick the body thoroughly. Examine the natural orifice if they are alright. When the body of the calf is dry and

the calf gets up, allow the calf to suckle and if it cannot suckle, help it to suckle. Cut the umbilical cord with scissors and apply tincture iodine. For the first three days, give plenty of room to the cow and allow the calf with the mother to suckle the mother, whenever it feel like suckling.

For the first three months, calves need not be given any concentrate food like bran, cake, etc. Allow them to suckle only. Provide salt lick consisting mainly of the rock salt. The advantages of salt lick are that (1) it improves digestion and general condition of the calf; (2) it prevents wormy infestation; (3) it corrects deficiencies; (4) it helps to prevent the calves from licking dirt and walls.

Calves grow best on natural suckling alone and more so the buffalo calves. From the fourth month onwards, calves can be given concentrates such as bran, cakes, etc. Shark liver Oil can be added to provide Vitamin 'A' and fishmeal to give the animal protein. Protein is more required for the rapidly growing animal to give good growth; and so calves should be provided with more proteins in their food. At the age of six months, the calf gets the maximum suckling and it may be fed on linseed gruel also which is a laxative diet. After one year, the calf becomes an adult.

Crop Reports

(Continued from page 24)

36,900 tons estimated for the previous year and the average of 35,100 tons during the previous five years, representing a decrease of 2.4 per cent and an increase of 2.6 per cent respectively.

The wholesale price of Tur-dhall per Standard Maund of 82-2/7 lb or 32.0 tolas as reported from important market centres on May 9, 1953 was Rs. 24-1-0 in Visakhapatnam, Rs. 22-1-0 in Tirunelveli, Rs. 22-0-0 in Tiruchirappalli, 20-14-0 in Nandyal, Rs. 2-4-0 in Vellore and Rs. 2-1-0 in Salem. Compared with the prices published in the corresponding period of last year, i.e., those which prevailed on May 10, 1952, these prices reveal an increase of 11 per cent in Nandyal and 4 per cent in Vellore.

Labour Review

The Government of Madras have declared that all employment in the handling or transport within the limits of any minor port, of goods which have been discharged from, or have to be loaded into any vessel in the State of Madras, to be Public Utility Service for the purpose of the Industrial Disputes Act for a period of six months commencing from July 8, 1953.

The Union Government have declared the coal industry, so far as it is concerned with the production and supply of coal and coke, to be a Public Utility Service, for the purposes of the Industrial Disputes Act for a further period of six months commencing on the July 14, 1953.

Strikes and Lockouts

Consequent on a lightning strike on May 3, 1953 by about 1,400 workers the British India Tobacco Corporation, Limited, Guntur, the management declared the lockout on the same day apprehending breach of peace. On the advice of the Commissioner of Labour, Madras, the management lifted the

lockout on July 5, 1953, and allowed the workers to resume.

About 13 workers of the New India Ceramics, Ltd., Feroke, Malabar, struck work on June 2, 1953 demanding an increase in the piece-rate wages. They resumed work on June 3, 1953 as a result of negotiations conducted before Sub-Inspector of Police, Meenchanda.

About 4,000 workers of Madura Mills, Ltd., Tuticorin, staged a stay-in-strike on July 1, 1953, and resumed work the same day unconditionally.

About 279 workers of the Commonwealth Tile Factory, Codacal, struck work on July 15, 1953, demanding increased wages. They resumed work the same day voluntarily.

About 145 workers of Messrs. Madura Mills Co., Ltd., Tuticorin, staged a stay-in-strike on July 3, 1953, protesting against the action of the management for issuing show-cause-notice to one Roving Tentor who wilfully disobeyed the orders of his superiors. They resumed work the same day unconditionally.

Concession to Poor Ryots

The Government have directed that the concession of reduction, ordered previously, in the standard rates up to 20 per cent in the sale of agricultural materials to deserving and poor ryots residing in firkas selected for Rural Welfare Work, be extended to crowbars, mummuties, sickles, ploughshares for country plough and blades for guntaks. The concession will also apply to all types of manures including bone meal and compost. The 20 per cent concession will be treated as a subsidy by the Government.

The concession ordered formerly applied to the following agricultural materials and departmental services:—

Sales.—Mhote wheels, implements (puddler, tramplor ridger, bund-former, mould board and plough, etc.), insecticides and pesticides, seeds (of all kinds), seedlings and grafts;

Services.—Tractor ploughing, and levelling with bull-dozer.

The poor ryots may purchase the articles either from co-operative stores

or from local merchants, and claim the subsidy through the proper channel, provided the ryots to be benefited are approved by the District Rural Welfare Committee.

For the purpose of this concession, the following shall be deemed to be poor and deserving ryots:—

(i) **Owner Cultivator.**—Owning not exceeding one acre of wet land or one acre of garden, land or 5 acres of dry land or paying a total assessment of Rs. 10 per annum, irrespective of the fact whether the land cultivated is purely wet or dry or garden or combination of two or more.

(ii) **Tenant Cultivator.**—Paying a lease amount of Rs. 25 or less per annum, irrespective of the fact whether the land cultivated is purely wet or dry or garden or combination of two or more.

(iii) **Ryot cultivating both his own land and leased out lands.**—Owning not exceeding one acre of wet land or one acre of garden land or 5 acres of dry land, or paying a total assessment of

About 13 workers of Madura Dress Manufacturing Company, Madurai, struck work on July 11, 1953, protesting against their transfer to the Power-Driven Machines. They resumed work on July 16, 1953, on the mediation of the Labour Officer, Madurai.

Disputes Referred for Adjudication

The industrial disputes between the workers and the managements of the following concerns have been referred to the Industrial Tribunals for adjudication:—

Messrs. Hoe & Company, Madras; Coromandel Engineering Company, Limited, Madras; Photo Litho Press, Triplicane, Madras; Sri Krishna Bhavan Hotel, Coimbatore; Messrs. Brunton & Company, Engineers, Ltd., Fort Cochin; Messrs. Aspinwall & Co., Ltd. (Candle Island), Cochin; Rajamani Transport, Limited, Pudukottai; Gowri Tile Works, Manamadurai; Messrs. C. Gopal Nayagar & Son, Madras; India Automobiles, Madras; Messrs. The Essor Engineering Works, Madras and The Deccan Sugar & Abkhari Co., Ltd., Samalkot.

Rs. 10 per annum, irrespective of the fact whether the land cultivated is purely wet or dry or garden or combination of two or more.

Sugarcane Crop . . .

(Continued from page 25)

returns even from commercial aspects. This intensified development should be backed by intensified research and in this respect the financing of research in this State has been on a restricted scale. Liberalized schemes for expansion are needed even to bring it on par with other States. Such plans need not necessarily be a charge on the exchequer as this commercial crop can pay for its own research and development. Liberalized and enlightened co-operative venture between the partners of the industry is the first requisite step in the expansion and development. Then the existing gap between the average potential and the recorded State average yields can be bridged.

Rural Welfare: Review for July 1953

A brief note on the salient features of the activities of Rural Welfare Department in the areas selected for Rural Welfare, during July 1953.

Guntur District

Guruvareddipalem Centre.—Eighteen individual and 16 mass sanitation drives were conducted. The Rural Welfare Staff celebrated Tree Planting and Compost Weeks. They planted 3,230 trees, dug 70 compost pits, conducted five spinning demonstrations, renovated 14 Charkas and installed two Radio sets. Khadi worth Rs. 300 was sold.

Ammanabrole and Duddukur Firkas.—One hundred and thirty-six compost pits were dug, 42 compost pits were cleaned and 200 tons of manure was removed from the pits. Eighty Charkas were repaired. Fifteen spinning demonstrations were conducted. Three pounds of slivers were sold. 1,136 hanks of yarn were produced and 403 yards of cloth were woven by the self-spinners. Khadi worth Rs. 128-13-9 was sold; 24 individual sanitation drives and 3 mass drives were conducted. Three unhealthy pits and three wells were cleaned. Three Harijans Days were conducted.

Nellore District

Two hundred and thirteen compost pits were formed, 250 old ones were set right. Litter was spread in 168 cattle yards for preservation of cattle manure.

The breeding bulls rendered 18 services.

One new charka was introduced at Survepalli and 15 old ones repaired, 114 spinning demonstrations were given.



School boys with their teachers cooking food at a Rural Welfare Centre which they visited during vacation for rendering social service.

130 hanks of yarn were spun and 20 yards of khadi woven. Khadi worth Rs. 59-1-0 was sold by the Gramasevaks on instalment system.

Thirteen soak pits and 32 wells were cleaned, 89 small drains were formed and 30 cleaned and set right.

Three hundred and twenty-six books were distributed by the Central and Branch Libraries and 249 readers were benefited.

Bellary District

Two hundred and forty compost pits were dug. Khadi worth Rs. 335 was sold with the help of the Agricultural Staff, the gramasevaks planted 14,000 trees.

Nilgiri District

Ninety-nine compost pits were dug by the Gramasevaks, while 70 were dug by the Agricultural Fieldmen. 24 manure pits were dug in Kundah firka.

Seven hundred and fifty-three out-patients were treated, and 15 maternity cases were attended to. 370 hanks of yarn was spun.

Tanjore District

Two tanks were deepened with a Government grant of Rs. 895-9-0 and with a contribution of Rs. 1,100 by the villagers. Two road works were completed.

Sixty-eight compost pits were dug. Five miles of Bank road were planted with 1,000 Alam pothes. Babul seeds were planted in 1,000 pits. Apart from this 6,395 trees and 9,523 seeds were planted. Twenty-nine charkas were introduced.

Films on Japanese method of cultivation, planting of palmyrah trees, and kitchen gardening were exhibited and explained in six villages.

South Kanara District

Vanamahotsava and Compost Weeks were celebrated in all the four selected firkas and a large number of mango, coconut, jack and other useful plants were planted. Green manure seedlings were planted in about 80 acres of land. 246 compost pits and 8 latrines were constructed. 43 tons of manure were removed to the fields in the Nileshwar area. Seventeen charkas were distri-

buted and eight latrines were constructed. A new Elementary school was opened at Nellur Kamraje by the efforts of the Grama Sevak Sangham Khadi worth Rs. 250-7-9 was sold.

Cuddapah District

Vanamahotsava and Compost Week were celebrated by the Rural Welfare staff from July 1 to 7, 1953 in seven villages. 75 compost pits were dug and 35,000 seeds were sown and 5,008 seedlings were planted.

Short camps were held during this month at Kothapet, Peddasettipalli, Chowdur, Arkatavemula, Vaddirala, Dhodium and Torrivemula villages.

Nineteen spinning demonstrations were conducted and both the male and female members participated in the demonstration.

The Bhoodan Yagnam was carried on in Jangalapalli in Jammalamadugu taluk where three ryots offered 1.50 acres of land as free gifts for distribution to the poor landless tillers.

Seven prayer meetings and five Bhajana parties were conducted by the Gramasevaks at Vaddirala, Bhodium, Chinnakomerla, Torrivemula, Talamanchipatnam and Arkatavemula.

North Arcot District

610 compost and 58 manure pits were dug. 1,977 tons of compost was produced. 29 other type latrines were repaired. 8 insanitary pits were levelled up. 1,259 persons were benefited by the libraries. 20,369 trees planted.

Anantapur District

The villagers of Honnampalli village constructed a school building costing Rs. 3,700 towards which the Government grant was only Rs. 300. They also constructed a well costing Rs. 7,000 with a Government grant of Rs. 871 only.

Sixty compost pits were dug during the month and twenty thousand seedlings were planted during Vanamahotsava week.

East Godavari District

453 compost pits were dug, 53 pits were set right. Fourteen mass and 6 individual sanitation drives were

Kalambaram Multipurpose Society

The Kalambaram Multipurpose Co-operative Credit Society in Kumbakonam taluk, Tanjore district was registered on September 8, 1921. Kalambaram is six miles north of Kumbakonam on the Madras trunk road. The society is affiliated to the Kumbakonam Co-operative Supervising Union, Ltd., and the Co-operative Central Bank, Ltd., Kumbakonam. The area of operations of the Society comprises the villages of Kalambaram, Muzalai, Serukudi, Koilacheri, Natham and Kallur villages.

There are 122 members on rolls with a paid up share capital of Rs. 928. The total population in the area of operation of the society is 3,000 and the percentage of the population served by the society is 20.3.

Loans to an extent of Rs. 4,150 are outstanding against members under short and long terms. The dues to the Central Bank by the society under loans amount to Rs. 2,280. Besides this, the society has got two cash credit accommodation from the Central

Bank for Rs. 1,000 each for the issue of short term loans and for the purchase of manure to the members.

During the year 1951-52 the society purchased and distributed manure and sugar to the value of Rs. 9,038 and Rs. 412 respectively. The sales amounted to Rs. 9,843-8-0; a gross profit of Rs. 351-3-0 and a commission of Rs. 198 was earned.

The society has a medicine chest for rendering first aid to the villagers. During the year quinine was distributed to 95 persons and medicines to 11 persons mainly for treatment of fever and stomach-ache. Tincture of Iodine is also available with the society for the benefit of the villagers.

Hundi boxes have also been distributed to the members in order to encourage thrift habits among the villagers. With 5 boxes in January 1953, the number of boxes has increased to 53 in August 1953. The collections through Hundi boxes from January to August 1953 amounted to Rs. 173-7-0.

Rural Welfare . . .

(Continued from page 30)

One thousand seedlings were distributed to ryots for planting in their lands. Twenty lb. of need seeds, 40 lb. of pungam seeds and 5 lb. of konnai seeds were collected and nurseries in 5 villages were raised.

Vengalam and Valikondapuram firkas.—Khadi worth Rs. 243-1-9 was sold. Sixty-seven compost pits were dug. 109 tons of compost were produced. 8 charkas were introduced. Khadi worth Rs. 189 was sold.

Vellakoil centres.—Fifty-eight compost pits were dug and 17 old manure pits rectified, 174 tons of compost was produced. Six soak pits and two common trench latrines were constructed. 250 fruit seedlings, 2,450 tree stamps, and 930 Glyricidia Cuttings were planted.

Coimbatore District

Vanamahotsava celebration was organized in a fitting manner. Thirteen nurseries were raised. 5,000 Glyricidia seedlings, 1,000 trees of different species and 100 fruit trees were planted. The Rural Welfare Staff visited 301 hamlets and 12 Adult Education Centres.

New Concepts . . .

(Continued from page 14)

supply, and may increase the consumption of items nationally and personally desirable, like handloom cloth, soap, fertilisers, the main objection has been that it will be exchanged at a discount and may depreciate the value of the whole currency. It is true that, if the currency is kept for redemption, it will, like all other Government scrip, carry a discount, but if it is exchangeable in respect of many items of expenditure, it will be sufficiently in demand to narrow the discount margin.

There need be no fear that it will depreciate ordinary currency, because the effect of its selling at a discount is exactly the reverse, ordinary currency gaining a new value. No other objection than that the idea is new, remains but this ignores the use of similar currency ideas in other countries, for plans of reconstruction. If this currency had been available since it was first proposed, neither the 20 per cent inflation in prices or the unemployment we are witnessing may have occurred. By being earmarked,

Coral Islands in the Gulf of Manaar

A detailed survey of Coral Islands in the Gulf of Manaar between Tuticorin and Pamban, Madras, was undertaken by Sri A. K. Dey, Superintending Geologist and Sri V. Gopal, Assistant Geologist, Geological Survey of India.

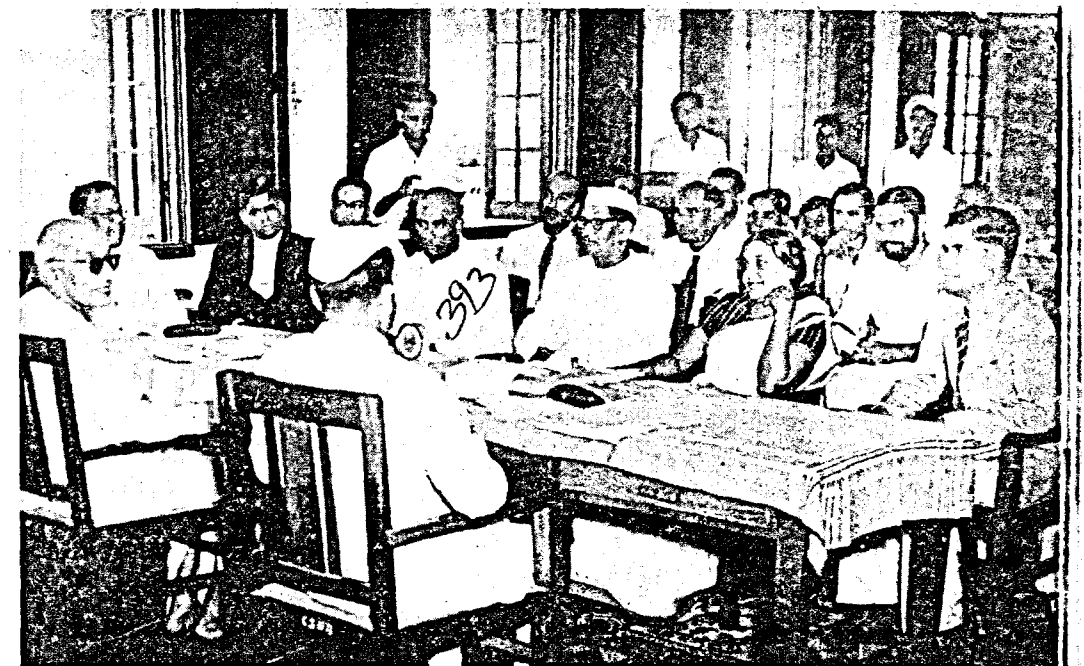
The purpose of the detailed survey was for investigating the nature of the Coral reefs and the possible utilisation of coral material as limestone in industry.

In their report to Government, the Geologists are of opinion that the coral reefs range in width from a few feet to 400 yards. The reefs are porous, soft and light materials containing over 96 per cent of Ca Co 3 and very little impurities. They can be used for small scale manufacture of bleaching powder, caustic soda and materials requiring high lime content. They can also be powdered and used as "whiting" in distempers and paints.

The estimated reserves of coral material in the Gulf of Manaar is about 2.25 million tons spread over a distance of 80 miles. As the lime in the reefs is deposited by living corals and other organisms, the reefs can grow again even if they are removed. If the corals are worked carefully and systematically at selected spots in the different islands, it is possible to obtain limited supplies of the material at the rate of about 200,000 tons per year for any length of time. The reserves are too little to support a cement factory. Limestone in the nature of a recently upraised coral reef occurs over an area of nine acres with probable reserves of 80,000 tons for a thickness of four feet on the basis of 20 c.ft. per ton. There are possibilities of finding further similar material in the shallow depressions and marshy low grounds in the northern lobe of Rameswaram Island.

this currency is by its nature, anti-inflationary, while, at the same time, it stimulates the production of desirable items. The purchasing power it represents may have obviated expenditure on famine which, paradoxically, was due not to food but employment deficiencies.

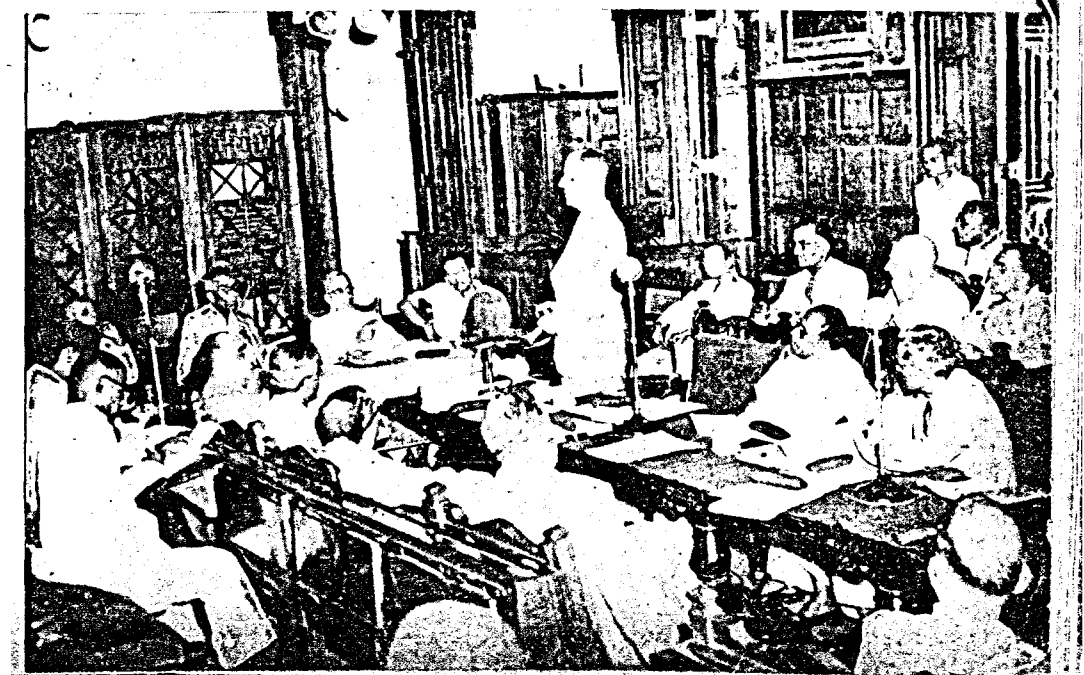
Chief Minister at the Conference of Project Executive Officers held at the Secretariat during September. Sri S. K. Dey, Community Project Administrator, Government of India, is on the right of the Chief Minister.



Dr. R. Nagan Gowda, Minister for Agriculture, presenting the first prize to the winner in the Sugarcane Crop Yield Competition.



The problems confronting the Plantations industry in the State were discussed at a Conference held at the Secretariat during September, with the Minister for Industries and Labour in the chair.



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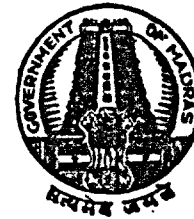
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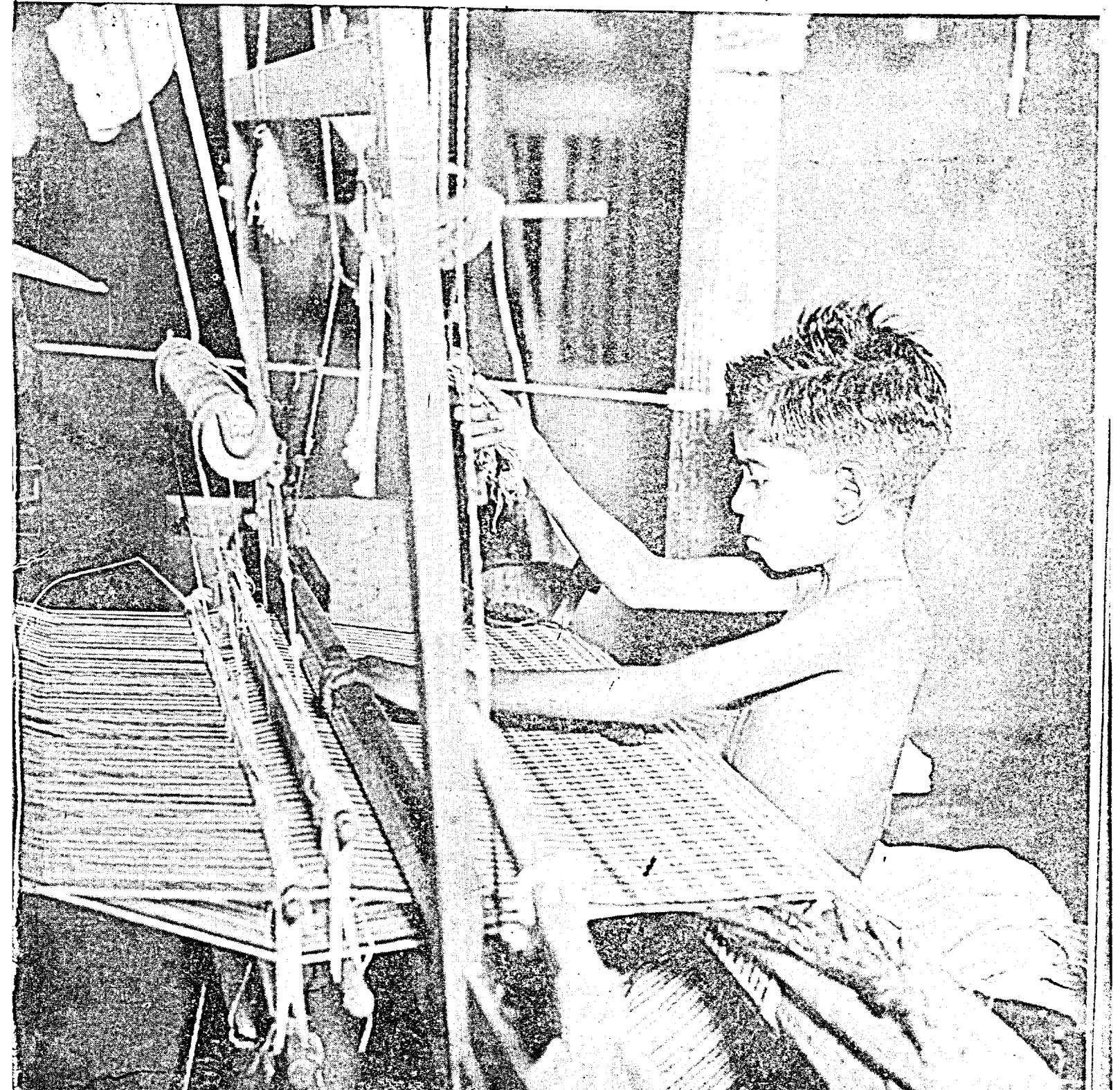
A-Division of the Department of Industries and Commerce, Madras



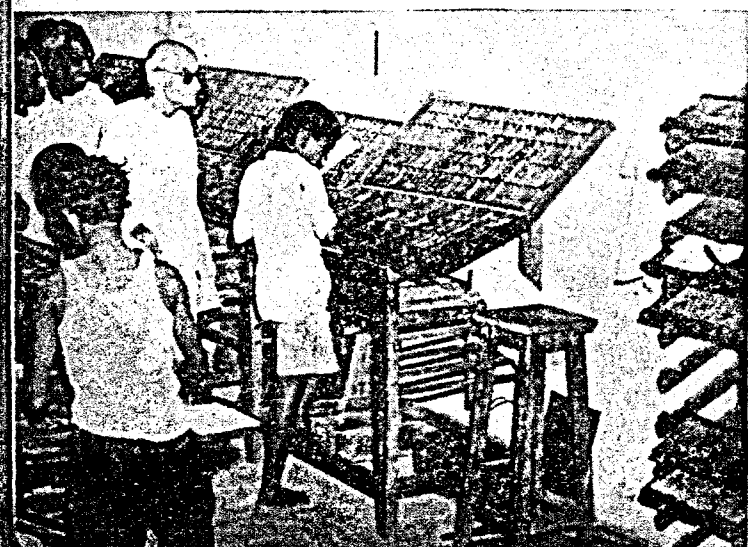
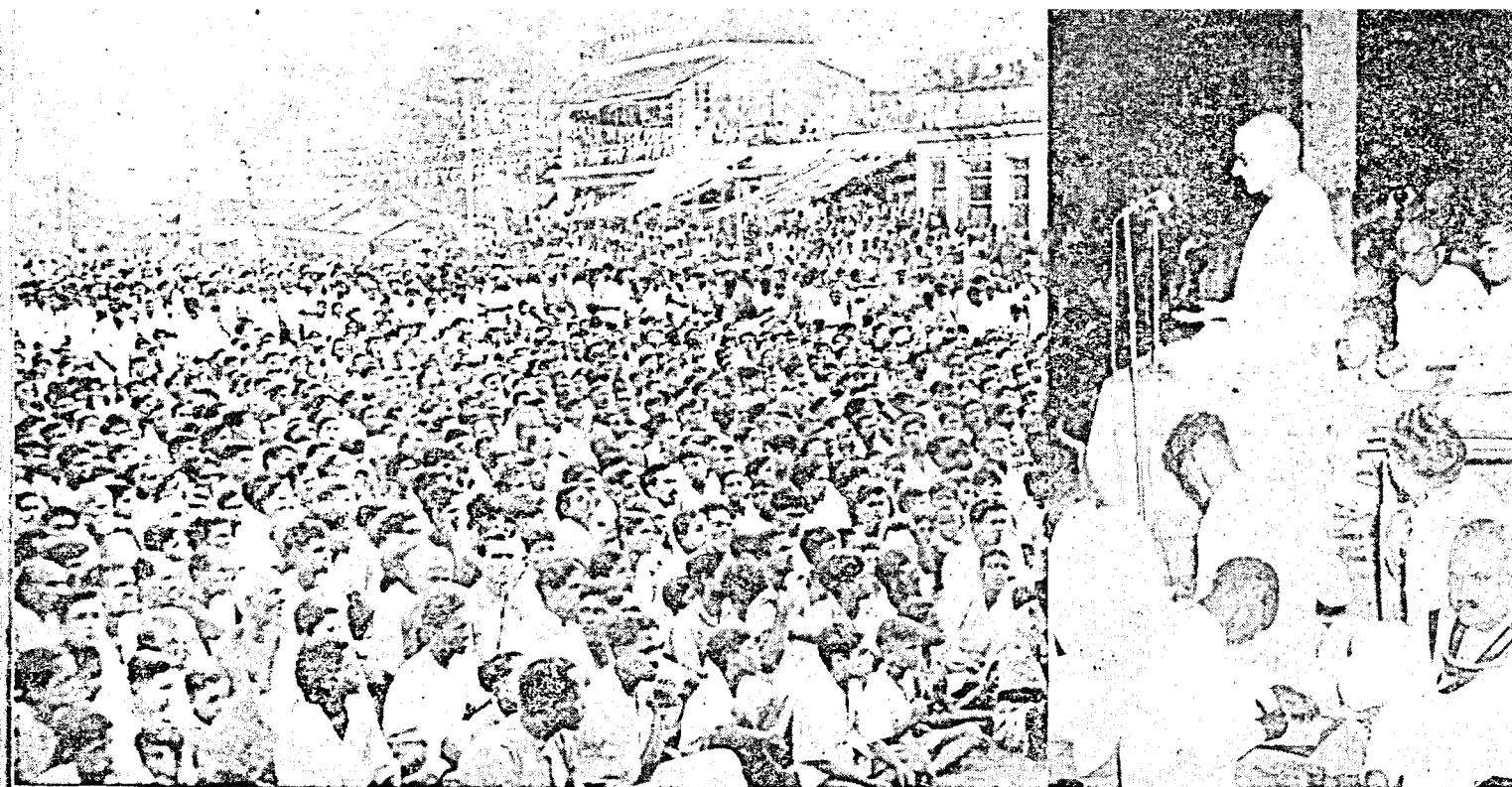
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CHIEF MINISTER AT KANCHEEPURAM

Sri C. Rajagopalachari, Chief Minister of Madras State, recently visited Kancheepuram. Here the Chief Minister is seen addressing a public meeting in front of the 16-pillar *mantapam* near the Sri Ekambareswar Temple at Kancheepuram (*top*).

At Kancheepuram the Chief Minister paid particular attention to two causes dear to his heart—the handloom industry and the new educational scheme. Pictures show Rajaji inspecting handloom saris and observing a class of boys learning the printing trade.

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November 1953

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COVER PAGE: To make children a vital component in the village community, to train the young ones to use their fingers instead of learning by rote, to teach them to love manual labour and respect craftsmen, and to integrate the school and the social environment—these are the prime aims of the Modified Scheme of Elementary Education. On the cover page is seen a pupil under the new system learning the fascinating art of handloom weaving.

New Addresses of Government Offices

The following Government offices which were in rented buildings till now have been shifted to Government buildings noted against them :

Name of Government Department.	Address of Government building to which shifted.
1. Chief Conservator of Forests and Forest Utilization Officer.	Board of Revenue, Chepauk.
2. Director of Industries	
3. Director of Controlled Commodities ..	
4. Special Officer, Artificial Insemination ..	Office of the Director of Animal Husbandry, Old Engineering College, Chepauk.
5. Registrar of Co-operative Societies (Resettlement); Deputy Registrar, Land Mortgage Bank; Deputy Registrar, Housing; and Special Deputy Registrar, now occupying the top floor of the Board office building.	Office of the Registrar of Co-operative Societies, Old Engineering College, Chepauk.
6. Joint Director of Agriculture	Office of the Director of Agriculture, Chepauk.
7. Designs Division, Highways	Office of the Chief Engineer (Highways), Chepauk.
8. Chief Inspector of Boilers	Office of the Chief Engineer (Buildings and Irrigation), Chepauk.
9. Electrical Engineer (General)	
10. Director of Fisheries and Assistant Director of Fisheries.	Building formerly occupied by Electrical Inspector and M.E.S. Stores, Chepauk.
11. Director of Fire Services and Stores ..	Office of the Inspector-General of Police, Beach Road, San Thome.
12. Police Radio Officer	
13. Inspector-General of Prisons	Office of the Superintendent, Government Railway Police, North Beach Road, Madras.
14. Director of Public Health	Office of the Director of Public Health, Teynampet.
15. Inspector and Inspectress of Anglo-Indian Schools.	Office of the Director of Public Instruction, Old College Road, Nungambakkam.
16. District Education Officer and Deputy Inspector of Schools (Eldams Road).	
17. Chief Inspector of Factories	
18. Examiner of Local Fund Accounts ..	Old High Court Buildings, First Line Beach, Madras.
19. Office of the Madras Public Service Commission.	New A.D.C.'s Block, Government House Estate, Mount Road, Madras.
20. Sales Tax Appellate Tribunal	Old A.D.C.'s Block, Government House Estate, Mount Road, Madras.
21. Electrical Inspector and M.E.S. Stores ..	Office of the Chief Engineer (Electricity), No. 157, Mount Road, Madras.

All communications intended for the above Government offices at Madras should, in future, be addressed to the address noted against them.

The National Extension Scheme

By SRI C. RAJAGOPALACHARI, Chief Minister of Madras

It was on this same good day* last year that I spoke when starting the work of Community Projects in the Madras State. Today I am speaking to you again on the same subject, though what we are now starting is called by a different name, National Extension Service. This also means improvement of villages. Work similar to what has been done in the Community Projects will now be done in an area in each one of the districts without exception.

Sometimes there is understanding without hard work and sometimes people work hard without knowing why. During the coming year officials and non-officials and particularly the men and women in the villages must learn to combine understanding and hard work. We must know what is necessary to improve life in the villages and to make people happy where they live. We must have more and better food and therefore we put great emphasis on improved agriculture.

As soon as we think of improved agriculture, we need not imagine the coming of heavy machinery or dumping of chemical manure on the soil. We may use these in a wise way, but we must convert all farm and household waste to manure, take more care of our cows and bullocks and when we work in fields and farms we must work harder than ever before, knowing that without adequate and nourishing food for the people every other programme will fail. We must take advantage of favourable conditions created to see that every child goes to school.

Village Industries

Improvement and organization of cottage and village industries are of much importance. One of the top men of a big American tyre company was talking to me the other day and told me that the bullock-cart was an admirable contraption excellently suited for its work. Of course I agreed with him and I asked him to design a cushion rubber tyre in segments which could be screwed on to our cart-wheel with

bolt and nut into the fellys, so that wheels of all sizes could be tackled and the work of the bullocks made more easy. When this gentleman and I admired the bullock-cart, we of course included the bullock in our admiration.

What a wonderful motor the bullock is—how little fuel it requires and how easy to raise that fuel in the countryside, viz., the cholam and maize and paddy stalks that we get in our efforts to raise our own food. It is not only the bullock-cart, but the village potter's wheel, the bellows and furnace of the village smith and the village tinker, the oil chekku and the buffaloes pressing the oil out in those chekkus, the village piccota in which the bullocks lift the water, the weaver's loom so simple to look at but producing such wonderful cloth—these and other things are all our village industries, not to be despised but to be carefully rebuilt into our present-day progressive life.

This can only be done by restoring the balance of work and mutual help in the village. This restoration of balance is what is called a Community

Project or a National Extension Service. We cannot serve the nation and we cannot have a project for the whole community, unless we pay a worshipful attention to these village artisans and their wonderful tools.

Closest Co-operation

We must spread in the villages, habits of cleanliness. People must come forward to share with Government the responsibility for achieving what is needed. The call is one for closest co-operation between the Government and the people. More than external works, we must pledge ourselves to cleanse our hearts. The starting point of prosperity is a clean mind and not minding fingers getting dirty. We must look upon everybody in the country as brothers and sisters. The good of one group is the good of every other group and any harm done to any group is harm done to the whole people.

Every kind of useful work anywhere is good honourable service to the country. All of us cannot do the same

(Continued on page 4)



WEAVERS' CO-OP. DEPOT: The Chief Minister recently declared open the Sales Depot of the Pillayarpalayam Kumaran Handloom Weavers' Co-operative Society at Kancheepuram.

* October 2

Strange Moral

A case came up recently before the Salem Sessions in which the story went that Munia Goundan, a habitual drunkard and gambler, who initiated his 18-year-old son, Palaniappan, to drink, was murdered by the latter, under the influence of drink, in Nadanthaikilage, Namakkal Taluk.

Evidence given in the case disclosed that the son, in an intoxicated state, began to lecture to his father on the evils of drink, and exhorted him to give up drink and gambling. The irate father beat his

son, who retaliated by hitting him fatally on the head with an axe. The Sessions Judge convicted the accused of culpable homicide, but in view of the accused being an adolescent, ordered him to be detained in the Borstal School, Palayamcottai, for a period of three years.

The above is from a daily newspaper in its issue of 7th October 1953.

The paper then proceeds to draw the strange moral that Prohibition should be scrapped!

... And the Bitter Truth

A few weeks back the following letter was received by the Chief Minister from a lady whose name and address are being withheld:

"I heard your advice to the Custodian Force bound for Korea, over the radio, with special interest, because my husband happens to be amongst those who are going. I thought it was the best of the messages given to them before their departure—it had a personal human touch.

"But, if you would permit me to say so, the message would have been still more fitting if you had included the subject of drink also in it. I wonder why you did not advise them to be moderate at least, in drinks, if not completely abstemious. Do you think they need alcohol to keep their spirits up even when they are going on a peaceful mission?

"Drink has been and is the greatest evil of all times. It has been responsible for the breaking up of more homes than any other single factor. Drink has ruined the life and happiness of thousands of women all over the world, whose husbands are addicted to it. It is responsible for more crimes and accidents in modern times than we think. It is a disease deep-rooted, especially in the army.

In the Army

"Why cannot Prohibition be enforced in the army also? I have

often wished it would be. When armies go overseas where drinks are available at very cheap rates and there is no one (especially a wife) to prohibit them from indulging in drinks, they are naturally tempted to consume more than is good for them.

"It is not only dangerous to health, but also to life itself, because after a heavy bout of drinking, man lacks in co-ordination and is incapable of clear thinking or any action that needs co-ordination, as for instance driving. And army officers invariably drive home themselves after booze parties. You can very well imagine the great danger of handling a vehicle in that fuzzy state of mind and on a dark night. It is just then they think they are the ablest of drivers and try to excel their skill in speeding.

Consequences of Drinking

"Besides this risk, there is another which is equally great, if not greater. You, Sir, have told our men not to look at women, but without advising them to abstain from drinks also. What is the use? It is the drink that makes them want women and it is next to impossible for them to keep away from women after drinking. The manifold dangers of going to women can well be imagined and I have no doubt that there are plenty such women too out in Korea. Not all men have such will power, honesty towards their wives and integrity as not to

yield to temptation; neither are all of them God-fearing.

"All this naturally leads to a criminal squandering of money—money which could be better saved for better purposes or spent on other matters which have a better claim.

"Sir, no doubt you know all this but still I couldn't help expressing myself after hearing your speech; and I hope you will forgive me my audacity in writing to you direct."

Depth of Feeling

This was followed by the next letter:

"I feel greatly honoured by your having condescended to reply to me—I least expected it. I thought you would get angry with me for having dared to say your message was incomplete.

"Sir, you have rightly guessed the depth of the feeling behind that letter and can imagine with what a heavy heart I have seen my husband off.

"I know scores of other wives who feel the same way I do about this drink business.

"Certainly, Sir, you may make use of my letter without disclosing my name.

"I do pray that with your kind help and influence this evil of drink may be eradicated from India and especially from the army."

National Extension Scheme

(Continued from page 3)

work. We must therefore do whatever we do the best of our ability. This was the teaching of the Father of the Nation. He showed and proved it in his own life.

We have now a great opportunity. Besides four Community Projects with four new blocks added to them in Madras State, there will also be two blocks in each district into which will come the National Extension Service. About four thousand villages will be covered this year. Let us all combine to take advantage of the new Scheme. All those who will be engaged in this work must look upon themselves as the salt of the earth.

(A.I.R., Madras)

Progress of the National Five-Year Plan

The Five-Year Plan initiated officially on April 1, 1951, has now entered the third year of its implementation. During the last two years, it has had a number of positive achievements to its credit, e.g., an improvement in the food situation, greater industrial production and beginning of a number of projects the effect of which will be to increase the supply of consumer goods and also to equip the country for greater and more varied production in the future.

The Plan involves an expenditure of Rs. 2,069 crores. During the first two years of its operation an amount of Rs. 584 crores has been spent, of which Rs. 262 crores were spent in 1951-52 and Rs. 322 crores in 1952-53. The expenditure programme during the current year is larger, about Rs. 413 crores.

Inflation

A National Plan must be influenced by various factors during the process of its operation. The Indian Plan has been no exception in this regard. In fact, it has already passed through two distinct phases. When the Plan was formulated inflationary trends were predominant in India, as it was throughout the world. But soon after, disinflationary forces started to operate. In India, there was a considerable fall in prices from February 1952 onwards, the impact of which was felt on public revenues as well as on investment and employment in the private sector. Although in recent months there has been a rising trend in prices, the problem is more of correcting the appearance of "slack" in certain sectors in the economy rather than of countering inflation.

While the Plan has, on the whole, progressed satisfactorily, the progress of expenditure in certain spheres has lagged behind targets and need has been felt for making suitable adjustments in these sectors and also for strengthening the Plan at certain points.

Employment Prospects

One aspect of the Plan which is at present receiving serious attention of the Government of India is its employment aspect. Data on the total volume of unemployment in the country are not adequate, but it appears that

the problem, on the whole, is one of insufficient expansion of employment opportunities rather than a fall in total employment. Nonetheless, there is evidence that a considerable fall in employment, particularly in white-collar jobs and for semi-skilled and unskilled personnel in the urban areas,

"Partners in India Ltd."

"I have said it often and I repeat it here, that in the implementation of the Five-Year Plan, our approach must be to produce a sensation of partnership with the man in the village," observed Sri Jawaharlal Nehru, Prime Minister, addressing the National Development Council meeting at New Delhi recently. "The Five-Year Plan of India is a peoples' plan, and in its implementation a feeling should be generated among the people so that each man, woman and child in India became as it were, a 'Partner in India Ltd.' jointly engaged in the great task of building a new India."

The Prime Minister added that the public response that had been generated in the First Five-Year Plan, particularly in some of its aspects, for example, Community Projects and local works, was "very pleasing and rather surprising." He hoped that this aspect would be constantly kept in view in the implementation of the Plan, as democracy could not function governmentally alone.

has occurred. It is, therefore, necessary to make adjustments in the Plan so as to halt and reverse this unfavourable trend. Decisions on this point are expected shortly.

An all-point programme for relief of urban unemployment which includes promotion of cottage industries, educational expansion, development of power and small industries, transport services, etc., is at present under active consideration of the Government of India and the State Governments.

National Extension Service

The Union Government have also launched a comprehensive National Extension Service which, ultimately, would absorb over 80,000 skilled personnel and nearly three lakhs of unskilled people. The opening of work and training camps which would provide practical training along with some pocket allowance to educated young men with a view to enabling them to secure productive employment are also being considered. Further, expansion of activities in the rural sector so greatly emphasised in the Five-Year Plan is also expected to react favourably on the employment situation in the country.

Long-term solutions are also being considered. Among these may be mentioned educational reforms, with a view to providing a more vocational bias to secondary education so that the students coming out of schools and universities do not swell the ranks of the white-collar unemployed.

Socio-Economic Reforms

On the socio-economic aspects of the Plan, a number of measures have been initiated by the Union Government which will have far-reaching consequences not only on the economy of the country but also towards the establishment of a Welfare State which the Constitution of India has laid down as the Objective. In this category come the various schemes of land reforms already taken up by the Government including abolition of intermediaries, conferment of proprietary rights to the tenants, etc., enactment of the Estate Duty Bill by the Indian Parliament, launching of comprehensive schemes of rural development like Community Projects, etc. While the full effect of all these measures will necessarily take time to be felt, the foundations have been laid whereby the common man will have greater opportunities for creative endeavour and self-expression.

India's Five-Year Plan aims at basic development in all sectors of economy and in the social services. In view of the urgent need for increasing the availability of food in the country, the Plan very rightly places the greatest emphasis on Agriculture



PALGHAT MEETING: Prime Minister Sri Jawaharlal Nehru addresses a mammoth meeting at Palghat, during his recent tour of the South.

and Community Development which together with Irrigation and Power projects account for nearly 44.6 per cent of the total outlay. The rest of the expenditure is on Transport and Communications (24 per cent), Industries (8.4 per cent), Rehabilitation (4.1 per cent), Social Services (16.4 per cent) and Miscellaneous (2.5 per cent).

Food Production

During the last two years there has been progress in the implementation of the Plan practically in all sectors. In 1951-52 an additional area of 2.05 million acres benefited through minor irrigation works. The Central Tractor Organisation reclaimed 0.25 million acres during 1951-52 and 0.16 million acres in 1952-53. The State Tractor Organizations also reclaimed some cultivable waste land. Further, the food situation has improved and substantial increase has been recorded in the production of cereals.

The Community Development Programme launched in October 1952 has advanced and, in addition, a new and a more comprehensive programme, namely, the National Extension Service was inaugurated from October 2 this year. So far, nearly 30,000 villages have been covered under the Community Development Programme. The programme for the remaining three years is to cover another 90,000 villages either through the Intensive Development Programme visualised in the Community Projects or through the Extension Service, so that by the end of the Plan period nearly 1/4 of the total rural population of India would be covered.

Water and Electricity

A large number of irrigation and power projects of which many are of a multipurpose nature have been started in India. The total expenditure on

these projects during the first two years of the Plan amounted to Rs. 190 crores. These projects have so far benefited 1.42 million acres of land. In the sphere of power generation, the two-year target has been exceeded. The additional power generated was 315,000 kws. as against a target of 239,000 kws.

In Madras State in the Tungabhadra Project, the work on the dam on both the Madras and Hyderabad sides is nearly complete and construction of canals on the right side has made considerable progress.

The Lower Bhavani Project is nearing completion and about 60,000 acres are expected to benefit from the irrigation facilities that will be provided in the near future.

Industry—Public Sector

Industrial development in the Public Sector includes the Sindri Fertiliser Factory, the Chittaranjan Locomotive Factory, the Indian Telephone Industries, the Indian Rare Earths, Ltd., the U. P. Government Precision Instruments Factory, all of which have gone into production. Another industrial project in the Public Sector, the Mysore Iron and Steel Works is expected to be completed soon. The table below gives the contribution to industrial production made by the above enterprises:

	1951-52	1952-53
1. Indian Telephone Industries—		
Telephone (Nos.)	21,628	27,000
Exchange Lines (Nos.)	21,000	11,000
2. Sindri Fertiliser Factory—		
Ammonium sulphate (tons)	34,799	230,000
3. Chittaranjan Locomotive Factory—		
Locomotives (Nos.)	17	36
4. U. P. Precision Instruments Factory—		
Water meters (Nos.)	..	2,100

As regards other projects in the public sector, the Hindustan Shipyard Ltd., completed during 1952, the construction of three ships. Two more ships are at present on hand. The construction of a third berth at Visakhapatnam Yard has also been completed, thus increasing the capacity of the Yard. The Pencillin and D. D. T. Factories are expected to be completed during 1954.

A definite advance has been made on the proposed Integrated Steel Plant, and an agreement has been entered into with a German firm and it is expected that the Plant would go into production in about four years.

Among the State enterprises the Bihar Superphosphate Factory, the Sir Silk Project in Hyderabad, the Nepa Newsprint Project, the U. P. Government Cement Factory and the Government Machine-tool Factory, Jalahalli, are expected to go into production during the current year.

The Chittaranjan Locomotive Works produced during the first two years of the Plan 53 new locomotives. The Factory also produced a large number of coaches. In the case of wagons, against a target of 30,000 to be produced within the country during 1951-56, actual production during the period April 1951 to December 1952 has been 8,000. During 1953-54 it is expected



HANDLOOM GOODS: Specimens of handloom products are displayed to the Chief Minister at the Kumaran Depot, Kancheepuram. The 250 members produce on an average 20,000 yards per month valued at Rs. 25,000.

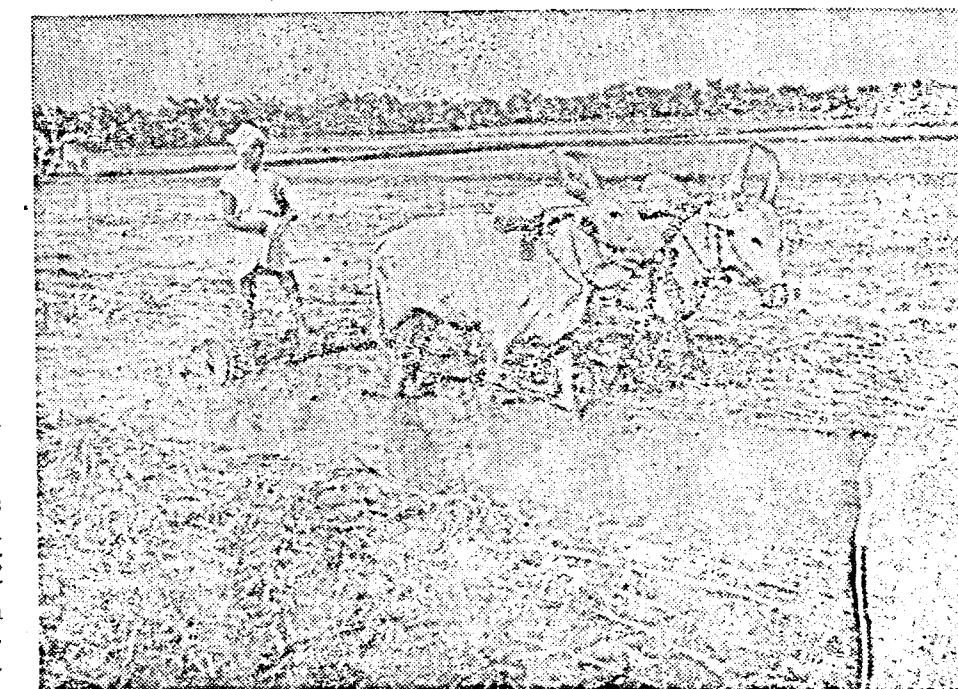
that the internal production of wagons will go up to 7,000.

Expansion plans for cement, aluminium etc., have also progressed.

Industry—Private Sector

For the Private Sector, a detailed programme of expansion of 42 industries including iron and steel, cement, aluminium, fertilisers, heavy chemicals and power alcohol and establishment of a few new ones including large-scale petroleum refineries, certain drugs and pharmaceuticals, etc., was drawn up in the Five-Year Plan. The expansion programme of the iron and steel industry, of the two main private producers, namely, the Tata Iron and Steel Co. Ltd., and the Indian Iron and Steel Company Ltd., has proceeded apace. The latter company has also been assisted by the Government in obtaining a loan from the World Bank amounting to £ 31.5 million, while both the companies are being assisted by the Government in regard to finance as well as other requirements to enable them to carry out their expansion programme.

In respect of oil refineries, two units with a total capacity of 3.2 million tons of crude petroleum are being erected at Trombay (near Bombay) by the Burma Shell and Standard-Vacuum Oil Groups. A third refinery is scheduled to commence in 1955 at Visakhapatnam with an annual capacity of 0.5



production of cotton cloth at 4,700 million yards reached the target for the fifth year of the Plan. Other consumer goods industries which recorded substantial improvement in production include paper and paper board, electrical lamps, artificial silk yarn, sewing machines, sugar and matches. A number of producer goods industries have also recorded improvement. Cement output rose from 2.6 million tons in 1950 to 3.2 and 3.5 tons in 1951 and 1952 respectively. Coal and steel have also recorded progress, coal having risen from 32 million tons in 1950 to 36.2 million tons in 1952 while steel from 1,004,000 tons in 1950 to 1,103,000 tons in 1952.

Punished for Corrupt Practices

During the month of July 1953, an Inspector and a Sub-Inspector of Police were compulsorily retired from service, an Overseer of the Public Works Department was removed from service and two Police Constables were dismissed. Four other Government servants were awarded less severe punishments.

A Revenue Inspector was dismissed from service in June 1953. The case of this official was not included in the list already published for that month.

How to Register Documents

By SRI K. VENKATASWAMI NAIDU, Minister for Religious Endowments and Registration

You would like to know something about documents and their registration. It is very important that documents affecting title to properties should be registered. People investing money on properties naturally desire to secure recorded evidence of their title to properties, and registration of deeds of title is intended to give wide publicity to their title.

In olden days documents evidencing title to properties were either drawn up on cadjan leaves or inscribed on copper plates. During the time of the East India Company instruments were first drawn up on paper and registered with the Judicial and Revenue authorities. On the strength of these instruments certificates of titles to properties were granted by the District Collectors. Later on when the administration passed into the hands of the British, attempts were made to codify the law relating to the registration of documents. The first Act to provide for the registration of documents was passed in the year 1908 which is in force to this date with certain amendments. It is an all-India Act.

Classes of Documents

Documents may be classified broadly into two, viz., testamentary and non-testamentary. The test whether a document is testamentary or non-testamentary is whether it is intended to be operative immediately it is final and is irrevocable. If it has that operation, it is a non-testamentary document. A testamentary document on the other hand is one that takes effect only after the death of the testator. Wills fall under this category. Again documents falling under the category of non-testamentary are of two classes viz., those that are compulsorily registerable under Section 17 of the Indian Registration Act such as gifts of immovable property, documents creating a right title or interest in immovable properties of the value of Rs. 100 and above, leases of immovable properties from year to year or for any term exceeding one year, etc., and those that are optionally registerable under Section 18 of the Indian Registration Act. Bonds, pronotes and documents pertaining to movable properties fall under the latter class.

What is the effect of registration of documents? There are some documents which are compulsorily registerable, which if not registered will not be admissible in evidence. Such a document cannot affect any immovable property which it purports or operates to affect. But there are some other documents for which registration is optional. A registered document shall take effect against unregistered documents and oral contracts. Moreover, it shall operate from the time from which it has been stipulated to operate.

Drawing up of Documents

Except wills and agricultural leases for periods not exceeding one year or whose annual rent does not exceed Rs. 100, all other documents require to be stamped under the Indian Stamp Act. The stamp duty on documents depends upon the nature and value of the documents. Generally documents are drawn upon non-judicial stamp paper. As documents are records of title they should be drawn up without any ambiguity. The following particulars should necessarily find place in documents:—

- (i) Date of execution.
- (ii) Names and addresses of the executants and claimants of the documents.
- (iii) Nature of the transaction.
- (iv) Value of property or consideration.
- (v) Description of property.

Before a document is admitted to registration a Sub-Registrar has to satisfy himself that all the above particulars are correctly mentioned. He has also to ensure that documents besides being duly stamped according to their nature and value should also be properly executed and attested by witnesses.

Except a will which may be presented for registration at any time, all other documents should be presented for registration to the Sub-Registrar having jurisdiction within four months from the date of execution. When, however, due to urgent necessity or unavoidable accident a document

cannot be presented before the aforesaid period, the District Registrar has power to condone the delay in presentation, on payment of the prescribed fine, provided the delay in presentation does not exceed four months.

Immovable Property

Documents affecting immovable property can be accepted for registration only by the Sub-Registrar within whose district the whole or some portion of the property to which such documents relate is situate. Every other document may be accepted by any Sub-Registrar in whose sub-district the document was executed or in the office of any other Sub-Registrar at which all the persons executing and claiming under the document desire the document to be registered. Every District Registrar is however empowered to accept for registration any document relating to property situate in any part of his district.

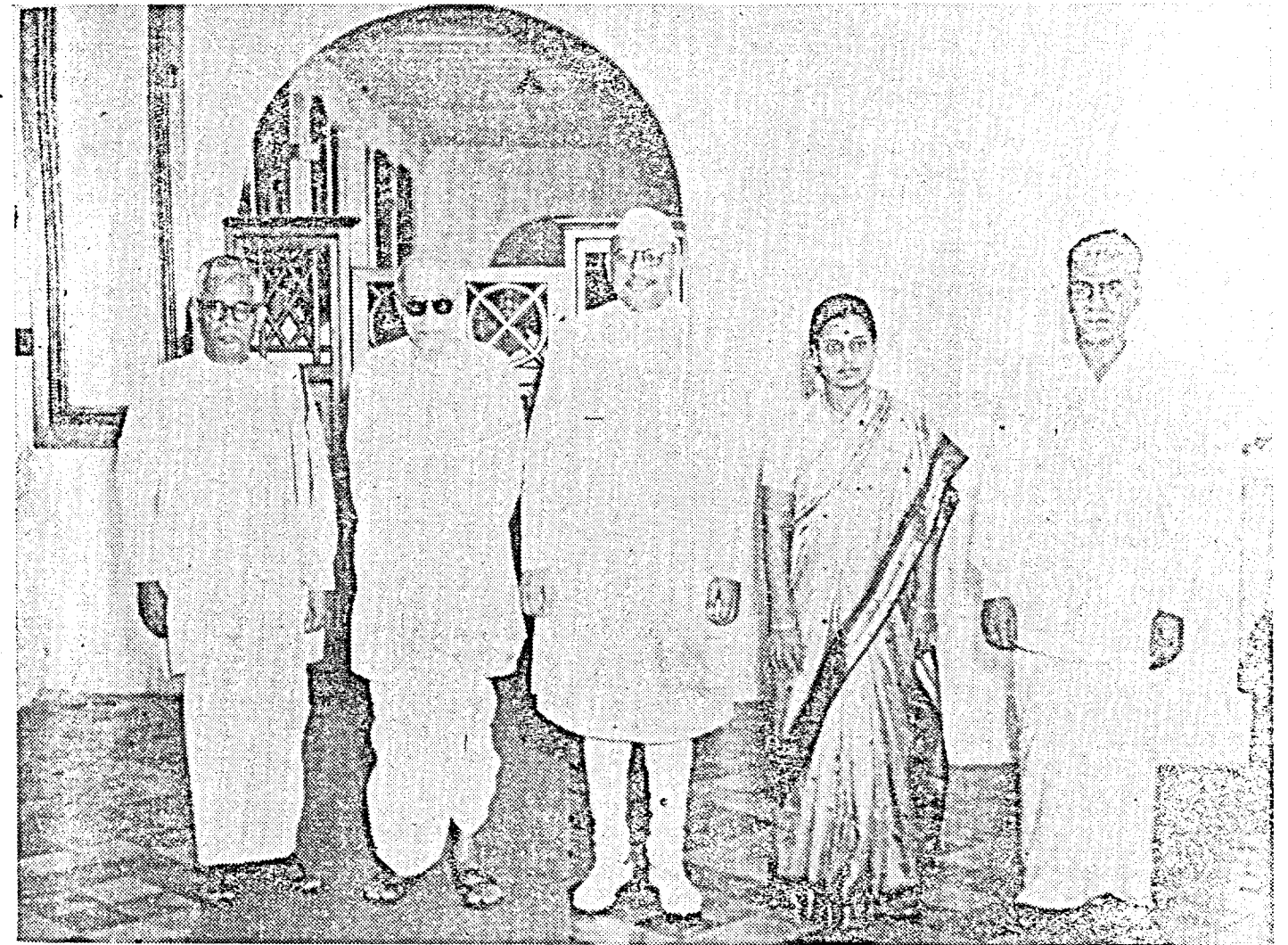
The District Registrar of Madras and the Registrars of Presidency towns in India are empowered to accept documents affecting properties in any part of India.

Every document should be presented for registration by some person executing or claiming under the document or by the representatives or assigns of such person or by the agent of such person duly authorised in that behalf.

Attendance

The Act provides that persons who by reason of bodily infirmity are unable to attend registration offices and person confined in prison shall not be required to attend any registration office in person and that in respect of such person the registering officer may on payment of the necessary attendance fee attend at their residence and at the Jail.

The executants of a document are required to appear before the registering officers concerned within the period allowed for presentation of documents and admit their execution. As in the case of presentation of documents, beyond the period prescribed for presentation, the Act provides also for the appearance of parties beyond the



NEW MINISTERS: The Governor of Madras swore in Sri M. Bhaktavatsalam, Sri K. Raja Ram and Srimathi Jothi Vencatachellum as members of his Council of Ministers on October 9, 1953, at the Secretariat. The new Ministers are seen here with the Chief Minister and the Governor.

period fixed for their appearance, if owing to urgent necessity or unavoidable accident they cannot so appear.

Examination of Parties

If all the parties executing a document appear before the registering officer and admit their signatures to the document, the registering officer shall examine them as to their identity and admit their documents to registration. With a view to safeguard against false personation in the registration of documents, the Department has taken the necessary precautions by insisting on the identification of the parties by at least two witnesses and by obtaining the thumb impressions of the parties in separate registers maintained for the

purpose. Provision is made in the Act for the registration of documents after the death of the executants.

Registration Procedure

On every document presented for registration the registering officer shall make an endorsement of presentation in which the date, hour and place of presentation and fees paid shall be entered and the signature of the presentant obtained thereto. If the executant of the document is present in the office, then his signature shall also be obtained in token of his admission of execution. The signature of the persons identifying the executant shall be obtained beneath the signature of the executant and the

registering officer shall close the above endorsement with his dated signature.

The document shall then be transcribed in register books kept under the Act and the entries so copied shall be compared by the office staff. The registering officer shall thereupon add on the document a certificate of registration which shall also be copied in the register books. Separate sets of registers are maintained in each registration office for transcribing documents. All non-testamentary documents affecting immovable properties are copied in the Register Call Book I, while wills and authorities to adopt are copied in Book III. Documents affecting movable properties etc., are transcribed in Book IV.

After the endorsements and certificates made on the document are copied in their respective register books, the seal of the Sub-Registrar bearing the inscription of the name of the office is affixed to the document. The document is then kept in the custody of the Sub-Registrar until it is returned to the party.

Encumbrance Certificates

All documents registered under the Act are indexed in their respective indexes. These indexes help the Department to grant encumbrance certificates on specified properties on collection of the prescribed fees. Applications for encumbrance certificates are steadily on the increase as they are frequently required in civil suits. Revenue authorities and co-operative societies also insist on these certificates before loans are granted by them on properties.

Entries in register books and indexes relating to documents affecting immovable properties are open for inspection by the public on payment of the required fees. Copies of the aforesaid entries are also granted to the public on payment of the necessary fees therefor.

Records

The records of the Registration Department are invaluable as they are true copies of title deeds to properties. Only the certified copies granted by registering officers are accepted as evidence in Courts of Law. As such the Department takes special precautions in preserving these records against deterioration by insects, etc. Every registering office has a separate record room in which either iron record racks or almirahs are provided for accommodating the records. Apart from the records being examined periodically by the Sub-Registrars, naphthalene balls and other insecticides are placed in the record receptacles to prevent any damage to records.

Documents relating to co-operative societies and land mortgage banks are exempt from stamp duty. These instruments are also granted concessions to registration fees.

Revenue

This Department earns approximately Rs. 105 lakhs per annum, besides collecting surcharge duty on instruments of sale, gift, mortgage

with possession, exchange and perpetual lease to the tune of Rs. 210 lakhs per annum which amount is distributed to the local bodies, viz., District Boards, Municipalities and Panchayat Boards.

In the early age of the Registration Department, Judicial officers were appointed as ex-officio registering officers. Gradually, these officers were replaced by Revenue officials but as the activities of the Department increased, it was found necessary to replace ex-officio staff by a special set of officers exclusively trained in the work of the Department. At present all the officers of the Registration Department are persons who have been trained in the work of the Department.

The Registration Department

The Registration Department has as its head an officer called the Inspector-General of Registration. The entire State is divided into several Registration districts. As against 26 Revenue districts in the State there are 30 Registration districts. While most of the Registration districts are coterminous with the Revenue districts, some heavy Revenue districts are divided into two or more Registration

districts. For example, the Revenue district of Malabar is divided into three Registration districts of Palghat, Kozhikode and Tellicherry.

Each Registration district is placed under the charge of District Registrar. The Registration districts in turn are divided into Registration sub-districts and each Sub-Registrar's office is in the charge of a Sub-Registrar. There are at present 596 Sub-Registry offices and 641 Sub-Registrars in the State. Most of the sub-offices are within the easy reach of the inhabitants of the village attached to them.

In addition to the regular Sub-Registrar's offices, the Department has also initiated the itinerating system of registration in five centres. Under this system the Sub-Registrar of the local area proceeds at fixed intervals of a week or more to the village in which this system of registration is introduced and attends to the needs of the registering public. Proposals for opening new Sub-Registry offices and for creating itinerating centres of registration are examined by the Department with reference to the needs of the people, and sanctioned by the Government.

(A.I.R., Madras)



SOUVENIR ALBUM: An album of photographs of his recent Southern tour was presented to the Prime Minister by the Information and Publicity Department.

Welfare in Industry

By Dr. U. KRISHNA RAU, Minister for Industries and Labour

India today is on the road to becoming an industrial country. The problem of industrial welfare, therefore, is assuming greater and greater importance in our country, since it is now agreed that progressive conditions of life of the labourer will result in better productivity and greater industrial harmony.

Broadly speaking, therefore, welfare work in industry consists of efforts to make the life of the worker worth living. A strong well-trained and contented labour force is absolutely necessary for the unhampered and stable industrial progress of any nation. We must make every attempt possible to combat the sense of frustration that may come in an industrial worker, to relieve him of personal and family worries, to improve his health and to afford him the means of collective bargaining and self-expression.

State, Employer and Union

This can be done firstly by the State taking up welfare work through legislation in the educational, industrial and social fields, secondly by the enlightened employer with wisdom to provide decent wages, good living conditions, wholesome food and recreational facilities that will satisfy the worker, and thirdly by the trade unions who can help the previous two authorities by their reasonable demands for increasing the standards of living and well-being of the worker.

In the early years of industrialisation, very little attention was paid to the provision of necessary amenities to labour which had to put up with long hours of work, low wages, bad working conditions and absence of welfare facilities. These conditions led to many investigations resulting in legislation aimed at providing regulated hours of work, regular payment of fair and adequate wages and other amenities. All these legislative measures and administrative rules may

From the speech delivered by Dr. U. Krishna Rau, Minister for Industries and Labour, at the Fifth Annual State Conference of Social Work at Vellore on 25th September 1953.

only constitute minimum standards. It should be left open to the management and the workers to come together and evolve schemes which are more advantageous to both.

Legislative Measures

I shall not bore you with the details of the various legislations, but I shall briefly touch upon a few of them. The Factories Act of 1948 saw to it that better conditions of hours of work and rest, holidays with pay, employment of women and children have been duly provided for. The employers are required under the Act to provide amenities such as for washing and storage and drying of clothes, first-aid appliances, creches and other desirable amenities.

The Madras Shops and Establishments Act of 1947 regulates the conditions of work in shops, commercial establishments, theatres, restaurants and other establishments. It also provides for the health and safety of the employees and the grant of holidays with wages.

Similarly, the Workmen's Compensation Act of 1923, the Madras Maternity Benefit Act of 1934, the Payment of Wages Act of 1936, the Minimum Wages Act of 1948, the Employment of Children Act of 1933, the Employees State Insurance Act of 1948 were all undertaken to see that the rights and welfare of the workers, men, women and children, were adequately looked after.

The Industrial Disputes Act of 1947 makes provision for the investigation and settlement of industrial disputes. It has always been felt that the internal settlement of disputes between the workers and their employers is the best method of solving the difficulties. Failing this, settlement of the disputes by conciliation, arbitration and adjudication is provided for in this Act. It also regulates and prohibits irregular strikes and lockouts. This Act requires the formation of works committees consisting of representatives of employers and employees in concerns employing one hundred or more workers. The object of these committees is to promote measures for

securing and preserving amity and good relations between the employers and their workmen.

The Indian Trade Union Act of 1926 provides for the registration of trade unions and defines the law relating to registered trade unions.

The Plantation Act of 1951 is intended to provide housing and educational facilities to plantation labour. It makes it obligatory on the part of managements to provide many amenities for workers. On account of the depression in trade, the implementation of the Act has been postponed. The matter, however, is under the active consideration of the authorities and its implementation will soon be an accomplished fact.

Decent Housing

As I have said, legislation can only fix minimum standards. Much has to be done by the managements. I shall briefly describe measures which in my opinion are essential to the well-being of the worker and which the managements can and should provide. Housing is one of the most essential requisites for a decent standard of living to labour. This subject has been engaging the attention of many authorities, but, I am afraid, much progress has not been achieved owing, of course, to financial difficulties. In considering this subject, stress must be laid on the provision of privacy and the necessity for clean surroundings and sufficient accommodation without overcrowding.

To my mind, the minimum standard of a two-room tenement with a kitchen and verandah surrounded by a small garden or open space would be ideal. This may sound too ambitious, but it is an absolute necessity. Of course, in our major cities, want of space and transport facilities may be obstacles, but a solution may have to be found. Money spent in providing decent houses to workers will, I am sure, yield returns in dividends of human happiness, contentment and increased efficiency.

In our own State we have many examples of industrial concerns providing such housing.



MEDICAL EXHIBITION: The Governor of Madras, Shri Sri Prakasa, evinced great interest in the Exhibition organised by the students of the Madras Medical College.

their workers, but I am of opinion that many more industrial concerns should follow these very good examples.

The Worker's Health

Attention to the worker's health is very important. This, of course, means increasing his power to resist disease. In our country, under existing conditions of living in small rooms, unhygienic and ill-ventilated and with unfavourable surroundings, our workers become unfit and inefficient for normal life and work. I am sure every effort will be made to improve this aspect. This is inter-related to the provision of adequate medical facilities to treat diseases if they should attack the worker.

Ignorance, superstition and prejudice may contribute to this aspect being neglected, but an efficient medical service is most essential for the maintenance of good health by the worker. There should be a medical staff to examine the health of all employees before admission to employment and these should attend to the provision of treatment for all common diseases and occupational injuries and should make periodical examinations especially with regard to communicable diseases.

The number of dispensaries should be increased and should preferably be situated in the industrial area itself and should be meant exclusively for

the worker. If possible, there should be a maternity ward attached to this dispensary with a lady doctor and qualified midwife for conducting maternity cases and giving anti-natal advice to mothers. An ambulance should be provided to convey cases of serious accidents and serious illness to nearby hospitals.

Wholesome Food

Food is another important factor. No programme of improvement and amelioration of the conditions of workers can succeed unless it provides good nourishing food to all workers. The food should not only be sufficient, but should be wholesome. The supply of grains through shops is desirable and has contributed to the relief of the economic difficulties of the worker, but in my opinion this should be supplemented, if possible, by the opening up of canteens in industrial concerns where cheap food in a wholesome form should be given to the worker.

I have seen many industrial concerns in our State having these canteens, but my only plea is for the extension of these canteens for the benefit of the workers. If industrialists will adopt this wholesome measure, it will be a boon to the workers. The canteens that I have referred to should be spacious, well-ventilated and all cooking and serving must be done in a hygienic manner. These canteens in

addition to providing cheap and nutritious food eliminate the needless hurry of the worker to go home for his meals.

Women and Children

In our State a large number of women are employed in our factories and this number is increasing steadily every year. Women workers have been found to be specially skillful in certain types of work and therefore special care should be taken to look after them. Separate latrine accommodation and washing facilities have to be provided; rest rooms have also to be provided for the use of these women workers. They should not be employed some time before and after confinement and they should be given maternity benefit.

This naturally raises the importance of the provision of creches or institutions where the young children of the workers in the factories are taken care of while the mothers are at work. A trained nurse should be in charge of the creche which should have good cradles where the children can rest and sleep. Food should be given to them at definite and specified intervals and the mothers should be enabled, wherever necessary, to nurse the babies at suitable intervals. It is heartening to find that many industries in our State have provided these creches. They are working efficiently and well.

Co-operative Societies and Stores

In any scheme of labour welfare, the starting of co-operative societies and co-operative stores have a definite part to play, for they help in the improvement of the economic condition of the worker. The number of such societies is still very small. These societies should run co-operative stores where the workers could buy their requirements of cloth, dhoties, saris, umbrellas, blankets, mirrors, oil, soap and a host of other things at cheap rates and without the fear of being swindled. These co-operative stores can also handle the supply of grains to the workers. The possibilities are so many that one could without hesitation recommend the starting of such societies.

Education

Of all the handicaps of our workers, lack of education is the greatest. Illiteracy is the most formidable obstacle to efficiency. It is therefore very necessary in the interests of

industry that schools for labourers' children should be started and free education should be given to these little boys and girls who will be the citizens of our future India. In our State a number of industrial concerns have provided school buildings and have also undertaken the cost of the upkeep and salaries of the teachers. They are giving free education and sometimes scholarships are given as well. These are commendable efforts, but my plea is that starting of such schools should be the concern of every one and the problem of thus eradicating illiteracy should demand our first attention. To the adult worker, reading rooms and libraries are amenities which go a long way to improve the worker and relationship with his employer.

Recreation should not be forgotten. Athletics and tournaments, dramas and musical entertainments, lectures on religious and social subjects, excursions to places of historic interest are some of the things that may be attended to with immense benefit. One great advantage recreation provides is that it enables the workers and the management to come together and to work with a spirit of fellowship. In many places I have seen workers' institutes catering to the welfare of the workers. Some of these have good-sized halls equipped with a projector and a talkie, loudspeaker, etc., and I have seen in many of these dramatic performances, meetings and other functions.

The Welfare Officer

To make a success of all these problems, it is absolutely necessary to have a welfare officer. An ideal officer should above all things have a true understanding—even a love of his fellows—he should in a large measure have the gift of putting himself in the other man's shoes and so inspire confidence; he should have a sense of humour; he should have a good background and training; he must cultivate and maintain the friendliest relations with all the oddly assorted people with whom he will come into contact and whom he is expected to make into a team. His patience must be of the highest order; he must be a diplomat and must be a good organiser. He should not be considered as a tool of the management and should be as popular with the workers as he should be with the management.

I know I am asking for the impossible, but I should stress that labour welfare officers should possess as many of these qualifications as possible and should endeavour to be liaison officers between managements and their workers and should interpret in a faithful manner the desires of one to the other. They have a great duty to perform and on their efficiency will depend the harmonious relationship between managements and labour.

Trade Unions

Lastly, a word about the trade unions. They have a great part to play in the matter of the organisation of labour and to make the workers realise their responsibilities. Sufficient stress should be put on the dignity of labour and the fact that it is on their effort that the industry can prosper and national prosperity increased. Labour leaders have a great duty to perform, that is to advise the workers not to go slow, not to attempt stay-in strikes, but to follow legitimate measures provided by law for the settlement of disputes. This is an essential part of the welfare industry that I have in mind and I think trade unions and their leaders have a very heavy load of responsibility in bringing home these truths to the workers.

All welfare work cannot have quick results. It should result ultimately in increased output, increased efficiency, diminished sickness and increased happiness. If this is assured, then I am sure better relationship will exist between the workers and the managements and that all manner of differences will be solved. I am sure welfare departments will be able to create the necessary atmosphere of goodwill and harmony so essential in a sympathetic spirit and approach it as a human problem, I am sure labour will reciprocate in the same manner. This, I am sure, will lead to increased national wealth and will place India in a rightful place in the comity of nations.

Puthupeerkadavu Village

The Government have directed that the new revenue village, formed in the Sudalai Combai Block in Gobichettipalayam Taluk, Coimbatore District, for the rehabilitation of the displaced persons in the Lower Bhavani Project, be named as "Puthupeerkadavu".

Restrictions on Use of Loudspeakers

Numerous complaints have been received of the use of sound amplifiers in Madras City by commercial establishments like restaurants and the like in the reception of radio programmes, and playing recorded music. The amplifiers are often used for hours at a stretch, with the vibrators tuned to their maximum volume, and cause considerable annoyance to persons outside the establishments. Under Section 71 (XV) of the Madras City Police Act, 1888, no sound amplifier may be used in the City except at such times and places and subject to such conditions as shall be allowed, from time to time, by the Commissioner of Police, or his Deputies or Assistants.

This provision applies also to extra loudspeakers attached to radio sets licensed by the Postal Department. Any person who wishes to use a sound amplifier should therefore obtain prior permission from the Commissioner or his Deputies or Assistants. Police officers have been authorised under Section 41 of the Madras City Police Act to stop any person who makes use of sound amplifiers without obtaining the necessary permission.

Permission for the use of loudspeakers in Madras City will be given only for occasions such as marriage receptions, public meetings, religious discourses and any special occasions requiring the use of sound amplifiers, and their use will normally be allowed only for a maximum of three hours on each occasion and generally no permission will be given for the use of loudspeakers after 10 p.m. All concerned are requested to co-operate in this matter.

The Madras Electric Tramway Dispute

The Government have issued the following Press Note :—

In view of the various statements, some of them confusing and some even misleading, that have appeared in the Press from time to time, Government lay before the public the circumstances that led to the cancellation of the licence of the Madras Electric Tramway Company.

The Madras Electric Tramways (1904), Ltd., a British firm incorporated in the United Kingdom, is governed by the Indian Tramways Act, 1886 (Central Act XI of 1886) and the orders issued thereunder from time to time.

In December 1952, a dispute arose between the workers and the management of the Madras Electric Tramways, Ltd., Madras, in regard to age of retirement for workers, quantum of gratuity payable to them and bonus for the years 1949 to 1951. These matters were referred to the Industrial Tribunal for adjudication. While the adjudication proceedings were pending, Mr. Beardsell, Commercial Manager of the Madras Tramway Company, represented on 9th April orally that as the Company was working at a loss, a Receiver had been appointed by the Trustees of the Debenture Holders of the Company from 1st April 1953, that the Receiver was entering upon and taking possession of all the Company's assets on 11th April 1953 and that he would stop running of the trams from 12th April 1953. In spite of the request of Government to give them decent notice before stopping a public utility service such as the tramways in the City, in order to enable alternative arrangements being made, the Receiver stopped the running of trams with effect from 12th April 1953. Mr. Brookes who was the Managing Director of the Company till then was constituted the Receiver on behalf of the interest of Debenture Holders of the Company.

As the management did not give the notice of fourteen days before closure of business required under Section 22 (2) of the Industrial Disputes Act, 1947, or obtain the permission of the Tribunal before whom adjudication proceedings were pending,

as required under Section 33 of the said Act, criminal proceedings were instituted against Messrs. Brookes and Beardsell, the Receiver and the Commercial Manager respectively of the Company, which after full and elaborate arguments ended in their conviction.

Under Section 22 of the Indian Tramways Act, 1886, the Corporation of Madras would have the option of purchasing the Tramway in April 1953 or earlier by negotiation. The financial position of the Corporation, however, did not permit such an undertaking. The State Government had referred the question of purchasing this service as early as in 1951 to an Expert Committee which went into the matter and reported against it.

After a period of three months as prescribed in Section 19 of the Act elapsed from the date of stoppage of the tram services without any prospect of resumption of the services, Government issued a notice to the Madras Electric Tramways Company and its Receiver on 11th August 1953 to show cause within a fortnight why the powers of the Company should not be declared to be at an end. On 12th August 1953 Mr. Brookes wrote to the Government asking for substantial financial assistance. The State Government did not consider it feasible to accede to this request.

In reply to the show cause notice issued by Government, Mr. Brookes, Receiver of the Company, stated that for over two years past, the Company was working at a loss ranging round Rs. 40,000 per month mainly due to redundant labour in the workshops and an increase in costs which resulted in the closure of the tramways.

Mr. Brookes pleaded that it was not feasible for him to resume the service unless labour and all the Company's creditors including the State Government came to his help in abundant measure. In view of the fact that they had no employment for many months, the workers approached the Tramway Company to allow them to draw upon their Provident Fund. The Tramway Company declined to allow this on the ground that the Trustees of the Fund could not act contrary to the rules of the Fund

which did not allow any advances for temporary contingency from Provident Fund. It appeared to Government that the cancellation of the licence was the only method that could permit the payment of Provident Fund to the workers. The workers themselves could, if they so desired, obtain their gratuity and Provident Fund if they voluntarily tendered their resignations, which, however, they were unwilling to do. Representations were made to Government on behalf of labour that in order to ease their distress, the Tramway Company's licence must be cancelled so that the Provident Fund could be released. This was the position when the Government gave a show cause notice to the Tramways why its licence should not be cancelled. On the 22nd September however the Workers' Unions requested the Government not to cancel the licence but to wait till the 25th of that month to see what happened to the application of the Company to certain banks for a loan. The Company also had addressed the Government for time in view of their application to certain banks for accommodation. Government decided to postpone consideration of the cancellation of licence to the 25th September. No communication was received however from the Tramway Company as to the result of their efforts to raise finance. Meanwhile Government received information that the Tramway Company had come to a settlement with its workers and the Tramway Company had paid all workers one month's salary from out of the Provident Fund. How the Board of Directors now agreed to change the Provident Fund Rules and pay the workers one month salary which they had refused to pay previously is not clear.

The Company owed Government for arrears of electricity dues nearly nine lakhs of rupees. Mr. Brookes did not admit that this figure was correct but it was represented that it would not be possible for them to pay up even the admitted arrears. The Government informed the Tramway Company's representatives that it was open to them to send a formal representation asking the Government's permission to pay the arrears

Committee Set up to Draft Model Public Health Act

A Committee for drafting a Model Public Health Act, which the various States of the Indian Union may enact with suitable modifications, has been set up by the Government of India.

The Committee has been constituted in implementation of a resolution passed by the Central Council of Health at its first meeting, and it has been requested to submit its report within a period of six months.

According to the terms of reference, the Committee will draw up a model comprehensive Public Health Act, which will aim at bringing together existing legal provisions relating to health, now scattered over various enactments, modify those sections of law which require change and incorporate new provisions necessary for the development of future health programmes in the States. The draft Act will also embrace, on the basis of the recommendations of the Environmental Hygiene Committee, all phases of environmental hygiene, such as housing, water supply, general sanitation, regulation of certain trades,

industries and occupations, etc. The Committee will also recommend, after surveying the existing position, suitable bye-laws for the fixation of standards of hygienic environments.

The headquarters of the Committee will be at Calcutta. The Committee consists of the following :—

(1) Dr. B. C. Das Gupta, Director of Health Services, West Bengal—*Chairman*.

(2) Dr. K. S. Viswanathan, Director of Public Health, Madras—*Member*.

(3) Dr. M. Mathur, Medical Officer of Health, Delhi—*Member*.

(4) Sri P. C. Bose, Chief Engineer, Public Health Engineering, West Bengal—*Member*.

(5) Dr. K. C. Patnaik, Assistant Professor of Public Health Administration, All-India Institute of Hygiene and Public Health, Calcutta—*Member-Secretary*.

TOTAL DONATIONS TO THE MADRAS STATE FAMINE RELIEF FUND FOR THE FORTNIGHT ENDED 22ND SEPTEMBER 1953.

	RS.	A.	P.
Total miscellaneous contributions below Rs. 100	10	0	0
Total contributions above Rs. 100	Nil.		
	10	0	0
Donations received and credited to the account up to 8th September 1953.	11,85,830	15	5
	11,85,840	15	5

TOTAL DONATIONS TO THE MADRAS STATE CYCLONE RELIEF FUND FOR THE FORTNIGHT ENDED 22ND SEPTEMBER 1953.

	RS.	A.	P.
The Honorary Treasurer and Treasury Deputy Collector, Madurai, being donation by the Allinagaram Panchayat Board.	250	0	0
Total miscellaneous contributions below Rs. 100	86	10	0
	336	10	0
Donations received and credited to the account up to 8th September 1953.	8,17,735	5	9
	8,18,071	15	9

in reasonable instalments and undertaking to pay the current dues for power consumed after resumption of service. So far no representation has been received from the Madras Electric Tramways on this subject.

On the 29th September, the Cabinet considering all these circumstances, authorised the Minister for Industries to meet the representatives of the Tramway Company and ask them to give definite proof of the Company's readiness to reopen the Tramways. This was not forthcoming. Under the circumstances and with the sole desire of enabling the workers to draw on their Provident Fund to tide over their great distress as expressly desired by the men, the Government cancelled the licence of the Tramway Company after giving definite notice.

The Government desire to make it clear that they strove their utmost to enable the Company to resume service, but it was more than clear that it had become a financial impossibility for the Company. It was also clear that further protraction would accelerate the distress of the workers thrown out of employment as was evident from their repeated requests that the Company's licence may be cancelled and the Provident Fund released.

Prizes for Best Books in Kannada

The Government have approved of the proposal of the Karnataka Sangha for the award of prizes for the following three best books in Kannada for the year 1952-53 :—

(1) Literary Criticism for *Kannada Varnagalu* (Manuscript work) by Sri Sediypu Krishna Bhat, Mangalore.

(2) Poetry for *Soundarananda Mahakavya* (Manuscript work) by Sri Kadava Shambu Sharma, Puttur, South Kanara District.

(3) Yakshagana for *Bharatada Gurukula* by Kavibhushana K. P. Venkappa Shetty, Puttur, South Kanara District.

Each prize in respect of the books will be of the value of Rs. 500.

Blueprint for Andhra

By SRI J. M. LOBO PRABHU, I.C.S., Secretary, Development Department, Government of Madras

I know a little of Andhra, but I know more of the Andhras. I was Collector of Visakhapatnam in 1948. I recently reported how Kurnool could be made the State Capital, and more recently I inaugurated the State Handloom Society at Vijayavada. For three years I have been in charge of the Five-Year Plan, for Andhra and particularly Rayalaseema.

Andhra is a territory of potentials. Its population is only 310 per square mile against 592 in the Residuary Madras State; its area 39,634,403 is nearly equal to that of the Residuary State; its irrigation is of 35 per cent of the net area sown, as against 30.2 per cent in Madras; it has a surplus of nearly three lakh tons of foodgrains; it is the second largest oil-seed growing State; its cement production is proportionate to its population, six per cent of the Indian Union; its mineral wealth is great and varied, Manganese, Mica, Chromite, Asbestos, Barytes, Limestone, Steatite Gypsum, Ilmenite, Beryllium and Coal; it has two of the five great Indian rivers, the Godavari and Krishna, its per capita income is Rs. 290 as against Rs. 254-8-1 in the Madras State.

As against all this, in the balance-sheet its net area sown and cattle population are about half that of the Madras State, its fixed capital in agriculture, ploughs, carts, crushers, oil-engines and electric pumps about one-third of Madras, it has only three textile mills producing 921,600 yards of cloth with a deficit of 201,948,833 yards; only 0.3 per cent of its population is employed in factories against 0.5 per cent in Madras, its electric power is 27.56 million units against 540.13 million units in Madras; its export trade 2.2 per cent of the Indian Union, its banks 1.7 per cent of the total number of banks in the Union; its revenue incidence 6.29 against 10.68 in Madras.

Pattern of Income

These statistics indicate that development in the Andhra State has been confined to the primary sector of agriculture with little to show in the secondary sector of industry, and the tertiary sector of trade, transport, profession, Government and domestic

service. Accordingly, the estimated incomes of the three sectors are respectively Rs. 373.7 crores, 83.4 crores and 118.5 crores. This pattern was not so apparent in the composite Madras State but by itself is unbalanced and unequal to the responsibilities of a modern State.

This is reflected in the revenue, about Rs. 20 crores, which will be short of expenditure by about Rs. 4 crores. Unless the revenue is increased, the existing public services, meagre as they are, will have to be cut down. There is a suggestion that Prohibition may be scrapped and excise revenue which was Rs. 5.57 crores in 1945-46, gained, to balance the budget. It is doubtful if the women of Andhra, who have an equal vote in the Government, will agree to this.

In any case, it is idle to expect that the excise revenue will be in the same amount as many may have given up drink, and others may have learnt to obtain it illicitly. The fact also should not be forgotten that if people turn to liquor, they will have less money to spend on other articles, which will affect the sales tax. In the circumstances, revenue has to be obtained by increased production. The future of the State is therefore dependent on development of its potentials.

The Five-Year Plan

The Five-Year Plan has a provision for Andhra of Rs. 51.34 crores, out of a total of Rs. 140.83 crores for the

Expenditure in Andhra and Madras States

The Governor of Madras has issued orders authorising the expenditure in the Andhra State and the Madras State for a period of four months beginning with the 1st October, 1953, pending the sanction of such expenditure by the Legislatures of the Andhra and Madras States. These orders have been published in the *Fort St. George Gazette*, dated 29th September, 1953.

composite State. An unwritten provision is the spirit of the people, more lively, as reflected in their songs, than that of any other people in the country which has been enhanced by the winning after 40 years of their demand for independence.

It is this spirit and natural potential which have to be capitalised for the development of the State.

For "Agricultural Development" the provision is Rs. 6.61 crores. Water is the problem of most areas, want of rain generally, and waste of it in areas subject to erosion. The soil has to be conserved, and the water to be impounded, for which the labour is easily available, if the money is found.

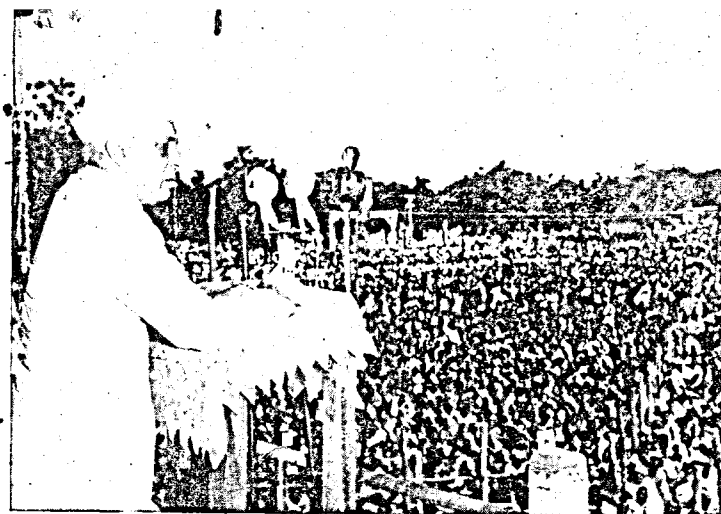
Central Aid

The question is, if the Government of India can finance the experiment of full employment of the people of this area to realise the agricultural potentials. The repayment will be not only in a corresponding increase of revenues but also in the transformation of the entire economy, from the maturity of the primary sector. A new Five-Year Plan, built up from below on the labour now employed only in half its capacity and the requirements of the villages, now hardly met, could be drawn up.

It may prove that people can produce food and finance abundantly by themselves if they are once started by Government on full employment. Plans for soil conservation, reclamation of virgin lands in the unpopulated Agency tracts, minor irrigation and well works are all ready and can be carried out, the moment finance is found. In the wake of Government expenditure, according to the 'multiplier theory' of Keynes, four times as much private income and expenditure will be granted.

Veterinary and Forestry

The provision for "Veterinary" is Rs. 40.79 lakhs which includes a Dairy-cum-Bull Farm at Visakhapatnam, opening of veterinary institutions and touring billets at each taluk, distribution of breeding stock and artificial insemination. The Andhras are proud and fond of their cattle but cannot find enough fodder for them. I have



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INAUGURATION OF ANDHRA STATE

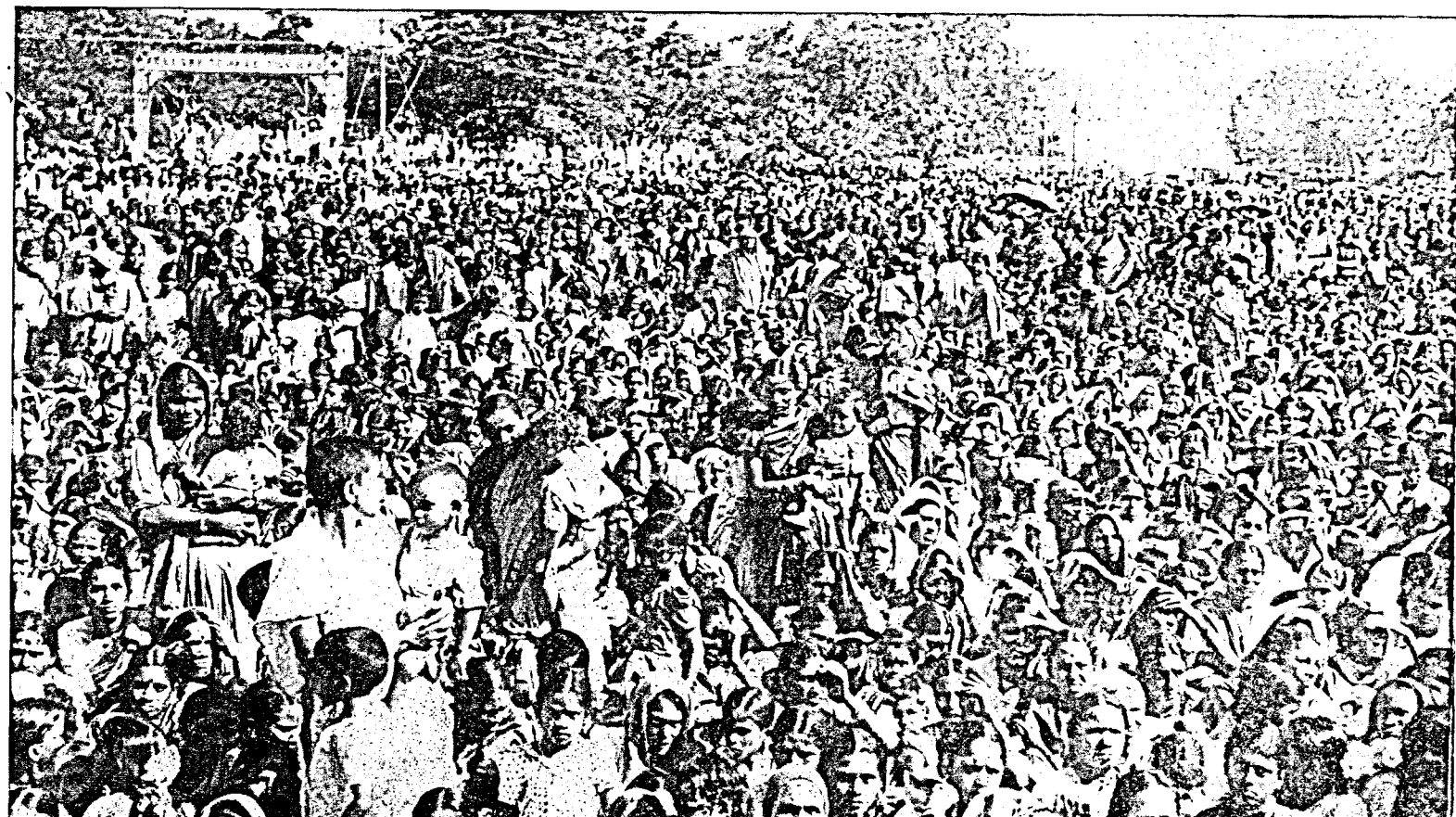
Amid scenes of unprecedented jubilation, the new State of Andhra was formally inaugurated by the Prime Minister, Sri Jawaharlal Nehru, in Kurnool, its capital, on October 1.

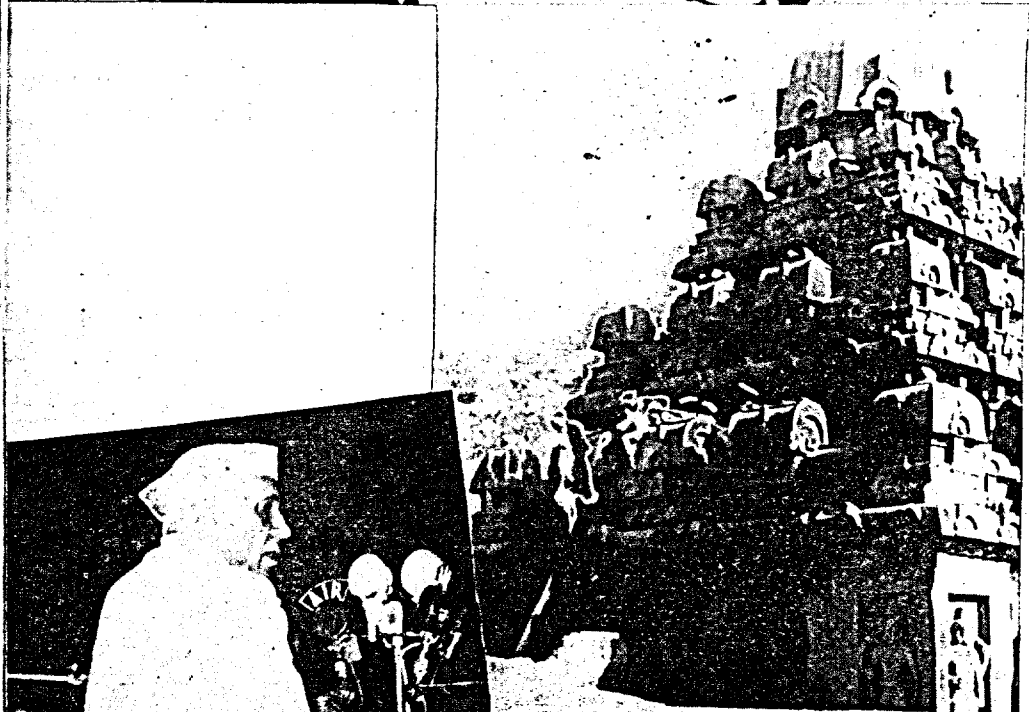
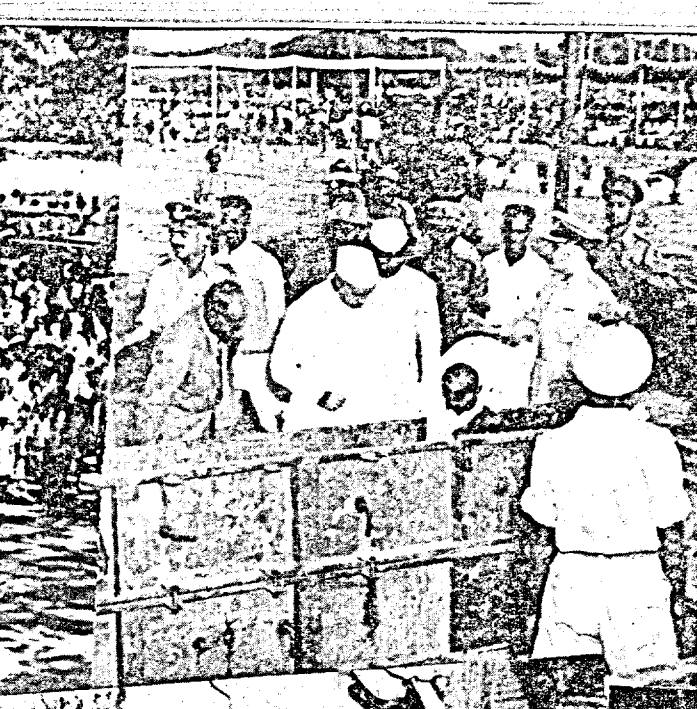
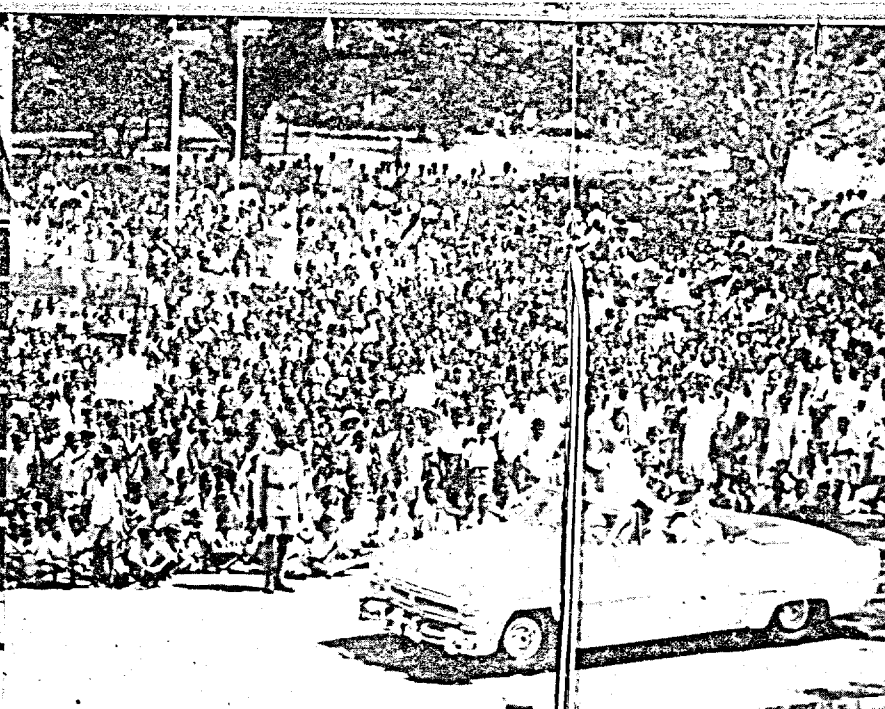
Addressing a mammoth gathering on the momentous occasion, the Prime Minister underlined the duties and responsibilities that now devolved on the people of the new State.



Gaily decorated archways and buntings sprung up on the streets of Kurnool to salute the inaugural day.

The women's section of the vast crowd that assembled to greet the Prime Minister and listen to his inaugural address (below).

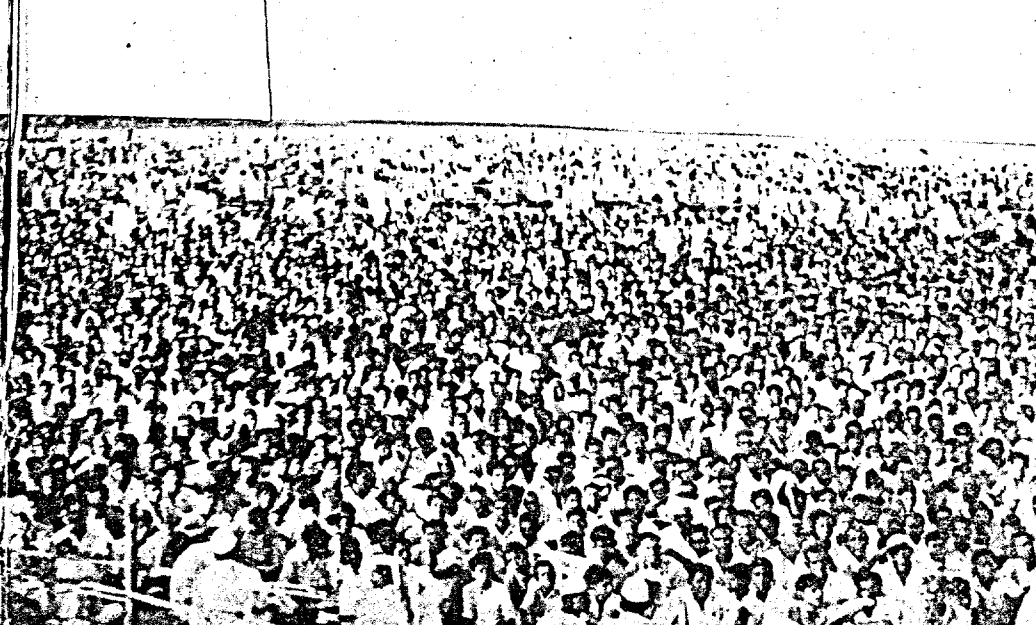
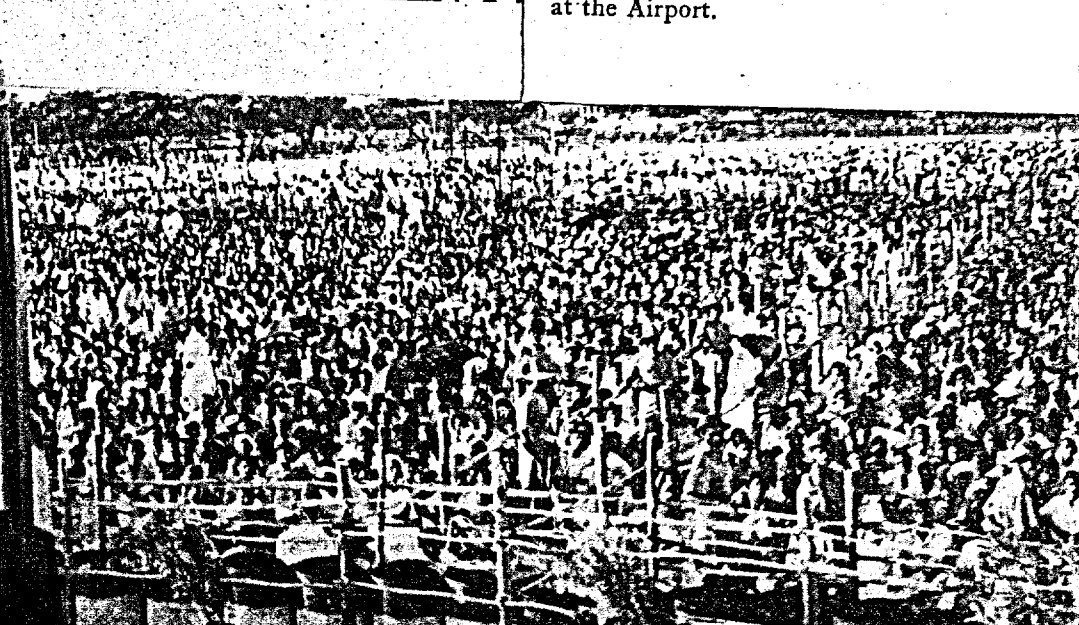


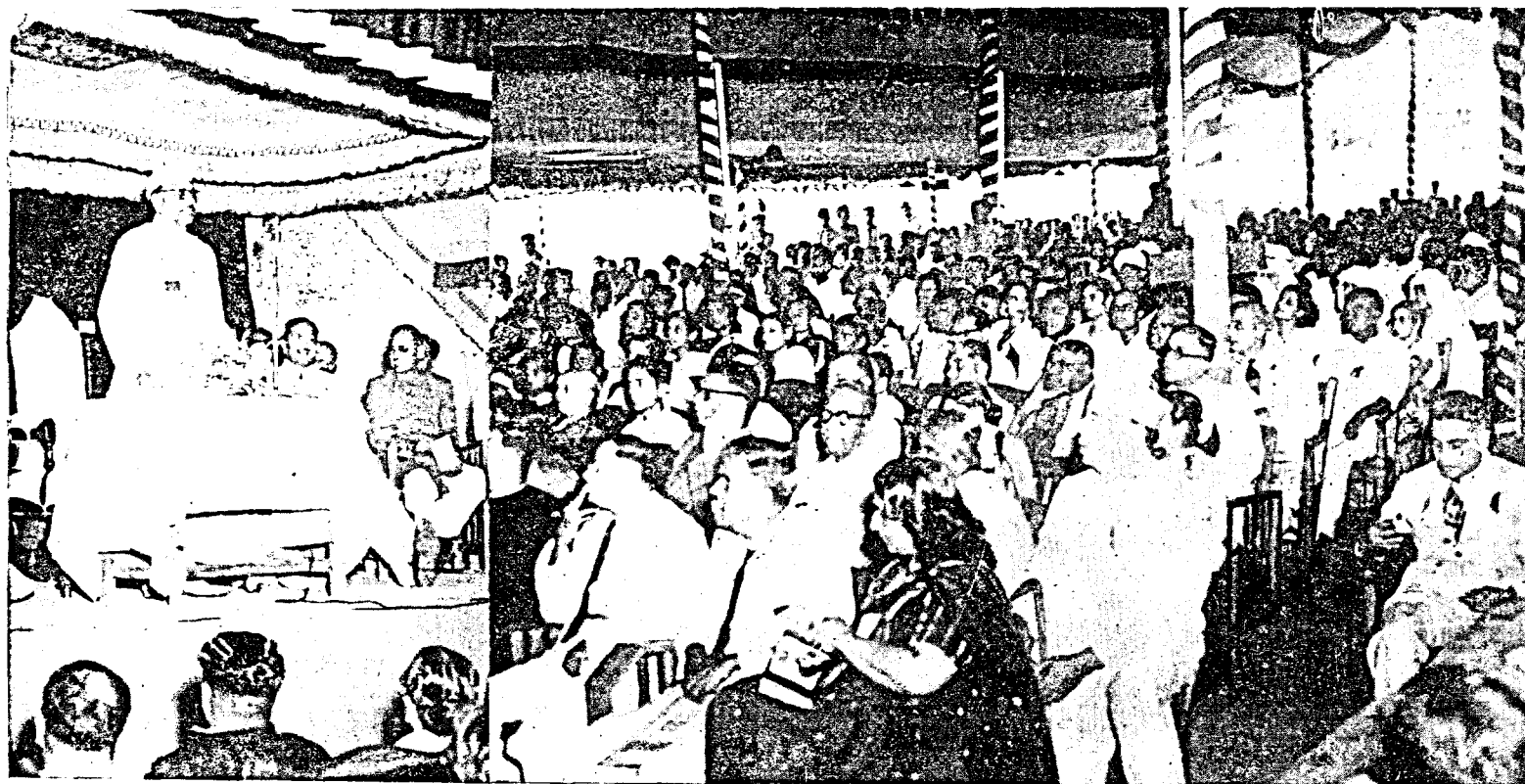


PRIME MINISTER'S WHIRLWIND TOUR OF THE SOUTH

Prime Minister Jawaharlal Nehru recently made a whirlwind tour of the South, visiting Madras City, Madurai, Palghat and Coimbatore. At all these places the Prime Minister addressed mass meetings and also found time to inspect the working of many social service organisations.

Pictures show the Prime Minister arriving at Meenam-bakkam Airport, being greeted by the Governor, Shri Sri Prakasa, attending a children's rally, inspecting the rammed earth colony built by the N.C.C., examining a handloom fabric, admiring the monolith rathas at Mahabaliparam, exchanging a friendly joke with a child in the Madurai temple, meeting Toda representatives at Coimbatore, addressing a public meeting (Madras City) . . . and leaving farewell at the Airport.



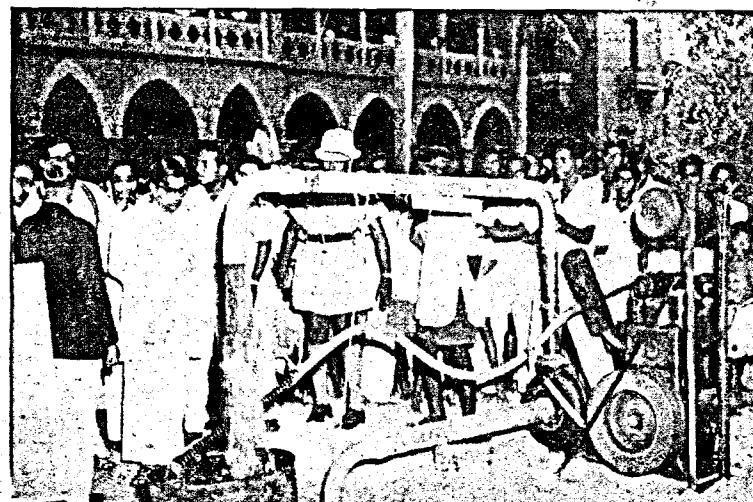
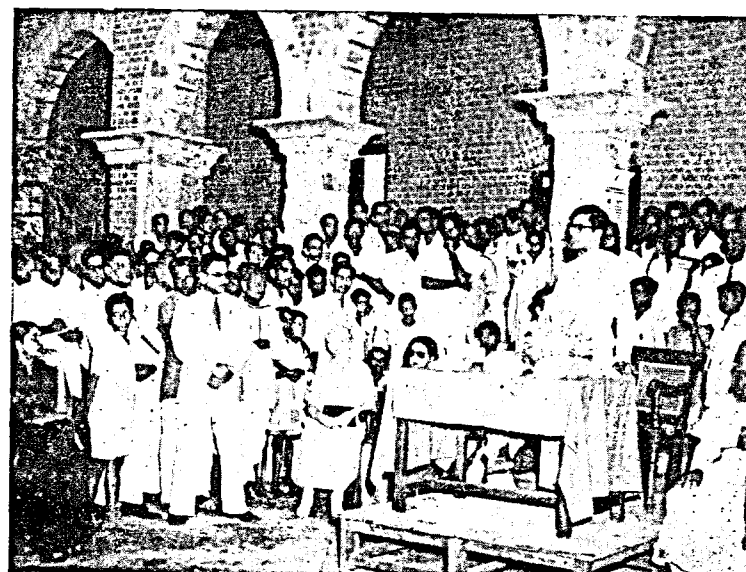


SOCIAL WORKERS' CONFERENCE

The Fifth Madras State Social Workers' Conference was held recently at Vellore.

Shri Sri Prakasa, Governor of Madras, is seen (above) inaugurating the Conference.

Sri C. Subramaniam, Minister for Finance, opened the Exhibition arranged in connection with the Conference (centre). The Finance Minister is seen (below) watching the working of a filter-point tube, one of the exhibits.



PROGRAMMES

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MADRAS INFORMATION

been suggesting that existing community pasturages could be made to yield ten times their present fodder, if the responsibility for their maintenance, including contour bunding for retaining moisture and rotational grazing to avoid overcropping, are made a responsibility of the owners of cattle who may be bound to contribute labour in proportion to their animals.

For "Forests" the Five-Year Plan provides Rs. 12.22 lakhs which is very meagre considering the low proportion of Forests and their generally poor conditions. A larger plan could absorb some of the idle labour. In addition, I have suggested that village forests can be brought into existence, if it is made compulsory for every cultivator to plant and maintain ten trees for every acre of agricultural land, the cages to protect the trees for the first two years being supplied by the Government.

Co-operation

For "Co-operation" the provision is of Rs. 50 lakhs of which Rs. 29.11 lakhs is for tenant farming societies, and Rs. 8.15 lakhs for warehouses. These societies are the cheapest methods of reclaiming cultivable waste of which there is 3.5 million acres, and of employing the landless who form nearly 35 per cent of the population. In respect of collective farming, I have been suggesting that lands of members which have to be sold for their unpaid debts, should be taken up on lease by the society to be worked with the labour and capital of other members. This would not only exemplify the co-operative character of the societies, but save the land to the owners, after the debts due are paid.

For weavers' co-operative societies, an amount of Rs. 50 lakhs will be available every year from the "Cess Fund" to consolidate the handloom industry in respect of production and distribution, so as to render it more equal to the competition with textile mills which individual weavers cannot meet.

Housing and Fisheries

The provision for "Housing" is of Rs. 1.12 crores. So far the largest number of new houses in towns have been built through the Co-operative agency, which not only provides finance but ensures economy. A desirable development may be mass production of standard parts and fittings, particularly prestressed cement

door and window frames, pillars and hollow bricks. Sri V. Ramakrishna, I.C.S. (Rtd.), is making machines costing about Rs. 2,000 which produce vibrated cement hollow bricks, half as cheap as ordinary bricks. He intends to distribute these machines with the 100 agents of the Andhra Cement Factory so that these bricks are generally available. Co-operative housing societies could also own these machines, which would enable the construction of houses at least 25 per cent less cost.

For development of "Fisheries", the provision is of Rs. 23.43 lakhs of which Rs. 10.2 lakhs is for stocking inland waters, Rs. 6.2 lakhs for quick transport and Rs. 1.15 lakhs for deep-sea fishing. The deep-sea fishing will add 1,000 tons of fish, the inland fisheries 14,000 tons, while each of the transport vans will save 100 tons from spoilage.

The Rural Welfare schemes have a provision of Rs. 95.3 lakhs of which Rs. 46.3 lakhs is for "Firka Development", a forerunner of Community Projects; Rs. 13.38 lakhs for development of cottage industries; Rs. 5.9 lakhs for palm gur; Rs. 13.75 lakhs for stone and Rockingham ware and Rs. 2.7 lakhs for Visweswarayya's industrial scheme. All these schemes, including the two Community Projects, make only a dent on the vast problem of capitalising the unused human and natural resources. They would thrive better in the context of full employment which would create the required purchasing power. Some critics are inclined to think that by themselves they are palliatives, which disguise the real issues and divert attention from the fundamental problem of full employment.

Industries

The provision for "Industrial Development" is Rs. 46.28 lakhs, of which Rs. 40.81 go to Polytechnics. It may be questioned why so little is done when industry is so conspicuously backward. The general presumption has been that the public sector will develop on its own. The ship-building yard, the oil refinery and the harbour development (to a record depth of 48 feet) at Visakhapatnam no doubt represent a considerable aggregate of industrial activity. At Vuyyuru near Vijayavada, Sri V. Ramakrishna, I.C.S. (Rtd.), is developing the by-products of his sugar factory into various industries. A new venture

in the country, the manufacture of machinery from prints and designs obtained from manufacturers abroad, is also being tried at this factory.

On hand are the manufacturing of machinery for cement, paper and sugar factories, power cranes and foundry equipment. The paper machinery when available will utilise the bogasse of sugar factories and may well mark a revolution in paper production. If the example of Sri Ramakrishna is followed by others, and is helped by Government with supply of raw materials and placing of orders, the private sector of industry in Andhra may develop. A plan however is necessary and it will have to be backed with money and credit.

Mineral Wealth

A plan is also required for mineral development. At present mining is most primitive, the leases being given on the first-come-first-served principle with the result that most mineholders are petty local men trying to make quick money. A team of experts including foreigners should survey the existing mines and the geological maps for preparing a plan for modern methods, which can be enforced on pain of cancellation of the leases. From her mineral wealth alone, Andhra can bid for a place of eminence among the other States.

For "Road Development", the provision is Rs. 248.36 lakhs, the greater part of which has been already spent. The road mileage of Andhra is only 23.6 miles for 100 square miles, which leaves many areas unconnected with towns. Of all works, roads can employ most easily the unemployed population. Roads also are the single most civilising factor bringing the towns nearer to the villages not merely in trade and industry, but in the ways of living and working. A larger road plan for Andhra should therefore receive immediate attention.

Power Projects

The Five-Year Plan provides Rs. 115.59 lakhs for Education and Rs. 115.5 lakhs for Health. This is not much but increase may wait economic development which is more urgent. For Irrigation, the total provision is of Rs. 9.96 crores, without including the Ramapadasagar or the Pennar projects, both of which are necessary to increase food production and reduce floods and unemployment. For Electricity, the provision is of

Rs. 17-20 crores, which covers the Machkund and Tungabhadra Hydro Schemes, the Nellore and Cuddapah Thermal Schemes, and transmission of power from the Jog Scheme in Mysore. Even so the power supply of the State may not be enough for industrialisation in towns or villages on an adequate scale. Other schemes will have to be considered.

All things considered, the conclusion on the development of Andhra is that there is so much to do, and so little done. The situation can now change, the people appear to be possessed of a new spirit to make their State a success. A plan on the single idea of providing full employment may, in the circumstances, be tried as an experiment in the new State.

To full employment all other things will be added, since work is, in the final analysis, the real source of wealth. Advanced economics are based on full employment, while backward countries have made it the basis of liquidating the neglect of the past. To the new State and later to the whole country, there is only one testament, that of Full Employment.

Column Loudspeakers

A novel feature of the loudspeaker arrangements at the Island Grounds meeting addressed by the Prime Minister of India is that one missed the loudspeaker horns that are usually tied to posts planted all over the grounds and connected by wires. The State Broadcasting Department of the Government who have been in charge of these arrangements have developed an entirely new system of centralised "Column Loudspeakers". The first of such a system to be used east of Suez was at Kurnool on 1st October 1953 when the Prime Minister of India inaugurated the Andhra State.



For covering meetings where the audience runs into a few lakhs of people, a large amount of audio-power has to be fed into the loudspeakers. The practice so far had been to install a large number of loudspeakers at different places in the ground, so that people in the front are not blasted by a large amount of sound and those in the rear left unserved by an adequate sound.

This system unfortunately produces echoes or multiple voices, because, though all the speakers produce the sound at the same time, the times taken by these sounds from different speakers to reach any place in the ground differ, thus causing loss in articulation or clarity by one syllable running into another. One way of avoiding this is to introduce time delays in the reproduction of sound by different loudspeakers to make up for time of travel of sound. This system though effective leads to a complicated electronic arrangement.

An easier and better system is the use of "column speakers." Here all the loudspeakers necessary to reproduce a large volume of sound are assembled as a column. The column itself is erected at a height of fifteen to twenty feet above the ground. An interference pattern of the sound from all these speakers produces a beam in the vertical plane. Because of this beaming and the physical height of the column above the ground, the sound intensity actually increases as one moves away from the column being maximum at about three to four hundred feet and then gradually falls.

Thus the sound intensity in the whole ground is more or less uniform, blasting at nearby points is removed and the whole area served. Incidentally, the column being only about a hundred feet from the dais, gives the psychological illusion that the sound is actually emanating from the dais and not from a loudspeaker near the audience.

Indian Agriculture in Maps

Pictorial representation often conveys more vividly the meaning of figures than is possible for the naked eye to glean from a mass of data. An Indian Agricultural Atlas brought out recently by the Directorate of Economics and Statistics, Ministry of Food and Agriculture, Government of India, seeks to present all important agro-economic data relating to India in the form of maps and diagrams.

Bilaspur is the smallest State in India and Madhya Pradesh is the largest in area; the total population of U.P. is larger than that of any other State, but the density of population is the highest in Travancore-Cochin; foodgrains occupy nearly three-fourths of the sown area and of the net cultivated area, less than one-fifth is irrigated.

Rice is the largest irrigated crop; and the area under it is largest in Bihar, though Madras ranks first in production; Bombay has the largest area and production of jowar but is fifth in its yield per acre; U.P. ranks first in area and production of wheat but is second to Punjab and Pepsu in yield per acre; though cotton is grown in a large number of States, its yield per acre is highest in Pepsu, Rajasthan and Punjab.

These are some of the important facts represented in the Indian Agricultural Atlas. World maps have also been given to illustrate the position India occupies in the world in respect of important agricultural crops.

Bye-Election in Kangayam

The poll for the bye-election in the Kangayam Assembly Constituency will be held on Sunday, the 8th November 1953, between the hours of 7 a.m. to 12 noon and 1 p.m. to 5 p.m.

A Tale of Two Projects

Lower Bhavani

The Lower Bhavani Project as the name implies, is a project to harness the waters of the River Bhavani in the lower reaches of the river.

The Bhavani is a tributary of the Cauvery and has a major portion of its course in the Coimbatore District, Madras State. It drains a catchment of 2,376 square miles. The Bhavani which comes under the influence of both the South-West and North-East Monsoons, carries ordinarily heavy freshes of the order of 50,000 cusecs and more. These freshes last only for a few days. At other times, the flow is barely sufficient for the old irrigation of 39,000 acres developed under two ancient anicuts on the river below the dam. The present scheme is to dam the river about ten miles upstream of Satyamangalam, where the catchment is 1,621.5 square miles and store the floods and utilise the stored waters as and when required.

The Dam will be about 5½ miles long with a portion across the river for a length of about 1,523 feet in masonry and the rest in earth. A canal about 125 miles long for irrigation of a new area of 207,000 acres takes off on the right flank.

Cost of the Project

The execution of this Project was sanctioned late in 1937, for Rs. 7 crores. The Government later wanted the Canal to be extended to serve a famine-affected area in Dharapuram Taluk at an additional cost of Rs. 120 lakhs. Power penstocks for about 10,000 kw. and other miscellaneous additions costing Rs. 10 lakhs were also sanctioned, making a total of Rs. 8.3 crores.

The Project is expected to be completed at a cost of about Rs. 9.3 crores due mainly to an excess of about Rs. 70 lakhs in the land acquisition charges and to deeper foundations found necessary during execution. Large economies have been effected on the work both in design and working costs, in spite of the rise in prices since 1946 when the estimate was prepared. The establishment cost has been as low as three per cent of the outlay on works only.

A start was made with preliminaries early in 1948 and lands were acquired for laying out a camp to house all the staff and the labourers required for the construction. The actual work was started only after October 1948.

When water flows through parched fields joy surges through the heart of the cultivator. When the Lower Bhavani and the Malampuzha Projects are completed, water will flow through the fields of Coimbatore and Malabar Districts. The earth will yield more; the heart of the cultivator will rejoice and with him the Nation.

A bridge across the Bhavani was first constructed just below the dam site to facilitate movement of men and materials to the other side of the river. This was officially opened on 28th August 1949.

The preliminary works took nearly a year, and from then on, the Camp had a population of 30,000 people—workers and their dependents—and the place began to hum with life and activity.

Market Conditions

At the time the Project was started, the market conditions were unsteady with heavy fluctuations and continually rising spiral of cost of materials and labour. So contractors quoted high rates and it seemed uneconomical from the standpoint of the Government to adopt this method. It would have meant the revision of estimates considerably over the originally sanctioned estimate.

So, with the approval of the Government, the Department itself took over the construction. It had to import and collect the labour at the site, employ them on job-work, measure the works, prepare bills, make weekly payments to labourers, and to look to all other requirements of the labour imported from various distant places.

Method of Execution

Thus the execution of the work has been planned and executed on the basis of job-work, i.e., on numerous small jobs on task-rate system, with headmen of labour gangs functioning as job-workers and occasionally on daily wage system. Both the job workers and the departmental labourers have been paid regularly every week. The departmental work or daily wage system was limited to the minimum and was confined only to those items where the works are not susceptible of definite measurements, such as dewatering foundations, cleaning masonry and the like. The net result has been that the contractors' profit has been eliminated. A high quality of work has been maintained throughout and the cost kept down, by this means.

The estimates for the Project were prepared in 1946 with then prevailing rates. Now construction is nearing completion, and it is expected that the Project will be completed without a revised estimate, in spite of the excess in quantity of work due to deeper foundations up to 40 feet in masonry portion and cost of most of the articles and labour having gone up considerably since 1946. The dam can also be made to hold more water as the F.R.L. has been raised by five feet.

Masonry Dam

During the dry months of 1949, the diversion works, namely, construction of coffer dam, etc., were started and completed before the South-West Monsoon floods. This made it possible to commence excavations for foundations for masonry dam, as soon as the monsoons were over.

The Masonry Dam is designed as a gravity dam incorporating all the modern features. The dam will be 204 feet high over the deepest foundation level to the top of the dam and 140 feet above river bed level.

The dam is of stone masonry, with front and rear faces built of coursed rubble masonry first sort and a heartening in between of random rubble masonry in cement mortar of specified proportions.

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Sluices

The dam has nine sluices 6 feet by 10 feet for passing the required discharge along the existing river course. There will be four penstock pipes with an ultimate generating capacity of 10,000 kilowatts for generating power at a later stage. There are five high level sluices of size 6 feet by 10 feet for supply of water for a new area of 207,000 acres, mostly in the Coimbatore district.

Spillway

In the river portion to the Masonry Dam, an ogee type of spillway of length 396 feet is provided to discharge a flood of 122,000 cusecs. This, together with the river sluices, will permit a discharge of 156,700 cusecs. The top of the spillway will be provided with nine radial gates of 36 feet by 20 feet with the full reservoir levels at the top of the shutters.

The Earth Dam

The Earth Dam is of zoned type with a central impervious zone, enveloped by semi-pervious zones. In order to minimise the seepage of water through the junction between the original round and the earth dam and to

ensure proper key between the embankment and the foundation, the usual precautions of adopting a cutoff trench with one or two cutoff-walls a grout curtain below each of the cutoff walls and a filter with graded materials in the rear portion of the dam have all been taken. Consolidation with optimum moisture content has been done to get a well-compacted dam.

Canals

A canal, capable of discharging 2,500 cusecs, at full supply level, takes off from the dam on the right flank. The sill of the canal sluices is at R.L. 840.00. The canal will be about 125 miles long, with a network of branch canals and distributaries to a length of 500 miles. This canal will bring under irrigation 207,000 acres of land lying in four taluks, namely, Gobichettipalayam, Bhavani, Erode and Dharapuram. The irrigation will be the dry crops, cotton and millets in rotation.

The normal bed width of the main canal is 111 feet with a depth of flow of 8.6 feet. Being a contour canal, it irrigates only on one side, and intercepts a number of natural drainages, etc. Hence, 152 drainage

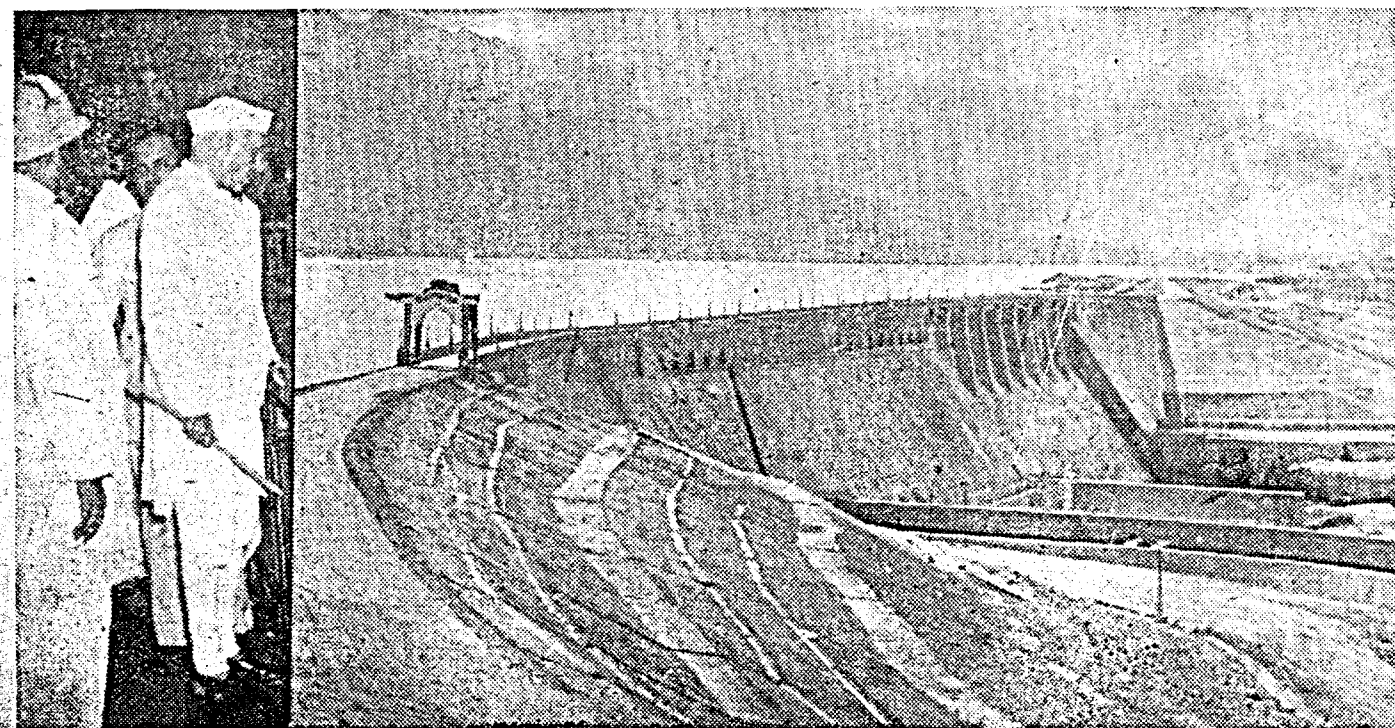
culverts, 25 aqueducts, four syphons and one super-passage had to be built. There are besides about 100 bridges and a number of sluices.

Though the present age is one which is noted for its craze for machines, the Project is carried out by using labour and machinery in proper proportions, work done by machines being such that cannot be economically carried out by manual labour. Thus, a happy balance between man and machine has been effected, and full scope given for employing all the labour available for work for which it is particularly suited.

The Progress Up-to-date

The total quantity of work to be done under earth dam is about 161 m. c.ft. of which 157 m. c.ft. have been completed, i.e., 98 per cent of the work has been completed. The earth dam has been raised to the level ranging from 915-930.

The total quantity of masonry work involved is about 13.8 m. c.ft. The entire masonry dam has been completed including spillway bridge, except for some minor items such as



LOWER BHAVANI: During his recent tour of the south, Prime Minister Jawaharlal Nehru visited the Lower Bhavani Project site. The dam, when completed, will be about 5½ miles long.

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parapet which are in progress. Spillway gates are being manufactured. Sluice gates have been fixed and the emergency gates for these are under erection.

The entire canal has been excavated except for a few gaps at the cross drainage works. About 100,000 units of earth work to be done in execution of distributaries of which 66,000 units

have been completed. Generally in the canal portion, about 95% of work may be taken as completed. The canal and distributaries down to mile 29/0 has been thrown open for irrigation this year.

The Malampuzha Project

River valley projects for irrigation in Malabar district of Madras State are peculiar, as sites for storages with flat terrain are not easily available, lands to be irrigated are of an undulating nature and acquisition of valuable topes is generally involved. Rainfall is generally high but due to its bad distribution in several years, the yields of crops have been poor. With a view to remedy these defects and to meet the growing need for producing rice in this part of the country which is a deficit one in food, river valley projects have been recently planned and Malampuzha is one of the first to be carried out.

Any river valley project in Malabar need only supplement the rainfall and fill the gap between the prevailing monsoons, the South-West from June to September and North-East in November and December. Additional water conserved can be used to grow a summer crop. The difference that

these supplies will make to the crop is very great in the yields.

The Project

The Malampuzha Project was first thought of in 1914-15, but it came under active consideration only in 1944 when this Project was included in the list of 12 River Valley Projects for the Madras State by the Post-War Reconstruction Committee of the State.

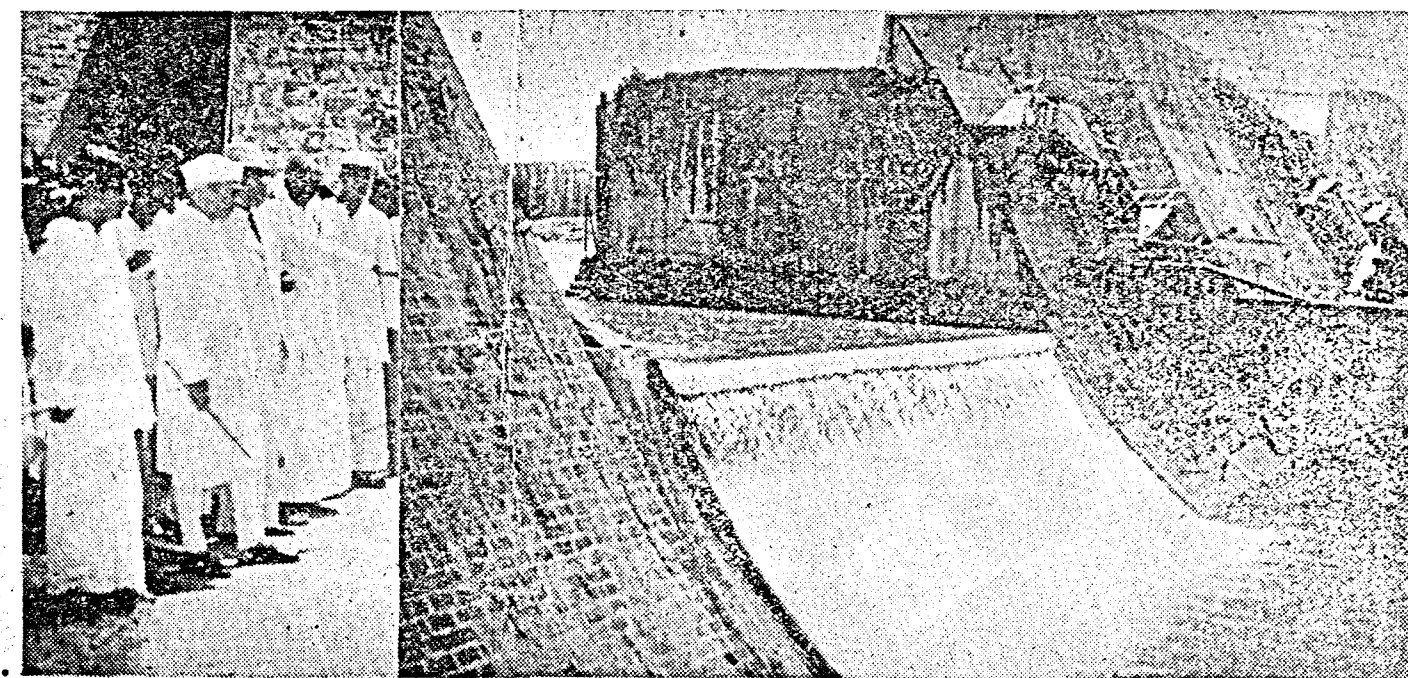
The Scheme was estimated to cost Rs. 380 lakhs and this was sanctioned by Government in 1949.

The Project consists of a dam and reservoir on the Malampuzha river one mile upstream of its crossing the Madras-Cochin Railway line, and a main canal from the reservoir about 20 miles long with necessary distributaries. The reservoir will have a capacity of 8,000 m.cft. with full reservoir elevation at 377.50. The dam will be mainly of stone in cement

mortar with the spillway in the river portion. The total length of dam is 5,967 feet of which 5,233 feet will be masonry and the balance of earth. The spillway portion will be 186 feet with 15 feet lift gates over the crest capable of disposing of a flood discharge of 30,000 cusecs.

The lake will impound the flow from a catchment of 57 square miles of hilly country and will have a waterspread area of nine square miles.

The dam will have three sluices 5 feet by 6 feet at the left flank and one sluice of the same size at the right flank for irrigation purposes. The left flank sluices are intended to irrigate an area of 40,000 acres. The main canal from the reservoir takes off from these left flank sluices. The right flank sluice will provide for the existing irrigation (rice) of about 300 acres but extension of irrigation is possible.



MALAMPUZHA: Prime Minister Jawaharlal Nehru paid a visit to the Malampuzha Dam site during his recent tour. This Project will help produce two crops of rice on 40,000 acres.

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The Canal

The maximum depth of cutting is about 30 feet and the maximum height of embankment is about 30 feet. Where the canal cutting is deep and extensive rock blasting is involved, the canal has been deepened and flumed to about half of its normal width to minimise rock cutting. The excavated earth from the ridge cuttings is transported by tram track wagons pushed by earth-work labourers to form embankments in the valleys close by.

Benefits

(1) *Irrigation.*—The Project on completion will establish assured supply of water to two crops of rice on an area of 40,000 acres. A third crop will also be benefited to about a third of the area in the initial stage and a large area later. Valuable crops like sugarcane and betel are also expected to be grown in some areas.

(2) *Power.*—The storage in the reservoir permits generation of power for domestic and industrial purposes in the Project area. Penstock pipes 6-foot diameter fabricated in the Public Works Workshops have therefore been installed at the left flank to enable power generation at a future date.

(3) *Water-supply.*—Within a few miles from the dam site is Palghat, a town of commercial importance with a population of 70,000. An 18-inch diameter pipe has been provided in the dam to provide water for the needs of this growing town.

(4) *Employment.*—The Project provides employment for about 6,000 workmen in the construction of the dam and for about 5,000 workmen in the excavation of the canal and the construction of the necessary works across the canal. When the river valley is fully developed by the Project under construction, a large number of workmen will get continuous employment in agriculture and industries—large and small.

Progress

The progress up to August 31, 1953, was as follows:—

Out of four sections of the dam three sections have been completed. In the main dam across the river all blocks excepting the sluice and spillway portions have almost been raised up to the top level. Work is in progress in the sluice block and

spillway portion. About 90 per cent of the work has been completed.

The earth dam has been raised to an average level of 356.24 against the top level of the dam 387.50.

Main Canal.—Excavation of main canal including all masonry work up to 13/10 is completed. The two major aqueducts, viz., across Korayar and Kannadi rivers and railway bridges crossing the main canal have been completed.

Distributaries.—Out of nine distributaries, excavation has almost been completed in respect of seven distributaries. About 60 per cent of the masonry work across branch channels has been completed.

Colony

As preliminary to the construction of dam and canal works temporary buildings to house the staff and labour engaged on the Project works and the offices have been put up. All the buildings are provided with necessary and essential amenities like water supply and electricity and a small township has grown up near the dam site planned and executed on up-to-date lines.

Two circuit houses fully furnished, one in the headworks area and the second in Palghat Town (in the canals area), have also been built to accommodate officials and visitors visiting the Project works.

The Project is expected to be completed in 1954.

Facts and Figures

India earned Rs. 17 crores of foreign exchange during 1952-53 through the exports of products of its cottage and small-scale industries.

Bihar has over 13 million acres under rice production, but Assam has the highest per acre yield of a little over 900 lb.

The Indian Overseas Communications Service deals with about 10,000 overseas telephone calls and 100 radio photographs every year.

The value of goods seized during the last two years being smuggled into India from Goa and Daman is Rs. 63.47 lakhs.

During 1952-53, the Director-General of Supplies and Disposals purchased machinery and spare parts

worth Rs. 11.84 crores of which Indian purchases totalled nearly Rs. 11.22 crores.

Potato production in India has steadily increased from 1.3 million tons in 1948-49 to 1.6 million tons in 1952-53.

Against a total budget provision of Rs. 36.66 crores at the Centre for Grow More Food Schemes during 1953-54, the total amount sanctioned to date is Rs. 6.98 crores.

During 1952, India manufactured its first 413 portable air conditioners.

The amount of rent collected from Government buildings of all grades in Delhi and New Delhi during 1952-53 totalled approximately Rs. 85 lakhs.

The number of telegraph offices in India last year was 3,731.

A little over 2,000 species of medicinal and poisonous plants are found in India.

During the last six months of 1952-53, redemption fines and penalties totalling Rs. 8.41 lakhs were imposed for attempts to smuggle contraband goods.

Sales Tax for Milk Co-ops

The Government have ordered, in supersession of previous orders, that in the case of sales of milk by Co-operative Milk Supply Societies and Unions, sales tax should be levied only at a single point, namely, at the stage of sale to the actual consumer of milk.

This action has been taken on representations made by the Co-operative Milk Supply Societies and Unions.

The Godavari Flood Relief Fund Closed

At a meeting convened by the Sheriff of Madras on 28th August 1953, a fund called "the Godavari Flood Relief Fund" was constituted and an appeal was issued to the public by the Chief Minister as President of the Fund for generous contributions. The Fund has now been closed. All future contributions intended for this Fund may be sent to the Governor of Andhra, Kurnool, who has made arrangements to receive such contributions.

EDUCATION

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Development of Basic Education

In the later part of 1952 the Government appointed an *Ad Hoc* Committee with Sri G. Ramachandran, Director, Gandhi Gram and now Honorary Educational Adviser to Government, as Chairman to examine the present condition of Basic Education in the State and to make recommendations for improving the working of Basic Education. The terms of reference of the Committee included examination of the curriculum of Basic Training Schools and Basic Schools in the State. Prior to this, on the advice of the Standing Advisory Board for Basic Education, the Government had constituted a Committee in June 1950 under the Chairmanship of Sri E. W. Aryanayakam, Secretary, Hindustani Talimi Sangh, Sevagram, Wardha, to study Basic Education in this State and to suggest ways and means of improving it. This Committee submitted its report in January 1952. The *Ad Hoc* Committee was also asked to examine the recommendations of the Aryanayakam Committee.

The Committee had several sittings in various places. It also had discussions with the Minister for Education and the Director of Public Instruction. Moreover, it met many workers in the field of Basic Education and Inspecting Officers at two of the Regional Basic Educational Conferences held at Cuddalore and Palghat.

The Committee felt that there should be a planned development of Basic Education and also that there should be greater efficiency in the organisation, supervision and working of Basic Schools and Basic Training Schools.

Basic Compact Areas.—The Committee emphasised that the urgent task was to increase the efficiency of the existing Basic Schools and the building up of compact areas of 30 Basic Schools round at least 40 Basic Training Schools, to begin with. This recommendation was accepted by the Government to the extent of developing 30 compact areas now and this work is going on.

Efficiency of Basic Schools.—In order to improve Basic Schools, it was considered necessary that Headmasters of all Basic Schools should be Senior Grade Teachers (Secondary Grade), and also that all senior grade teachers working either as Headmasters or as

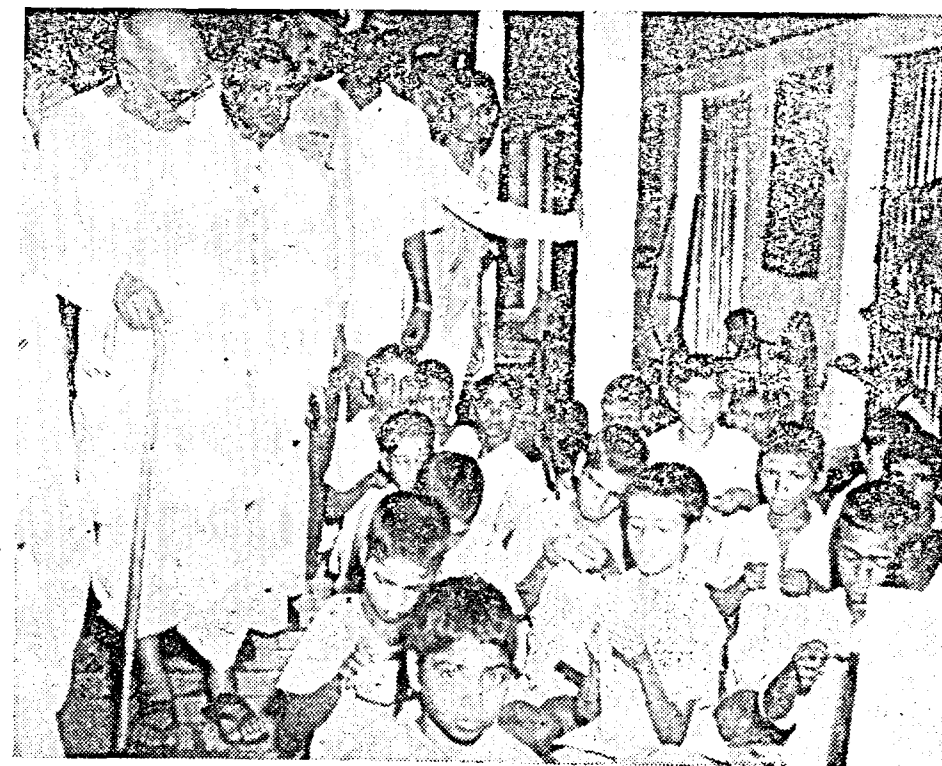
assistants should be given a pay of Rs. 45-90, a scale of pay similar to secondary grade teachers working in secondary schools. Government have accepted these recommendations and issued orders.

The Committee considered it necessary that only Basic trained staff should be employed in Basic Schools. Government have accordingly ordered that only Basic trained teachers should be appointed in Basic Schools and that prior approval of District Educational Officers will have to be obtained before non-Basic teachers are appointed or continued in Basic Schools. Moreover, in order that teachers working in Basic Schools may have intimate experience of current practices and developments in Basic Education, they are to attend monthly conferences at the Basic Training School in the centre of the compact area. These will be whole-day conferences arranged by the Inspecting Officer in co-operation with the staff of the Basic Training School.

Moreover, in order to demonstrate the full possibilities of Basic Education,

the Government have accepted the recommendation of the *Ad Hoc* Committee and ordered that a full-fledged Basic School with eight grades should be run in every Basic compact area as a model institution.

Inspection and Control.—In the matter of inspecting, supervising and controlling Basic Schools, it was considered necessary that there should be a specially trained Basic Deputy Inspector to be in charge of each of the compact areas. This has been ordered and the Inspecting Officer will frequently visit the Basic Schools and give detailed suggestions for improving craft work, correlated teaching and other aspects of Basic Education. Similarly for Basic Training Schools, Gazetted Basic Education Officers of the rank of District Educational Officers have been appointed, one for each of the four Divisions in the State. The Basic Education Officers will have direct control in all matters relating to Basic Training Schools and Basic Schools. The Basic Education Officers will be vested with all the powers in



MANUAL TRAINING: Students of the Hindu Religious School at Wallajabad busy in the Tailoring Class, with the Chief Minister as an interested observer.

regard to Basic Schools which are now exercised by District Educational Officers in regard to Elementary Schools. At higher level the Deputy Director of Public Instruction in charge of Basic Education will have all the personnel working in the field of Basic Education under his direct control. This arrangement will be only for the period of consolidation and restricted expansion. Even during this period, every effort will be made to have co-ordination between Basic Education staff and other officers of the department at all levels.

Integration with Secondary Education.—In order to integrate Basic Education with Secondary Education, Government have already ordered that pupils passing from Senior Basic Schools with a satisfactory study of English shall be admitted into IV Form of secondary schools without any further test. On the recommendations of the *Ad hoc* Committee, the Government have now ordered that, to begin with, middle schools and middle school forms of high schools in the compact areas should be converted into Senior Basic Schools, and Basic grades, respectively. Moreover, in order to ensure the required standard of efficiency in the schools, the appointment of Basic trained graduates as headmasters for Senior Basic Schools has been ordered.

Post-Basic Education.—To pave the way for Basic Education to grow beyond the Senior Basic Stage, Government have, on the recommendation of the Committee, ordered the development of the following Senior Basic Schools in the State into Post-Basic Schools:—

Gandhiniketan Senior Basic School, Kallupatti, Madurai District; Kasturba

Gandhi Kanya Gurukulam, Vedaranyam, Tanjore District; and Senior Basic School, Vinayasramam, Guntur District.

Government have also promised these institutions special aid necessary during the early period of their development as Post-Basic Schools.

Basic Training Schools.—The Basic Training School syllabus and scheme has now been revised bearing in mind the fundamental approach and methodology of Basic Education as enunciated by the Hindustani Talimi Sangh. This has been approved and issued to Basic Training Schools in the State.

Under the Revised Scheme, the headmasters and staff of each Basic Training School will be the final authority for passing or failing a candidate. But to maintain standards on a State-wide scale, question papers, only three for the Junior Basic and four for the Senior Basic grades, of an objective type, will be set by a State Board.

Preparation of Books.—In order to meet the demand for suitable reading books and guide books for Basic Schools and Basic Training Schools, on the recommendation of the Committee the Government have ordered the appointment of a Tamil and a Telugu Special Officer to prepare the necessary literature in Tamil and Telugu. This work has already been started.

Basic School Syllabus.—The Committee also has prepared syllabuses for the various grades of the Basic Schools giving detailed suggestions and guidance to the teachers.

The Committee has recommended that important aspects of Basic Education like community organisation, student self-government, sapahi, cultural and recreational activities, should

be introduced into the existing elementary, middle and high schools. The Government have accepted this principle and steps will be taken to introduce these in elementary and secondary schools.

Future Policy.—The Government have accepted the recommendations of the Committee that all Basic Schools should contain the integrated course of Junior and Senior Stages of Basic Education.

Moreover, Government have directed that any new Training School permitted to be opened should be of the Basic Type and that there should be at the same time a concurrent programme of converting existing non-Basic Training Schools into Basic ones.

As the future policy, the Government have accepted that no non-Basic Training School will be opened in the State and also that progressively all the existing non-Basic Training Schools will be converted into Basic Training Schools.

The future development of Basic Education in the State is visualised as the extension and the increase of compact areas from year to year.

Relief Measures in Flood Areas

The Government have sanctioned the following relief measures to the agriculturists in the East and West Godavari Districts who have been affected by the recent floods:—

(1) Concessional sale of jonna seeds for sowing in areas where dry paddy and millet crops have been wiped out by the floods, at 25 per cent less than the cost price,

(2) Concessional sale of sulphate of ammonia direct from the agricultural depots for stimulating the partially affected standing paddy crop, at 25 per cent less than the cost price, and

(3) Grant of loans under the Intensive Manuring Scheme for the purchase of sulphate of ammonia at Rs. 35 per acre in the case of first loan and Rs. 10 per acre in the case of second loan without interest, subject to a maximum of Rs. 600 (inclusive of the first loan) for individual. All ryots in the affected areas of East Godavari and West Godavari may approach the local Agricultural Officer and obtain further information in the matter and necessary technical advice in regard to re-sowing or re-manuring their lands.

Flood Relief Work by N. C. C.

The call for help from the flood-stricken people of Rajahmundry came and the National Cadet Corps, true to its traditions of social welfare work, volunteered its services. The task that faced the relief workers was one of stupendous magnitude. Nearly three-fourths of Rajahmundry Town had been submerged and 3,000 thatched huts and 150 pucca buildings had completely collapsed. Thousands of people had been rendered homeless and the loss of property was enormous. Timber worth Rs. 50 lakhs had been washed away from the depots in Rajahmundry, one of the biggest centres of timber trade in India. It is over many weeks now since the Godavari rose in floods, but still the ravages of the flood are visible in every part of the town.

The N. C. C. Second Circle, Madras, had planned to hold a social service camp in Madras City from the middle of September, when it was proposed to build, in co-operation with the Madras Corporation, a colony of rammed-earth houses for slum-dwellers. When all the arrangements were complete and the camp was about to be inaugurated, the Rajahmundry Municipal Council and prominent citizens in the town appealed to the N. C. C. authorities to participate in flood relief work and to build houses at Rajahmundry instead. It was found not possible to accede to this request, but something had to be done to mitigate the sufferings of the flood-stricken people.

It was proposed, with the blessings of Sri C. Rajagopalachari, Chief Minister of Madras, and the support of the State Government, to send the Third Battalion of the N. C. C. to undertake flood relief work in Rajahmundry. The Battalion which was commanded by Major N. A. Nair, consisted of three officers, four J.C.Os., nine N.C.Os from the Regular Army, 14 N. C. C. officers and 345 cadets from various institutions in Andhradesa.

The N. C. C. flood relief work at Rajahmundry was formally inaugurated by Wing-Commander C. Satyanarayana, Circle Commander of the N. C. C. The work was of an arduous nature and was a severe endurance test for the officers and cadets. In

the beginning, many cadets fell ill, but they rallied as the work progressed. The joy of service and achievement put new vigour into them and by the time the camp ended they were not only in excellent health, but some of them had actually put on weight.

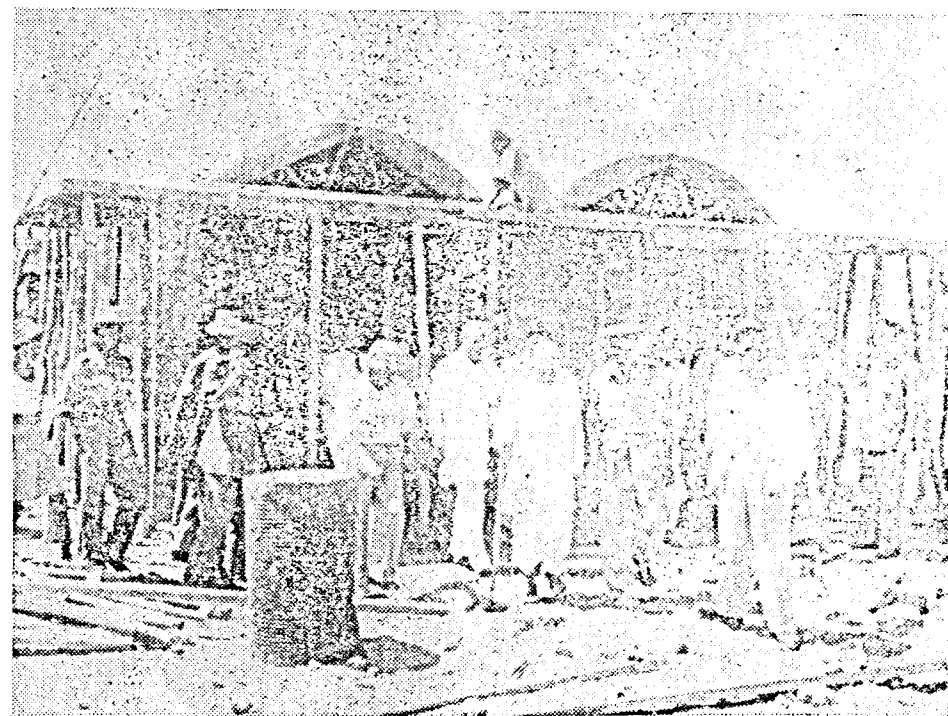
The work of the cadets was confined mainly to closing the breach in the River Godavari near Kateru and clearance of debris in the town. The breach that was closed by the Battalion was of 100 yards length, with a base of 30 feet and a height of 12 feet. This work involved digging, carrying, spreading and ramming the bund at all stages. In addition, filling carrying and reverting of 3,000 bags was also undertaken to close another breach.

Clearance of Debris

The cadets salvaged and cleared over 200 houses. Some of the houses were in a dangerous state.

But thanks to the guidance of army engineers, the cadets carried on their work in safety. Idols, utensils and other articles of value were salvaged and returned to the owners. The work of debris-clearance was done in an orderly and disciplined manner and all usable building materials were neatly stacked. The cadets also cleared streets and drainage in many parts of the town. Sanitation of low-lying areas in the town was considerably improved by filling them up with lorry-loads of earth.

To mark the closing of the camp, a parade was held on the morning of October 6, when Sri S. Rangarajan, District Judge, took the salute. Addressing the cadets, he said that the people of Rajahmundry were deeply grateful for their selfless work. In the evening, Dr. Nageswara Rao, Chairman, Municipal Council, and other Councillors gave a tea-party in honour of the officers and cadets of the N. C. C.



CADETS CONSTRUCT COLONY: Sri C. Rajagopalachari, Chief Minister, paid a visit to the N.C.C. Camp at Chetput recently. Picture shows the Chief Minister inspecting one of the houses erected by the Cadets. This housing colony for slum-dwellers was constructed by 1,700 cadets and staff officers, and will consist of about 75 houses of two types with walls of rammed earth. Streets, street lighting, public fountains and a borehole latrine for each house are being provided.

Guide Books on the Modified Scheme of Elementary Education

Copies of English and regional language editions of the *Guide Book on the Modified Scheme of Elementary Education* are available for sale with the District Educational Officers.

Please contact the District Educational Officer of your area for your requirements of the books.

Single copy **ONE ANNA**

Growth of the Indian Navy

The history of the Indian Navy, as we know it today, dates back to 1613, when the Indian Marine was constituted as a fighting force of the East India Company and played its part in the wars against the Portuguese and the Dutch in the seventeenth century.

In 1685, the headquarters of the Indian Marine were moved from Surat to Bombay and the following year the name of the service was changed to Bombay Marine, by which name it was known till 1830.

Up to 1735, the ships of the Marine were built in Surat, but in that year the present dockyard site in Bombay was acquired and developed as a building yard. By 1775, the Bombay Dockyard was comparable with any in the world and it was universally recognised that a Bombay teak-built ship was superior to the vessels built in Europe. The only ships-of-the-line ever built for the Royal Navy outside the United Kingdom were built in Bombay.

World War I

During the First World War, several of the troopships of the Royal Indian Marine (as the service was then known) were converted to auxiliary cruisers and in this capacity they served with the East Indies Squadron of the Royal Navy, in the Persian Gulf and in the Red Sea.

After the Armistice in 1918, the Royal Indian Marine was reassigned its pre-war tasks, but in 1928, the Service was reconstituted on a combatant footing. Six years later the Indian Navy Discipline Act was passed by the Indian Legislature and on September 8, 1934, the Royal Indian Navy came into being.

World War II

During the Second World War, the Navy expanded from a force of some 2,000 officers and men to a total strength of 30,000 and modern ships began to be added to the Fleet. Sloops of the Royal Indian Navy undertook convoy duty in the North Atlantic and in the Indian Ocean, and also assisted in various evacuation operations.

During the operations in Burma, the Royal Indian Navy acted in support of the Army and took part in several

successful combined operations on the Arakan Coast. After the war, Indian ships proceeded to Japan as part of the occupying forces.

Throughout the history of the Service, Indian ships have been engaged on the important work of surveying and charting the seas and many of the charts of the Indian Ocean now in use bear the names of officers of the Indian ships which took part in that work.

Independence and After

Before the dawn of freedom—August 15, 1947—India could hardly be said to have a Navy of its own. What small force of ships and escort vessels existed was merely an adjunct to the Royal Navy although it did useful work during World War II. August 15, 1947, found this small force further reduced owing to the partition of the country in which roughly one-third of it went to Pakistan together with the three of the most important naval establishments.

India, therefore, had not only a great deal of leeway to make in developing her Navy but had also to begin almost from the beginning in building up her naval establishments. Besides, there were other problems that called for attention—modernisation of armament and equipment and re-orientation of training methods, and, above all, the gradual Indianisation of the Service.

Flagship Delhi

Plans for the expansion of the Navy were immediately taken in hand by the Government of India. Before the year was out, an agreement had been reached between the Governments of India and Great Britain under which *H.M.S. Achilles*, a 7,030-ton Leander Class cruiser which distinguished itself in the memorable battle of the River Plate, was to be transferred to the Indian Navy.

When the cruiser, renamed as *Delhi*, arrived in Bombay on September 15, 1948, the Prime Minister, Sri Jawaharlal Nehru, was himself there to welcome the Indian Navy's flagship with due ceremony. He described it as "a symbol of the gradual growth of our Navy". "*Delhi* is young for us", he said, "but it is also old and hardened in experience". A cruiser,

he added, was an emblem of war but it was also an emblem of war to help maintain peace.

Formation of Squadron

The acquisition of *Delhi* was followed by the appointment of Vice-Admiral (later Admiral) Sir Edward Parry, (who commanded the *Achilles* during the battle of the River Plate) as Commander-in-Chief, Indian Navy. He held this office from August 15, 1948, to October 1951 when he was succeeded by the present C-in-C, Vice-Admiral Sir Mark Pizey.

A beginning has thus been made. It was followed, the next year, by the purchase of three destroyers from Britain, *H.M.S. Rotherham*, *Redoubt* and *Raider* and later renamed *Rajput*, *Ranjit* and *Rana*, respectively. After a thorough work-up in the Mediterranean, the three destroyers arrived in Bombay in January 1950. With these was formed India's first destroyer flotilla under the command of Captain A. Chakravarti.

Frigate Flotilla

Simultaneously, with the frigates *Jumna*, *Sulej*, *Kistna* and *Cauvery*, which came to India's share after Partition, a frigate flotilla was formed under Captain B. S. Soman. Another frigate, *I.N.S. Tir*, which was being used as a Boys' Training Ship was later converted as a Midshipmen Training Ship. In addition to these, the Fleet now consists of some 600-ton minesweepers, a specially fitted survey ship, *I.N.S. Investigator*, a tank landing ship, *Magar*, and several types of landing craft.

Recently, the Indian Navy has acquired on loan three 'Hunt' class destroyers—now renamed *Godavari*, *Gomati* and *Ganga* from the Admiralty for training purposes, and bought an oil-tanker—now named *I.N.S. Shakti*, which would help the ships to remain at sea longer than usual.

Training Establishments

Having acquired the ships, the problem was to get the officers and men for these ships and to train them. India on Partition had lost three training establishments, a number of experienced officers and men and she needed specially trained staff. Here,

the Admiralty came to the help by undertaking to train officers and men in batches.

At home, too, the training establishments at Jamnagar and Bombay were expanded and new training centres were opened at Cochin and Visakhapatnam. The Indian Military Academy at Dehra Dun (now known as the National Defence Academy) was re-organised in January 1949 and a Joint Services Wing was set up to give combined basic training to future officers of all the three Services. The Naval cadets of the Joint Services Wing, after doing a combined course for two years, are sent to the United Kingdom for further training extending over four to six years. It is, however, planned to carry out their entire training in India as soon as facilities for such training are sufficiently developed.

The principal training centres that India got on Partition are *I.N.S. Shivaji*, the Mechanical Training Establishment for officers and ratings at Lonavla (Bombay) and *I.N.S. Valsura*, the Electrical School at Jamnagar. In 1948, new training centres were added—*I.N.S. Venduruthy* at Willingdon Island, Cochin, and the Boys Training Establishment at Visakhapatnam.

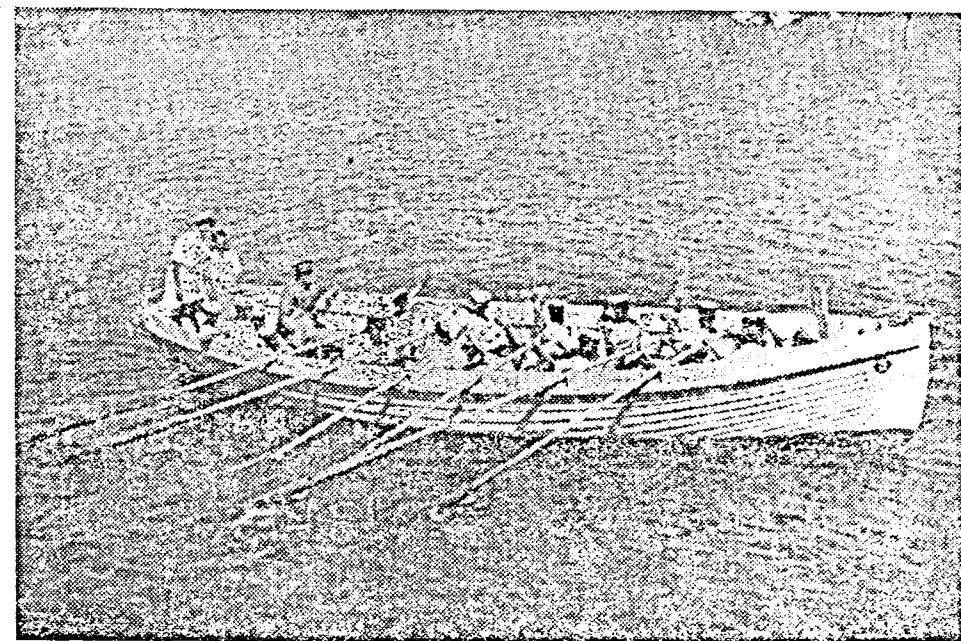
Largest Centre

The Cochin centre has had a large number of direct entry officers and ratings and is now the largest I.N. training centre with courses in Seamanship, Gunnery, Signals, Torpedo and Anti-Submarine, Supply and Secretariat and Cookery. The schools which are housed in temporary structures are now being moved into permanent buildings which are springing up slowly in Cochin.

Permanent buildings have now been provided for Navigation, Gunnery and Torpedo and Anti-Submarine schools. Similarly in Jamnagar also a new building is now being built to house the Electrical Training School of Valsura.

A notable achievement in the sphere of sea and shore training is that all the Commanding and Executive officers of the ships of the Fleet have been Indian since a long time.

The expansion of the Naval squadron also necessitated an expansion of the Naval Dockyard and other establishments at Bombay. The Dockyard



BOAT DRILL at the Boys, Training Establishment at Visakhapatnam.

expansion held up so far owing to various reasons has been taken up now to be completed by stages. In 1949, a school to train apprentices in various types of dockyard work was set up in the Naval Dockyard at Bombay with the object of raising the technical and educational standard of the civilian personnel in the Dockyard.

Indian Ensign

On January 26, 1950, came a change in the name of the Navy which was of considerable significance. On that day, it dropped the title 'Royal' which had been associated with it for long and since then it came to be known as the Indian Navy with the White Ensign yielding place to the Indian Navy Ensign at all Naval establishments and ships. Similarly, in the crests of the Indian Navy the old Tudor Crown was replaced by the Ashoka Lions and the former Star of India by the Lotus.

The next epoch-making event in the history of the Indian Navy took place on May 27, 1951. On that day, the President Dr. Rajendra Prasad, as the Supreme Commander-in-Chief of India's Armed Forces, presented the President's Colour to the Navy at a spectacular ceremony in Bombay.

Since 1949, the Indian Fleet had carried out many goodwill cruises to many countries near and far. These countries include Egypt, Italy, Turkey, Greece, East Africa, Madagascar and other islands in the Indian Ocean, Iran, Iraq, Arabia, Australia, New Zealand, Indonesia, Thailand, Malaya, Burma, etc.

One of the latest developments in the Indian Navy has been the formation of a shore-based Fleet Requirement Unit which forms part of its programme for the development of Naval Aviation. The Naval Air Station was commissioned as *I.N.S. Garuda* at Cochin in May last. Of the ten Sealand aircraft purchased for the Navy in U.K., most have already arrived at Cochin.

Though the Indian Navy has been making good progress in every sphere of its activities, it has still a long way to go.

Executed

Kandregula Narayanamurthy of Molletivaripalem, who, on July 4, 1952, stabbed and killed his mother Subbamma and was sentenced to death by the Sessions Judge, East Godavari, was executed on September 22, 1953, in the Central Jail, Rajahmundry.

Estate Duty Act Comes Into Force

The Estate Duty Act, 1953, providing for the imposition and collection in India of duty on capital value of property changing hands on the death of a person, subject to an exemption limit, came into force on October 15, 1953.

The Estate Duty Bill has taken nearly a year to pass through both Houses of Parliament, having been introduced in August last year. It will be recalled that it was in 1925 for the first time that a legislative measure of the kind was suggested by the Taxation Inquiry Committee then appointed, but the recommendation could not be given effect to on account of the impending constitutional changes.

The need for such a duty was felt again during World War II which helped a number of people to amass fortunes, but such a duty, on the analogy of the death duty existing in the U.K., could not be levied under the Government of India Act, 1935. The Act had, therefore, to be amended to confer on the Central Legislature the power to impose such a duty.

1946 and 1948

A Bill was introduced in the Central Legislature in 1946, but due to various reasons it could not be taken up for consideration. It was re-introduced in the Provisional Parliament in 1948, and, although it passed through the Select Committee stage, it did not come up and ultimately lapsed with the dissolution of this Parliament.

The Central Board of Revenue have brought out a booklet entitled *Hints on Estate Duty*, which summarises the main provisions of the Act, giving examples to illustrate the manner in which the calculations are to be made. Earlier, the Board had issued a small pamphlet containing the speech of the Finance Minister which he made in the House of the People on the motion for consideration of the Bill as reported by the Select Committee. In the near future, the Board hopes to be able to issue a publication on Estate Duty, similar to *Income-tax for the Layman* already out.

Scope of Measure

The Act applies to the whole of India, except the State of Jammu and Kashmir. All properties, both

movable and immovable, situated in the States of India are liable to duty. Immovable property outside the territories to which this Act applies are not dutiable, but foreign movable properties of a person domiciled in India at the time of his death attract the duty.

Estate Duty is a mutation duty, in that it is charged according to the value of the property changing hands on death irrespective of to whom it passes. Duty is payable on the capital value of all property, real or personal, settled or not settled, which "passes" or is "deemed to pass" on the death of any person on or after October 15, 1953.

The inclusive definition of property has been given as (a) any interest in movable or immovable property, (b) proceeds of sale of the interest mentioned in (a), (c) any money or investment for the time being representing the proceeds mentioned in (b), (d) any property converted from one species into another by any method, (e) equitable interests, (f) debts created by a person or with his consent enforceable against him, (g) choses in action, (h) any other right capable of being reduced to a money value, and (i) benefit conferred by the extinguishment of a debt or right at the expense of the deceased.

"Passing on death" has not been defined in the Act. This is "evidently used to denote some actual change in the title or beneficial possession of the property as a whole which takes place at death".

Property Deemed to Pass

There are also certain properties which do not actually pass on death, but for which provision has been made for deeming them to pass on death. These are:

(a) Property which the deceased was competent to dispose of.

(b) Property in which the deceased or any person had an interest ceasing on the death of the deceased.

This also covers the co-parcenary interest of the deceased in the joint family property governed by the Mitakshara, Marumakkattayam or Aliyasantana law. However, a concession has been given and no duty is payable if the deceased member of a

joint Hindu family had not attained the age of 18 years. If the deceased member is governed by the Mitakshara law, duty is payable even if he was less than 18 years of age, provided no male ascendant of his was a co-parcener in the family at the time of his death.

(c) Property taken as a *donation mortis causa* (i.e., gifts in contemplation of death). This is because the gift is not irrevocable and does not become effective before death.

(d) Property taken as a gift *inter vivos* (i.e., between living persons) made by the deceased either within six months or two years of death, according as the gift is made for public charitable purposes or to others respectively, or at any time where the donor has reserved some benefit for himself by contract or otherwise. But gifts made in consideration of marriage or proved to have been part of the normal expenditure of the deceased but not exceeding Rs. 5,000 in the aggregate, do not fall under this provision.

(e) Property in which a life interest, limited to cease on the death of the deceased, was disposed of or determined, whether for value or not, where such disposition was made or determination effected

(i) within the statutory period of six months in the case of public charitable purposes and two years in other cases, or

(ii) at any time with reservation. (Reservation here means either retention of enjoyment of the property by the original beneficiaries or some collateral benefit accorded to him.)

(f) Property comprised in a settlement made by the deceased, reserving for himself for life any sort of interest in that settlement.

(g) Property which the deceased vested in himself and another person jointly either by transfer or by purchase in the joint names, and the other person takes it by survivorship.

(h) Money payable under a policy of insurance effected by the deceased and kept up, either by him or under a settlement made by him, for the benefit of a nominee or assignee or a proportion thereof where the deceased partly kept up the policy.

(i) Annuities and other benefits purchased or provided by the deceased, either by himself or by arrangement with some other person, to the extent of the benefit accruing or arising on his death.

(j) Assets of a company controlled by not more than five persons where the deceased made a transfer of property to the company and received, or had power to obtain, benefits from the company during the three years ending with his death. The duty is payable on that part of the assets which bears to the total assets of the company the same proportion as the benefits accrued, due or received by the deceased in the last three accounting years (actual or potential) bore to the net income of the company for the said years.

Not Liable to Duty

The following kinds of property do not pass on death, and are therefore not liable to duty:—

(a) Property in which the deceased or any other person had an interest only as holder of an office or recipient of the benefits of a charity or as a corporation sale.

(b) Property held by the deceased as a trustee. But if he is a co-trustee under a disposition made by himself, such disposition must have been made more than two years before death. This period will be five years if the deceased was a sole trustee.

(c) Settled property in which the deceased's interest failed before it became an interest in possession.

(d) Property settled on the deceased for life and which reverts on his death to the settler.

(e) Life interest taken by a surviving husband or wife in the income of property originally settled by such survivor on or before the coming into force of the Act.

(f) Property passing by reason only of a bona fide purchase for full consideration in money or money's worth.

Absolute gifts made without any reservation are not dutiable unless made within the statutory period of six months in the case of public charitable purposes or of two years in the case of other gifts as the case may be. The conditions to be satisfied if the gifts made beyond the statutory period are not to attract duty are:

(a) the donee must take immediate

possession, (b) the donor must be excluded from possession, (c) the donor must not retain any benefit either by contract or otherwise, and (d) there must be no reservation or any secret arrangement.

Aggregation and Valuation

For the purpose of determining the rate at which Estate Duty is to be levied, all property passing on the death of the deceased has to be aggregated (subject to certain exceptions) so as to form one "estate". There are certain items of property which, though exempt from duty, are to be aggregated for the purpose of determining the principal value of the estate; e.g., agricultural land in non-scheduled States.

Correct valuation is the main issue involved in the determination of Estate Duty. The principal value of any property has been defined in the Act as the price which, in the opinion of the Controller, it would fetch if sold in the open market at the time of the death of the deceased. The market price means the best price which can be obtained. But no reduction is to be made on the ground that all the property is to be placed in the market at the same time, but due consideration has to be given to the fact where it is proved that the property has depreciated by reason of the death of the deceased. Where property has actually been sold within a short time after the death of the deceased under open-market conditions, the gross sum realised may generally be taken as the principal value without any deduction for expenses of sale. These valuations may either be estimated by the parties concerned themselves or with professional assistance.

A specific provision (Section 39) has now been made as to how the benefits arising from the cesser of interest in a joint family property are to be computed. This section provides that in the case of any joint family governed by Mitakshara, Marumakkattayam or Aliyasantana law of inheritance, the interest that ceases on death will be valued as if a partition had taken place immediately before the death of the deceased. Such a partition will be purely notional for the purposes of ascertaining the duty and ignores the point whether the deceased had any right to claim partition.

In determining the total value of the entire property of the Hindu

undivided family, the provisions relating to gifts, settlements, etc., should apply so that any transfers made by, say, the manager of the family within the statutory period may be brought back to the joint family pool for the purpose of determining the deceased's share therein.

Deductions from Estate's Value

In determining the principle value of an estate for the purpose of estate duty certain debts and encumbrances have to be allowed. The deductions permissible under the Act are (a) funeral expenses not exceeding Rs. 1,000, (b) bona fide debts and encumbrances, (c) dower debts not exceeding Rs. 5,000, and (d) cost of administering or realising foreign property not exceeding five per cent of the value of property. Taxes of whatever nature which have become due up to or on the date of the death are considered as debts and as such are deductible.

The rates of duty, prescribed in the Act, have been fixed under a slab system. That is to say that different rates of duty are applicable to each successive slab in an ascending scale. No duty is payable on the first slab of Rs. 50,000 of property which consists of an interest in a Hindu family governed by the Mitakshara, Marumakkattayam or Aliyasantana law. In the case of others, no duty is payable on the first slab of Rs. 100,000. These first slabs on which no duty is calculated are called exemption limits.

Exemptions from Duty

The following properties are exempt from duty but are to be included in the principal value of the estate for the purpose of rate:—

(a) Gifts for public charitable purposes made within six months of death to the extent of Rs. 2,500.

(b) Gifts for any other purpose within two years of death to the extent of Rs. 1,500.

(c) Proceeds of insurance policy for the purpose of paying Estate Duty and assigned to Government to the extent of duty payable but not exceeding Rs. 50,000.

(d) Moneys deposited with the Government for the purpose of paying Estate Duty to the extent of duty payable but not exceeding Rs. 50,000.

of the deceased to the extent of Rs. 5,000.

(f) Moneys earmarked under a policy of insurance or under a declaration of trusts or settlement for the marriage of any of the female relatives dependent on the deceased for necessities of life to the extent of Rs. 5,000 for each of such relatives.

The effect of these exemptions is that a rebate will be allowed at the average rate on the amounts of such items included in the principal value.

Relief Measures

Relief has been provided for quick succession to the same property. If there is a succession to the same property or part of it within five years, duty payable will be reduced by 50 per cent, 40 per cent, 30 per cent, 20 per cent, or 10 per cent accordingly as the second death occurred within 1, 2, 3, 4 or 5 years. It is to be noted that in the U.K. this relief is restricted to land and business only.

Further, in India all deaths occurring within a period of three months of the first death in respect of which duty has been paid will be treated as one death. This is meant to cover quick deaths arising out of epidemics or accidents. Relief is also provided for the Hindu widow's limited interests if she dies within seven years of her husband's death.

Court-fees paid in any of the States of India for obtaining probate, letters of administration or succession certificates is an allowable deduction from Estate Duty. But in respect of duty paid in any non-reciprocating country, the whole or so much of the duty paid in the other country as may be prescribed by the Central Board of Revenue will be deducted from the value of the property situated in that country.

Return of Accounts

The Act will be administered through Officers of the Income-tax Department. The Commissioners of Income-tax will be the Controllers, the Inspecting Assistant Commissioners of Income-tax, the Deputy Controllers, and the Income-tax Officers the Assistant Controllers of Estate Duty. All of them will exercise the functions of a

Controller under the Estate Duty Act, but the actual work will be divided amongst them in accordance with the monetary value of the estate of the deceased. The Commissioners, the Inspecting Assistant Commissioners and the Income-tax Officers who had or would have had jurisdiction in respect of the income-tax assessment of the deceased immediately before his death will function as Controllers for the estate left by the deceased.

At important places, like Calcutta, Bombay, Madras, Kanpur and Delhi, special Estate Duty circles may be created to deal specifically with cases that will be allotted to them.

Who Makes Payment

Every executor, manager of a Hindu joint family, trustee, guardian, committee or any other person to whom any property of the deceased passes or is vested or who takes possession or intermeddles with the estate, is accountable for the whole of the duty payable on the principle value of the estate, but the liability for such duty is limited to the value of the assets which such a person actually received or would have received but for his negligence.

It is the duty of every accountable person to deliver to the Controller, within six months of death, a verified statement of account of all property within his knowledge and belief in respect of which duty is payable.

When Payable

Estate Duty is due from the date of death and is collectable on the account delivered. But the Controller may allow payment to be postponed for such period as he thinks fit. The Controller has power to call for any accountable person to submit such verified statement of accounts, particulars, documents, evidence, etc., as he may require.

On determination of the duty or additional duty payable, a notice of demand will be served on the accountable person specifying the amount payable and the time within which and the place at which it is payable. Where there are more than one accountable persons, the liability for the whole of the duty is joint and several, but if any accountable person pays any part of duty in respect of any property not passing to him, he has the right to

recoup it from the owners or trustees of such properties.

Provisions for Appeals

The first appeal against the determination of the duty penalty or valuation made by the Controller or refusal by the Controller to grant a discharge certificate lies to the Board. Such appeals are to be filed within 90 days of the receipt of the order objected to. Where the dispute pertains to valuation, the question may be referred to the arbitration of valuers.

On any question of law arising out of the order of the Board an application may be presented to the Board within 90 days of the receipt of the order along with a fee of Rs. 100 requiring the Board to refer the question of law to the High Court. If the appellant is not satisfied with the Board's decision, he may apply to the High Court, which may require the Board to state a case. An appeal lies to the Supreme Court from any judgment of the High Court delivered on a case stated by the Board, which is certified by the High Court to be a fit one for appeal to the Supreme Court.

Discharge Certificate

Estate Duty forms first charge on the immovable property of the deceased, and any transfer of the property would be void or would be subject to the claim in respect of the duty. Any purchaser of the deceased's property would, therefore, require the seller to produce the certificate to the effect that either the duty had been paid on such property or that it is not liable to duty. Where no Estate Duty is payable, a discharge certificate is really not necessary, but the purchaser may want to see it as a measure of abundant caution, as otherwise he cannot get a clear title. Cases requiring an exemption certificate will be very common and, therefore, a simple form of account to be furnished to the Controller for obtaining an exemption certificate has been devised.

If the Controller is satisfied that the accounts submitted is correct, or that, in any case, the total principal value of the property will not exceed the exemption limit, he will give a certificate of discharge in respect of the whole property or any particular item contained in the account.

Life in a House-Boat

By Col. A. JABHAR

I have been asked to talk to you about your autumn holiday trip to that beautiful country Kashmir.

I am, therefore, assuming the role of a guide to take you first there and then take you inside that unbelievably unique thing called a house-boat, so that you can enjoy your trip a bit should be enjoyed. Kashmir in fact, is not a beautiful place but a beautiful country strewn with beauty spots. To visit the valley during September and October, which is the autumn season, you will have selected an ideal time for fruits and vegetables besides the scenery which, of course, has its own charms at different times and in different seasons.

The First Hop

Now let us get on with the trip. If you wish to enjoy every inch of that fascinating country then you must travel by bus from Pathankot to Srinagar. The buses you travel by are grand to look at and luxurious to travel in and are most cautiously and carefully driven by expert drivers who know every inch of that well-kept and dustless road from Pathankot to Srinagar.

At Pathankot a representative of the Kashmir Government meets and greets you in such a way that you instantly and instinctively begin to feel that you have come to a homeland which is as much yours as it is of the Kashmiris. Your first hop is from Pathankot to Jammu where the bus takes you to a very well fitted Dak-bungalow; there you have a very good wash, and excellent lunch nicely served and at a very reasonable rate.

Magic Change

It is from here to Srinagar that you start feeling an unbelievable change in your nerves and in your appetite. Some magical transformation takes place and you feel a different person, of course for the better.

From Jammu you start climbing to the abode of the gods called the Kashmir Valley. The first reaction you feel is through your blood. The tingling sensation in your veins shows that the mountain air in all its purity and ozone has started doing the surprising trick. Your tired nerves and your casual and indifferent

appetite become things and memories of the unhappy past. Your overhaul and rejuvenation start with a real bang.

Riotous Beauty

Going up and up and then down and down the gorgeous valley you feel as if you are having a magnificent time on the swing of Nature. You are moving through valleys studded with multi-coloured and innumerable varieties of indescribably beautiful wild flowers with their subtle aura of perfume which bewitch you into dazed amazement. You look at the divine panoramas and landscapes stretching for miles together on either side of you.

Here and there the scene changes into the grandeur of gigantic mountains and you begin to realise how small you are and how ignorant you are of the bounty and beauty of Nature. Now we have reached Srinagar, the Capital of Kashmir. The journey through the wonderland enthralled you so much that when you get off the bus you feel as if you have been rudely and crudely waked up from a heavenly dream!

Inside the House-boat

Now I shall take you inside the house-boat where you are going to spend the greater part of your holiday. A house-boat is like a small ship converted intriguingly into a cosy house or say cottage. They are called and known as two bedroom boats or three bedroom boats or four bedroom boats. They have fantastic names like *Deodar*, *New Eagle* and so on and so forth. A house-boat is run by a "Khansama" who is called a "Manji" or "Hanji". He is usually the cook, while his eldest son or one of his many sons works as bearer.

The Manji's family lives in another small barrack-looking boat which is called the kitchen-boat where your food is cooked and your boat staff lives. This boat is just behind your house-boat, so that your staff may be handy and at your beck and call. It is the Manji who feeds you on a contract from an agency through which you have arranged your stay. The board or lodge rate is really very reasonable ranging from 7 to 9 rupees a day per head, considering the menu of your food and the comfort of your accommodation.

All Comforts

Now let us get inside the house-boat where you are going to stay. You get into a fairly large room, generously ventilated, expensively furnished and exquisitely arranged. What with a beautiful carpet, magnificently carved walnut-wood furniture and nicely upholstered suite, well-arranged flower vases and nice pictures hanging about the room, all this makes you feel that your stay is going to be very comfortable indeed.

From the drawing room you step into the dining room which contains a beautifully carved walnut-wood dining table glistening with polish and around which are six chairs well-upholstered. There is an imposing sideboard with a lovely mirror and shelves containing gleaming glassware. The room has a nice carpet and curtains which soothe the eye.

From the dining room you go into a pantry which also has a staircase for going up to the deck which has flower-pots and deck-chairs in case you wish to still further relax in the open air. From the pantry you go into a corridor which is the passage to the bedrooms. In the bedroom you have two tape cots, two teapots arranged by the side of beds, a nice dressing table with chest of drawers as well as hanging and shelf almirahs. Next to the bedroom you have a fairly large bathroom fitted with tub, wash-basin, and sanitary essentials.

Appetizing Menus

You get early bed-tea; porridge, two eggs, bread and butter with tea for breakfast; soup, a meat dish with vegetables or curry and rice and pudding for lunch; afternoon tea with cake or scones, etc., soup, a meat dish with vegetables and pudding for dinner. You can make necessary alteration in the meal if you want to suit your taste provided it is not more expensive than the routine meal. Beautiful flowers come right up to the boat for you to purchase and so do the fruits and what not! You can get anything and everything you want sitting in the house-boat.

—(A.I.R., Hyderabad)

Vitamins and Your Health

Vitamins are substances present in fresh, natural foodstuffs, which are essential for health and well-being. They are present in food materials in very minute quantities, and the body also needs them only in very minute quantities. For example, cod-liver oil, although one of the richest natural sources of Vitamin D, contains only one part in 400,000 of that vitamin. But the body cannot afford to go without vitamins in spite of the fact that it only needs infinitesimal quantities of them.

The discovery of vitamins is a story of international co-operation in medical research. By the middle of the 19th century scientists had proved the presence of three principles, proteins, fats and carbohydrates, in food. But there was a missing link, the nature and composition of which had eluded research workers for a considerable period of time. In 1847, James Lind, a ship's doctor, proved experimentally that the disease known as scurvy could be cured by giving lemon juice or juice of other citrus fruits to the sufferers.

In the early eighties, Admiral Takaki of the Japanese Navy had proved the effectiveness of unmilled legumes in the prevention of Beriberi. In 1827, Eijkman, a prison doctor in Java, discovered that fowls which had been fed on milled rice developed symptoms resembling Beriberi. Casimir Funk, a Polish biochemist, produced in 1911 an extract of rice polishings supposed to be a preventive against Beriberi. To Sir Frederick Gowland Hopkins goes the credit of establishing the separate identity of vitamins and of their need for the proper functioning of the human organism.

Vitamin A

The number of different vitamins recently proved to be essential to growth is so great that only doctors can remember their names. But the most important of them are Vitamins A, C, D and the B group.

Vitamin A deficiency is one of the factors responsible for a large number of cases of deficiency diseases in India. It is present in butter and ghee, whole milk, curds, egg yolk, liver, fish, etc. Prolonged heating of ghee in an open pan destroys the vitamin. Vanaspathi and vegetable

oils do not contain it. The richest known natural source of Vitamin A is the liver oil of certain fish like cod, halibut, shark and some Indian fish. Animal foods rich in Vitamin A are, however, expensive.

The easiest and cheapest way of ensuring a sufficiency of Vitamin A is to increase the intake of green leafy vegetables. Three ounces a day of the common leafy vegetables will furnish an adult's requirements. Mango, papaya, tomato, carrots, green and yellow fruits and vegetables are rich sources of carotene which is transformed into Vitamin A in the body.

The B Group

The B group includes several vitamins. The lack of one of them, called thiamine, causes Beriberi, in which there is partial or complete paralysis of the limbs due to degeneration of the nerves, often accompanied by weakness of heart muscle, leading to heart failure. The richest sources of thiamine among ordinary foods are unmilled cereals, pulses and nuts, particularly groundnut. Diets based on whole wheat, any of the millets, raw home pounded rice or parboiled rice, usually supply thiamine in sufficient amount. Even if the diet is based on highly milled rice, the danger of Beriberi can be removed if two ounces of pulses are taken daily.

The lack of the other vitamins of the B group causes such diseases as soreness of the angles of the mouth and the tongue, eye diseases, etc. In general, whole cereals, pulses and nuts are fairly good sources of most vitamins in this group, while the richest sources are yeast, milk products, liver and eggs.

C from Leafy Vegetables

Vitamin C deficiency leads to bleeding gums and retarded wound healing, while prolonged deficiency ends up in the disease known as scurvy, the symptoms of which are sore gums, painful joints and haemorrhages. The vitamin is usually found in fresh fruits and vegetables, particularly the green leafy varieties which contain this vitamin in abundance. But stale vegetables rapidly lose their Vitamin C content. Pulses and cereals in the dry state do not contain the vitamin, but it is formed when they are allowed to sprout. Sprouting is a simple process where the grains, after a preliminary

soaking in water for about 24 hours, are spread out on a damp earth or a damp blanket and covered over with a moist cloth. The grains will have germinated in two or three days and should be consumed either raw or after cooking for a minimum period. Sprouted mung or green gram is a very good source of Vitamin C.

There is one very cheap and common fruit, namely *amla* or *nellikai*, which is one of the richest natural sources of Vitamin C. The fresh juice contains nearly twenty times as much Vitamin C as orange juice and a single fruit is equivalent in Vitamin C content to one or two oranges. Though the heating or drying of fresh fruits or vegetables usually leads to the destruction of their Vitamin C content, *amla* is exceptional in that it has certain substances which protect the vitamin. Hence, it is possible to have *amla* preparations with a high Vitamin C content. Guava is another rich source. Mangoes are fairly rich in it.

Liver Oils and Sunshine

Vitamin D deficiency causes rickets and deformities of the bones. It is found in liver and liver oils, egg yolk and in milk and ghee obtained from animals fed on green pastures and exposed to sunlight. Hence these deformities are apt to occur in infants living in dark houses and women who observe *purdah*. Often the cheapest way of obtaining this vitamin is by exposure of the body to sunlight.

Medicinal preparations of Vitamin D cost money, but exposure to sunlight costs nothing.

No War Gratuity for Ex-Servicemen

The Government understand that enquiries and applications are being received by the Madras State Soldiers, Sailors and Airmen's Board and District Soldiers, Sailors and Airmen's Boards in this State for grant of war gratuity, said to have been set apart for award to ex-servicemen, in commemoration of the Coronation of Her Majesty Queen Elizabeth II of England. The report about the grant of any gratuity on this account is baseless. The ex-service personnel of this State are informed that no such gratuity is being paid.



MEDICAL COLLEGE EXHIBITION

The students of the Madras Medical College recently organised a medical exhibition. Spread over 17 blocks and served by 300 volunteers, the Exhibition was arranged to augment resources for running the rural medical relief programme the students have launched in Pakkam village.

The Exhibition covered every aspect of the working of the human body. Special emphasis was laid on the functions of the lungs, heart and brain. Diseases, prevention and treatment were fully explained. Mass radiography and medical check-up were added attractions.

Pictures show freak births, cardiac test, muscle action, evolution, ward arrangement, working of the heart and Surgery.

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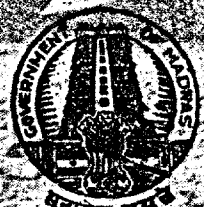
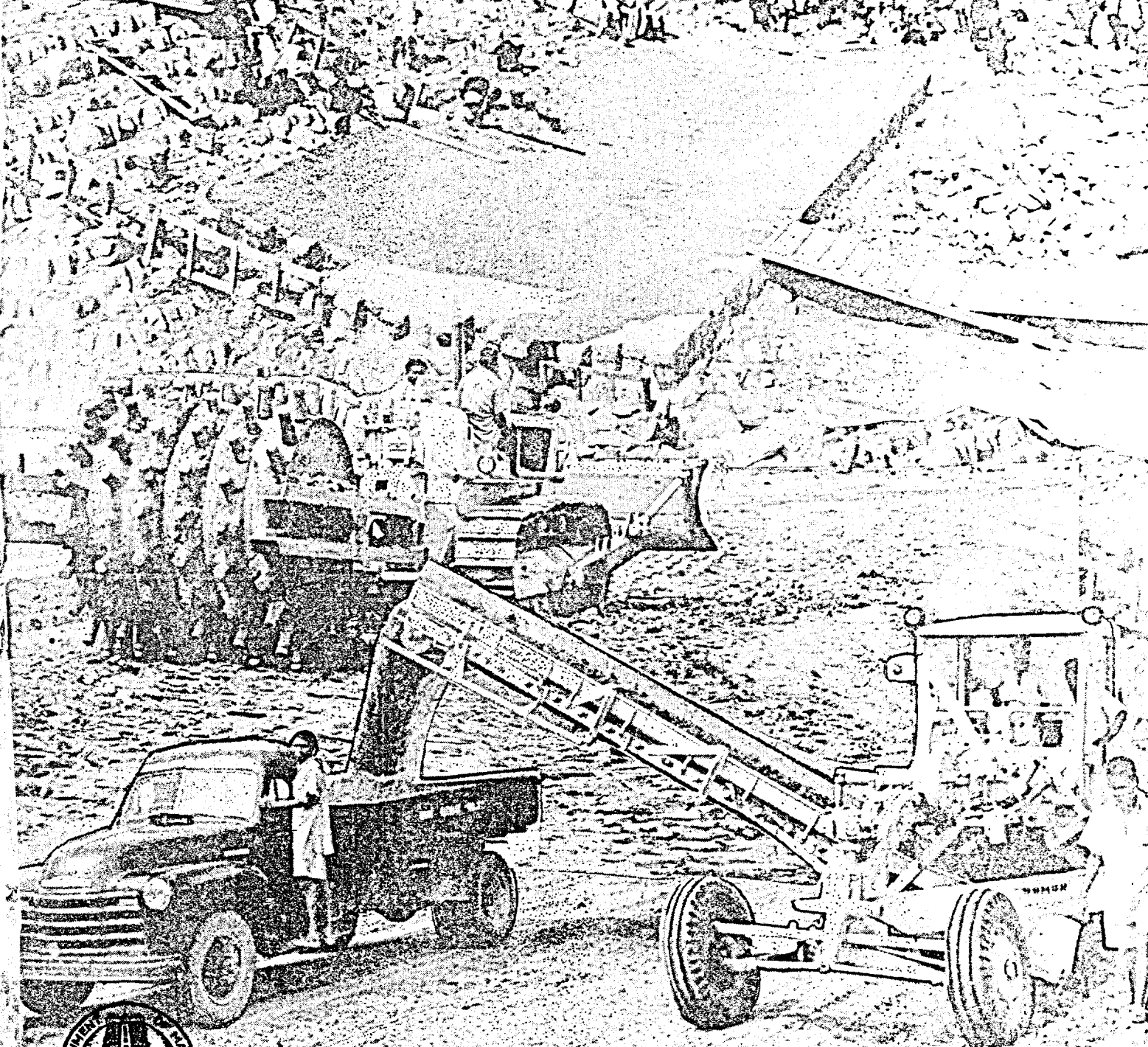
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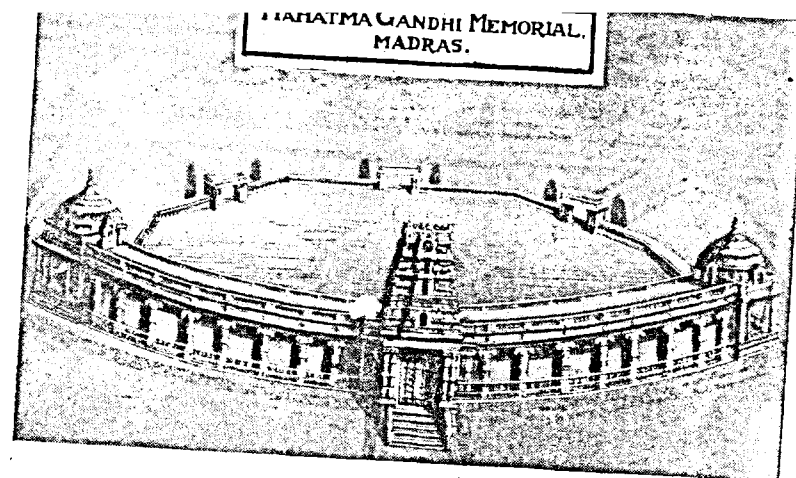
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MADRAS Information

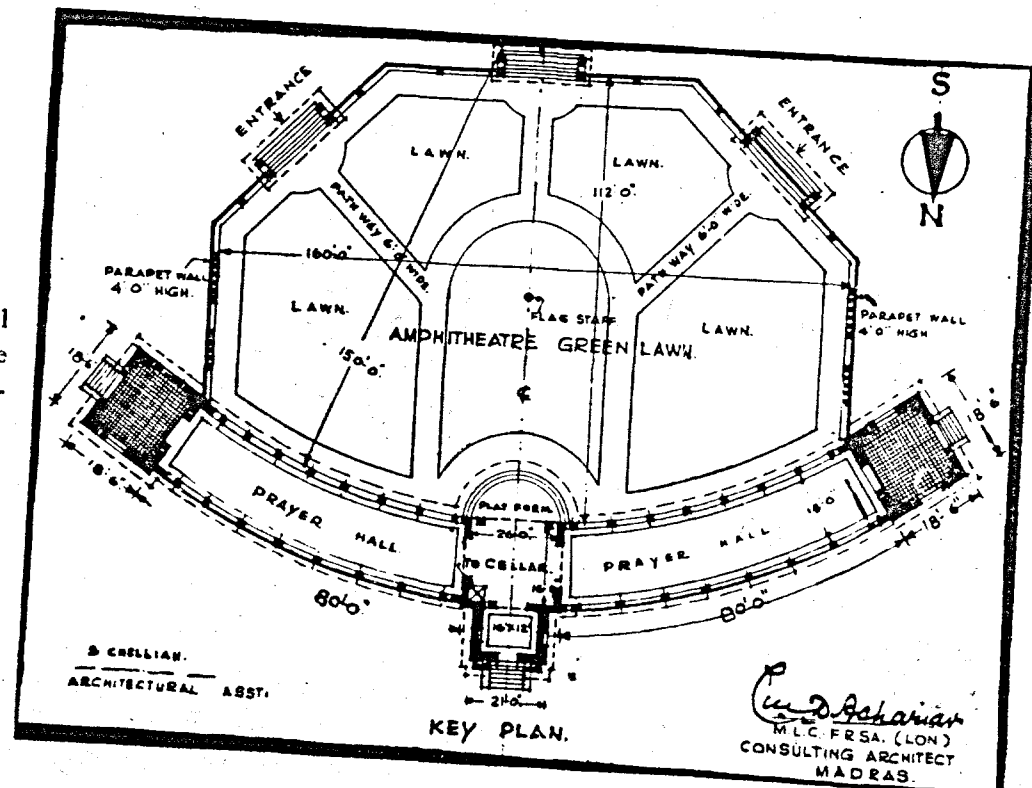


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MEMORIAL TO BAPU



The foundation stone for the Mahatma Gandhi Memorial was laid on October 17, 1953, at Raj Bhavan, Guindy.



The Key Plan of the Memorial shows the location of the prayer hall and the amphitheatre.

5

23 441

LIST OF MEMBERS OF THE HOUSE OF THE PEOPLE

1 Madras (General) ..	Sri T. T. Krishnamachari.	38 Dindigul (General) ..	Srimati Ammu Swaminathan.
2 Tiruvallur (General) ..	Sri P. Natesan.	39 South Kanara (North) ..	Sri Mallya Srinivasa Ullal.
3 Tiruvallur (Reserved) ..	Srimathi Maragatham Chandrasekar.	(General).	
4 Chingleput (General) ..	Sri O. V. Alagesan.	40 South Kanara (South) ..	Sri B. Shiva Rao.
5 Kancheepuram (General) ..	Dr. A. Krishnaswami.	(General)	
6 Vellore (General) ..	Sri Ramachander.	41 Cannanore (General) ..	Sri Ayillath Kuttyeri Gopalan.
7 Vellore (Reserved) ..	Sri M. Muthukrishnan.	42 Tellicherry (General) ..	Sri Nettur P. Damodaran.
8 Wandiwash (General) ..	Sri Muniswami.	43 Kozhikode (General) ..	Sri Kalapurackal Achuthan Damodara Menon.
9 Krishnagiri (General) ..	Sri C. R. Narasimhan.	44 Malappuram (General)	Sri B. (Kuttyath), Pocker.
10 Dharmapuri (General).	Sri N. Sathianathan.	45 Ponnani (General) ..	Sri Kozhapalli Kelappan.
11 Salem (General) ..	Sri S. V. Ramaswami.	46 Ponnani (Reserved) ...	Sri Eacharan Iyyani.
12 Erode (General) ..	Sri Periasami Gounder.		
13 Erode (Reserved) ..	Sri Balakrishnan.		
14 Tiruchengode (General).	Sri S. K. Baby alias Kandaswami.		
15 Tiruppur (General) ..	Sri T. S. Avanashilingam Chettiar.		
16 Pollachi (General) ..	Sri Damodaran.		
17 Coimbatore (General) ..	Sri N. M. Lingam.		
18 Pudukkottai (General) ..	Sri K. M. Vallatharasu.		
19 Perambalur (General).	Sri V. Boovaragasami Padayachi.		

20 Tiruchirappalli (General)	Sri E. Mathuram.
21 Tanjore (General) ..	Sri R. Venkataraman.
22 Kumbakonam (General)	Sri C. Ramaswami Mudaliar.
23 Mayuram (General) ..	Sri K. Ananda Nambiar.
24 Mayuram (Reserved)	Sri V. Veerasamy.
25 Cuddalore (General) ..	Sri D. Govindasami Kachirayar.
26 Cuddalore (Reserved)..	Sri L. Elaya Perumal.
27 Tindivanam (General)	Sri V. Munisami.
28 Tindivanam (Reserved)	Sri Jayaraman, A. Pinji.
29 Tirunelveli (General)	Sri Thanu Pillai.
30 Srivaikuntam (General)	Sri A. V. Thomas.
31 Sankaranainarkoil (General)	Sri M. Sankarapandian.
32 Aruppukottai (General).	Sri M. D. Ramaswami.
33 Ramanathapuram (General)	Sri V. VR. N. AR. Nagappa Chettiar.
34 Srivilliputhur (General).	Sri K. Kamaraj Nadar.
35 Madurai (General) ..	Sri S. Balasubramaniam.
36 Madurai (Reserved) ...	Sri P. Kakkan.
37 Periyakulam (General)	Sri K. Sakthivadivelu Goundar.

LIST OF MADRAS MEMBERS OF THE COUNCIL OF STATES

1 Sri T. Bhaskar Rao.
2 Sri M. Mohamed Ismail.
3 Sri K. L. Narasimham.
4 Sri G. Rajagopalan.
5 Sri H. D. Rajah.
6 Sri V. M. Surendra Ram.
7 Sri B. V. Kakkilaya.
8 Sri V. K. Krishna Menon.
9 Srimathi Mona Hensman.
10 Sri V. M. Obaidulla Sahib.
11 Sri T. S. Pattabiraman.
12 Dr. A. Ramaswami Mudaliar.
13 Sri S. Venkataraman.
14 Sri Ezhukuttikkal Imbichi Bava.
15 Sri S. Guruswami.
16 Sri P. S. Rajagopal Naidu.
17 Sri K. Sadananda Hegde.
18 Sri T. V. Kamalaswamy.

MEMBERS NOMINATED TO THE COUNCIL OF STATE BY THE PRESIDENT UNDER ARTICLE 80 (1) (a)

Srimathi Rukmini Devi.

Madras Information

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"WE SEEK TO SERVE AND NOT TO COMPETE"

December 1953

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COVER PAGE: Work proceeds at a brisk pace on the Manimuthar Project. The people of Tirunelveli contributed to pay for this scheme which will cost about 400 lakhs of rupees and irrigate 100,000 acres.

Patience and Perseverance Pay Dividends

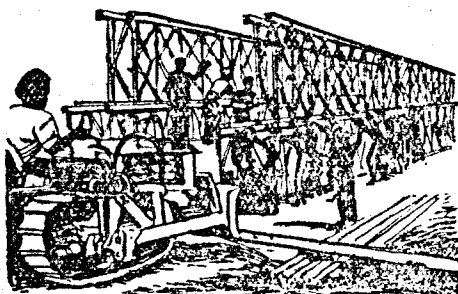
The story of the development of the Territorial Army during the past four years is the story of what patience and perseverance can achieve. When it was inaugurated in 1949 the high hopes held about its progress soon appeared to be unjustified and it became obvious that recruitment to it was going to be an uphill task. It did not offer full-time occupation or a career and, therefore, those looking for a job had no place in it. Those in employment or engaged in different professions did not immediately realise the benefits that the Territorial Army offered, for in its present form it was something new to India.

There were other difficulties too. Even those who wished to join had to obtain the permission of their employers, and although Government readily granted all necessary facilities to those of their employees who joined the Territorial Army, the private employers were reluctant to let their men go, for to them it meant loss of work hours. Those that did enlist themselves in the T.A. ran the risk of losing their civil jobs if they stayed away too long.

Matters actually came to a head when some of the units of the T.A. were embodied, i.e., had to stay in camp not for their normal duration but for an unspecified period. Complaints were received that some of the employers were not willing to take back their workers who had joined the T.A. in their original jobs. This question was, however, settled through legislation which made it obligatory on all employers to grant a lien on their jobs to men who joined the T.A.

Unwilling Employers

In spite of this piece of legislation, however, it has been repeatedly emphasised, both by Government and



Bridge building

by those interested in the progress of the Territorial Army, that the real solution of the problem lies in the willing co-operation of the employer and in the sense of patriotism of both the employer and the employee. The advantages that the Territorial Army carries with it will be shared by both. The employer will be making his men more disciplined and more efficient through training in the T.A. The worker will add to his knowledge and be a better citizen, and both will be helping to create a force that will guard the home-front in an emergency.

Getting the Right Types

For more than two years, therefore, it was a struggle for obtaining the right type of men, for getting full public co-operation and for creating in the men of the units that had been raised the true Territorial spirit. In regard to the Provincial Units, recruited from rural areas, there never was

Khadi and Village Industries Board

The Government of Madras have constituted a Khadi and Village Industries Board for the State of Madras with the following members:—

- (1) The Minister in Charge of Rural Welfare (Chairman);
- (2) Sri Sardar Vedaratnam Pillai;
- (3) Sri R. Gurusamy; (4) Sri N. Ramakrishna Ayyar, M.L.A.;
- (5) Sri G. Ramachandran, (6) Sri R. Srinivasan; (7) Sri Narayana Rao; (8) Sri C. A. Ayyamuthu; (9) Sri G. Venkatachala-

pathy; Director of Rural Welfare (Member-Secretary).

The Board will be an advisory body and its function will be to prepare and organise schemes for the production and development of khadi and village industries including training of personnel, if any, and advise on all matters auxiliary thereto, as far as possible, on the lines advocated by the All-India Khadi and Village Industries Board.

much difficulty in getting the requisite number and the right type of men. These units have their training camps for two consecutive months in a year and they are so arranged that the villager can easily attend them. These units soon began to make headway.

In the Urban Units however, progress was slow. These units receive their training during weekends or on holidays, for a total of 240 hours in a year. Although this meant that the men of these units could get training during their spare time, the response to appeals for recruitment was not satisfactory. In the technical units particularly there was considerable shortage of men, in spite of the obvious advantage that in these units there is scope for learning new trades or for adding to one's knowledge.

Gains Popularity

Gradually, however, things began to improve. As the T.A. became better known and its aims and functions better understood by people, more and more men were drawn to it and in the third and fourth years of its existence one could see definite progress both in recruitment and in the training. Today even the Urban Units are in a much better position in regard to recruitment than they were two years back. Territorial Army contingents taking part in Republic Day parades or making their appearance on other ceremonial occasions began to attract attention for their smart turnout and soldierly bearing. Having got a number of units going throughout the country, greater attention was then paid to training.

Combined camps were held at certain places where units from



Workshop practice

different centres not only got a chance to live and work together, but also were able to compare their progress with others, thus developing a healthy spirit of competition.

First T.A. Brigade

The greatest step in intensifying the training of T.A. units was the formation of the first Territorial Army Brigade, which went into camp last year near Gurgoan. This was perhaps the biggest gathering of the T.A. units in the country so far and Ministers and Members of Parliament as well as senior army officers who visited the camp had nothing but praise for the men of the T.A.

The progress of the Territorial Army was further reflected in the appoint-

ment of a T.A. officer to command a battalion. The appointment was significant as it was the first to be made in pursuance of Government's policy to make the T.A. ultimately self-sufficient in the matter of officers.

Advisory Committees

Another development of importance to the T.A., one which is intended to help it to progress on well-planned lines, was the formation of Advisory Committees both at the Centre and in the States. These committees meet at intervals and examine the progress of the T.A. as well as suggest ways and means to improve it. At the same time they enable the people's representatives to keep close contact

with what is after all a purely citizen Army.

In the end, the Territorial Army can today be said to have been based on firm foundations. Patience and perseverance have succeeded in creating a nucleus of India's Second Line of Defence. It is only a nucleus yet, for nowhere is it comparable to the citizen armies of other countries with much smaller populations; nor is it in strength anywhere near the mark where it could be considered adequate for a country of the size of India.

But a good beginning has been made, which augurs well for the future of the T.A. and gives promise that in the years to come it will develop into a force worthy of the country, fitted to carry out fully the role assigned to it.

You and the Territorial Army

There are a number of advantages to be gained from your training. But one essential condition for obtaining full value for your training is regularity and punctuality. Unless you attend your camps regularly and take them in right earnest, you will perhaps be wasting your effort. What you learn today, you will forget tomorrow, unless you keep up your training with punctuality and zest.

All able-bodied persons between the ages of 18 and 35, be they qualified technicians or unskilled labourers, are eligible for recruitment to the Territorial Army which is composed of all arms and service. The upper age-limit is relaxable in the case of ex-servicemen and civilians with technical qualifications.

For the purposes of recruitment, the country has been divided into eight zones. To facilitate training, the Territorial Army has been divided into two types of units, namely, Provincial Units and Urban Units, recruited from rural areas and town respectively. Provincial Units are imparted one-month recruit

training, whereas Urban Units have to put in 128 hours of recruit drill, to be done in the evenings, at weekends and on holidays. Ex-servicemen might be exempted from recruit training.

After the recruit training, Provincial Units are required to undergo two months' training annually, Urban Units have to do a minimum of 120 hours of drill up to a maximum of 240 hours per annum. An annual camp of four or more days is also included in this period.

The Territorial Army will not be required to perform military service beyond the limits of India except under a general or special order of the Central Government. Its role, in brief, is as follows:—

- (a) To relieve the Regular Army of static duties and support the Civil power, if required.
- (b) To provide coast defence and anti-aircraft units.
- (c) To provide field formations and units for the Regular Army if and when required.

The need for an efficient defence cannot be ignored by any nation.

There is no time in an emergency to raise and train a large army. Nor can a large army be maintained all the time without straining the national resources. The obvious answer is to prepare now and have a reserve. If you join the Territorial Army you help to build up that reserve, giving the Armed Forces much needed support. This will also ensure national security and maintain the morale of the people.

The Territorial Army can offer only a limited number of Commissions. But, if you join the ranks, you stand a good chance of attaining a Commissioned Rank, either in the Territorial or in the Regular Army.

The personnel of this Reserve Force receive the same pay and dearness and other allowances as are given to corresponding ranks in the Regular Army for every day of training or duty. Free clothing and rations are issued to other ranks. By joining the Territorial Army, besides many other advantages, you can supplement your income with travelling allowance, pay and allowances earned in your spare time.

MAJOR-GENERAL KATOCH,
General Officer Commanding, Madras Area.

(From the speech broadcast from A.I.R., Madras)

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DEFENCE

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MADRAS INFORMATION

The Territorial Day

By SRI C. RAJAGOPALACHARI, Chief Minister of Madras

Twenty-ninth October is celebrated as Territorial Army Day throughout India. At the request of Major-General Katoch, General Officer Commanding, Madras Area, I have great pleasure in saying a few words on the subject.

The Territorial Army was inaugurated in 1949. Progress has been made, but the target has not yet been reached. There are still some areas where recruitment has not been satisfactory. Parliament has passed a law making it obligatory on all employers to preserve for the men that enlist in the Territorial Army, their lien on jobs held by them. Employers have been readily co-operating in giving facilities to their men to join the Territorial Army. But I wish more and more men came forward to reap the full advantages of joining the Territorial Army.

Good Training

The men get very good training, in fact all the training that regular Army men are given. Besides discipline, drill and shooting practice, a great deal of knowledge in various trades is acquired by the civilians that join the Territorial Army; thereby their prospects in life are considerably improved. Remember, this does not involve any real interruption of the previous occupations of the men and that this is all obtained as a spare-time job for which payment is made by Government.

All men joining the Territorial Army get daily pay for the days under training or duty, equal to payment made in the regular Army. Free clothing and rations are issued to the men.

Provincial and Urban Units

The whole of the country is divided into eight zones for the purposes of the Territorial Army. Units are either Provincial or Urban. Provincial Units are given one month's recruit training. Urban Units are given recruit drill for 128 hours made up by weekends, holidays and evening-time on other days.

After the recruit training, the men get two months' training each year, if they are in Provincial Units and 240 hours per annum, if they are of

Urban Units. In order to get the fullest advantage of joining the Territorial Army, the men who decide to join should decide also that they will be punctual and put forth earnest effort.

The Territorial Army is a very useful reserve to aid the regular Army in maintaining national security and in keeping up the morale of the people during the times of danger. But the most important reason why people



Signals

should join the Territorial Army is, that thereby the Army of India becomes one with the people.

Co-partners in the State

The soldier's life should not be a mystery to civilians. We are all one, co-partners in the State and brothers to one another. There should be no mystery or opaque wall between one section of the people and another. When foreigners ruled our country, the Army was kept as a well-guarded mystery; but now we should not allow the mystery to continue. Civilians should no longer remain strangers to the training and the regulations that make soldiers. The Army should soon become as well understood by the common folk as the police or the administrative service is now understood.

Just as we want the cobbler or the dhoby to be able to read a book and write a letter in a good legible and swift hand, just as we want the clerk or the lawyer to be able to handle an awl and know to cut leather and use twine and needle to mend his own sandals, we want the soldiers to be literate and we want citizens to be familiar with the art of the soldier.

Not a Separate Caste

Our Army should not be a separate caste for all time. We may not become soldiers to make a living

thereby, all of us; but we should all know what it is to be a soldier and we should be able to take our places in the Army when the need arises.

Your wife may cook and you may be a clerk in an office. But when your wife falls ill and has to remain in bed for a day or two, you should know how to cook the food for the family during that time and earn a smile from your wife in bed. You may be unlucky enough to have a paid cook, but you may find him one day off-duty and you may have to attend to the work in the kitchen. It is good for all of us to know how much water must boil in the pot to take so much rice.

We should all know how to dress the vegetables for the sambar and when to put the salt in and when the tamarind and what is most important, we should learn not to put too much salt and earn the ridicule of the children in the family.

Acquiring Knowledge

You may be a small land-owner and you may, being otherwise engaged, let the field out on a lease to a cultivating peasant and the land may be giving its best under the joint care of yourself and the tenant, but it is not good that you should be completely ignorant of farming. You should be able to distinguish good from bad seed. You should know the time of the year when the several things should be done. You should know something about the manure that has to be put in.

To sum up, things in which we are interested should not be allowed to remain a mystery. So the work of the soldiers should not be a mystery to civilians. That is why a Territorial Army is made available for the spare-time of citizens who make their living in other occupations. This is an army of youngish gentlemen from the age of 18 to 35. The men go through all the discipline and acquire all the knowledge that are associated with the soldier's life without making a profession of it.

All further information can be obtained by contacting the office of the General Officer Commanding the area. It is patriotic to join the Territorial Army.

—(A.I.R. Madras)

Training Boys for the Indian Navy

Youth must be apprenticed to the sea, if a nation is to develop a Navy. How are boys trained for service in the Indian Navy? *I. N. S. Circars* is the answer.

I. N. S. Circars is the Boys' Training Establishment of the Indian Navy. Prior to Partition boys of the then Royal Indian Navy were trained at Karachi. Although the Naval Base at Visakhapatnam was in existence for some time, it started functioning as the Boys' Training Establishment only after Partition. Boys between the ages of 15½ to 16½ years, from all over India, belonging to various communities and creeds, come here to receive naval training before they are sent to sea to become the sailors who defend the coast of India.

Training Period

The training extends over a period of a year and a quarter during which the boys are imparted training in various branches such as Seaman, Stoker, Electrical and Communications. Besides professional training, classes are held to improve the general standard of the boys in English, Mathematics and General Knowledge. Keen interest is taken towards the physical development of the boys and numerous outdoor games, indoor games and other recreational activities are provided for the purpose.

A well-equipped library and information room with various magazines and papers are provided for the boys. A Hobbies Club is organised for the purpose of developing finer qualities and tastes. In a nutshell, while the main aim of the training establishment is to produce efficient sailors for the Navy, it does not ignore the development of qualities required for a good citizen.

New Entry Camp

A part of *I. N. S. Circars* is the New Entry Camp where the boys receive initial introduction to the Navy. They come here as raw recruits absolutely ignorant about the Navy; after being introduced to the Navy they are sent to the Main Camp for proper training. An interesting feature of the New Entry Camp is the formation of branches depending on the individual's ability and taste which

are judged by various psychological and educational tests.

The boys are accommodated in big dormitories and they dine together. They are provided with free clothing and free food consisting of three meals a day, in addition to their pay and free medical aid.

Recruitment in the Indian Navy

Boys are recruited and enrolled in the Indian Navy on a continuous service engagement which requires them to serve 10 years after becoming ordinary seaman or equivalent on attaining the age of 17 years which ever is later, followed by a period of 10 years in the Fleet reserve. On completion of 10 years' active service, they may volunteer and be accepted to serve the time for minimum pension. On completion of this period of re-engagement, further short extensions may be granted to those ratings whose retention is in the interest of the Service, until they attain the minimum pension, but no extension is permissible

Scholarships for Backward Classes

The Government of India have approved the recommendation made by the Scholarships Board for the award of about 10,000 scholarships during 1953-54 to Scheduled Castes, Scheduled Tribes and other Backward Classes students pursuing post-matriculation studies in India. This figure includes about 3,700 renewal scholarships sanctioned last year. The total amount likely to be spent is about Rs. 50 lakhs.

The selected candidates whose applications are complete are being informed of the awards through their heads of institutions, and payment of their first half-yearly instalment is expected to be made shortly after the announcement of awards to them.

The selected candidates whose applications are incomplete have been asked to complete the same immediately.

beyond the age limit prescribed for compulsory retirement.

Recruitment is carried out in various Recruiting Centres throughout the country. After selection, boys join *I. N. S. Circars* Boys' Training Establishment, Visakhapatnam.

On arrival boys report to the New Entry Camp where they are issued with Naval uniform. The initial issue of Naval uniform is always free of charge and boys are expected to maintain it from their Kit Upkeep Allowance. Boys remain in the New Entry Camp for about 10 weeks during which time they are schooled in the elements of parade training, physical training, discipline and cleanliness. In order to find out appropriate branches for boys they are carefully observed, examined and given Selection of Personnel Tests. These clearly indicate the aptitude of the boys, and depending on these results they are selected for training in different branches of the Service, viz., Seaman, Stoker, Electrical, Communications, etc., and in their respective branches they are trained in the Main Camp.

On successful completion of the training, which lasts about 15 months, provided he is 17 years of age, a boy is advanced to Ordinary Seaman or its equivalent and is drafted to sea.

Conditions of Service

To be accepted in the Navy recruits must satisfy the following conditions:

(a) They must be between 15½ and 16½ years of age at the time of recruitment.

(b) They must be medically fit in every respect for service in any part of the world. Eye sight 6/6 in each eye.

(c) They must have an educational standard equivalent to a minimum of four years' pre-matriculation (6th Jamath).

(d) They will be required to eat food prepared by cooks of any community which will be served and eaten in a common mess. Two kinds of food are served in the Navy, viz., vegetarian and non-vegetarian. Boys are allowed to choose one of them.

(e) They must be prepared to serve in any part of the world and obey the regulations as laid down in the *I. N. Discipline Act*.

DEFENCE

(f) They must be subjects of the Indian Republic.

(g) They must obtain Parental/Legal Guardian's consent.

Pay and Allowances

(a) Basic Pay

Seaman and Stoker Branches—

	Rupees per ensem.
Boy	15
Boy after initial training.	17
Seagoing Boy ..	30
Ordinary Seaman.	36-1-37
Able Seaman ..	44-1-50
Leading Seaman ..	62-2-72
Petty Officer ..	90-5-105
Chief Petty Officer.	120-5-135

Communications and Electrical Branches—

Boy	15
Boy on completion of initial training.	17
Boy Seagoing ..	30
Ordinary Rate ..	52
Able Rate ..	55-5-60
Leading Rate ..	65-5-75
Petty Officer Rate.	90-5-105
Chief Petty Officer Rate ..	120-5-135

(b) Allowances—In addition to the Basic pay, the following allowances are admissible—

(i) Kit Upkeep Allowance—

Up to Acting Petty Officer ..	12-8-0
Petty Officer and above ..	13-8-0

(ii) Dearness Allowance—

Boys do not receive any Dearness Allowance—

Pay from Rs. 31-50	20
Pay from Rs. 51-100	25
Pay from Rs. 101-150	27-8-0

(iii) Hair-cutting and Washing Allowance—

Rs. 2 per month.

(iv) Good Conduct Badge Pay—

For every four years of service after becoming Ordinary Seaman or its equivalent a Good Conduct Badge may be awarded which carries an allowance of Rs. 3 per month. A maximum of three badges may be awarded carrying an allowance of Rs. 9 per month.

(c) Food, accommodation and medical aid is provided free to all ratings in the Navy.

Indian Farm-boys to be Trained in American Farms

Twenty-five Indian farm-boys are to be selected, preferably from Community Project or National Extension Service blocks, to go to the United States on April 15, 1954, under the International Farm Youth Exchange Programme sponsored by the National 4-H Club Foundation of U.S.A. They will learn about American farm life and farm people by spending five or six months as working guests of carefully selected American farm families. When they return to their own farms in India, they will help in organising young farmers clubs, similar to 4-H Clubs, and improve farm life in their home communities.

The 1954 programme is a continuation of the present programme under which thirty Indian farm-boys, who went to U.S.A. last April and who returned to India on November 13, have been sharing in the regular farm work and community life of their American farm host families.

Applicants for the 1954 programme must be 20 to 28 years old, of good character, in excellent health, able to speak English and competent to promote rural youth activities in India after their return. Preference will be given to boys from small or medium-sized farms who will return to their own farms

in India. Applicants must not be still in college and they must not utilise this programme for seeking admission into American universities or for seeking a job when they return to India.

The cost of travel from New Delhi to the selected American farms and return to New Delhi will be paid by the National 4-H Club Foundation, which is a privately financed agency affiliated with the United States Agricultural Extension Service in Washington. Free health insurance will also be provided. The American host farmer and his family will give free room and board, but each Indian farm-boy must take with him at least Rs. 1,200 and preferably Rs. 2,000 of his own money, with which to cover any expenditure for clothes, entertainment, camera, films, local travel and other incidental expenses which he may wish to make while in the United States.

Application forms may be obtained from any State Director of Agriculture, or direct from Sri R. L. Mehta, Deputy Secretary, Ministry of Food and Agriculture, New Delhi, and should be submitted in duplicate to the latter so as to reach him not later than December 7, 1953.

Leave

During the period of training Boys are granted one month leave with pay and issued with free Railway Warrants. Casual leave and other leave are not granted during training except on medical or extreme compassionate grounds. On being advanced to the rate of Ordinary Seaman or its equivalent in other branches they become eligible to sixty days leave once in every calendar year with free Railway Warrant. All leave in the Service is with full pay. It must be understood and remembered, however, that all leave in the Navy is to be considered as privilege and not as a matter of right.

Advancement

From Boy to O. D.—On completion of Shore Training provided a boy is 17 years of age he is advanced to Ordinary Seaman.

From O. D. to A. B.—Three years service as O. D. including nine months sea service. This may be reduced to a minimum of two years in the case of accelerated advancement.

From A. B. to L/S.—By selection after at least two years service as A. B. including six months sea service in that rate.

From L/S to P. O.—By selection after at least two years service as L/S

Equivalent rate in various branches

Seaman Branch		Communications Branch		Stoker Branch		Electrician's Branch	
		Signal	Telegraphist			L. Branch	R. Branch
Boy ..	..	Signal Boy.	Boy Telegraphist.	Stoker Boy ..	..	Boy Electrician.	
Ordinary Seaman.	..	Ordinary Signal Man.	Ordinary Telegraphist.	Stoker ..	..	Electrician's Mate II.	Radio Electrician's Mate II.
Able Seaman ..	..	Signalman ..	Telegraphist ..	Stoker Mechanic ..	..	Electrician's Mate I.	Radio Electrician's Mate I.
Leading Seaman ..	..	Leading Signalman.	Leading Telegraphist.	Leading Stoker ..	..	Leading Electrician's Mate.	Leading Radio Electrician's Mate.
Petty Officer ..	..	Yeoman of Signals.	P. O. Telegraphist.	Stoker P. O. ..	..	Electrician ..	Radio Electrician.
Chief Petty Officer.	..	Chief Yeoman of Signals.	C. P. O. Telegraphist.	Chief Stoker ..	..	Chief Electrician	Chief Radio Electrician.

including six months sea service in that rate.

From P. O. to C. P. O.—By selection after at least three years service as P. O. including 12 months sea service in that rate.

Examinations

Apart from the above, i. e., period of service to qualify for advancement, they must pass their respective professional examinations and possess—

O. D. to A. B.—Third Rate (Specialist) qualification;

A. B. to L/S.—(1) Education Test I of the Indian Navy;

(2) Second Rate (Specialist) qualification;

(3) Passed Swimming Test.

L/S to P. O.—First Rate (Specialist) qualification.

Vacancy

Advancement to a higher rate is subject to a vacancy existing in that rate.

NOTE.—In the Boys' Training Establishment, boys are trained as ratings and not officers of the Indian Navy. There is, however, nothing to prevent a boy becoming an officer if he shows sufficient initiative, keenness and integrity and possesses a suitable mental outlook and officer-like qualities. There are officers today in the Indian Navy who joined as Boys.

Amenities

Physical training and outdoor games form an important part of the curriculum of the Boys' Training Establishment. Boys are given every opportunity and encouragement to play all games in the Service. Library, Information Room, reading room and canteen are provided for boys, and regular picnics are also arranged for them from time to time.

Starch and Glucose from Tapioca Roots

The Central Food Technological Research Institute, Mysore, has developed processes for the preparation of starch from tapioca roots and glucose and sweet syrup from this starch.

Tapioca roots are grown in the southern parts of India and are widely used as foodstuff. They can be cultivated in comparatively poor soil and do not require much of irrigation. They are heavy yielders and are considered cheap raw material for starch and glucose manufacturing industries.

The fresh roots are completely cleaned and skinned. They are then reduced to shreds in a current of water. The starch granules which are carried away by the current are separated by allowing the water to stand in tanks. The starch settles down and the upper layer of water is decanted off. The starch so obtained is dried, powdered and packed for the market.

The sweet syrup was obtained by the acidic hydrolysis of the starch in an autoclave. It contained glucose and another sugar called maltose. The composition of the end product can be controlled by the use of the proper concentration of the acid and by the utilisation of correct pressure in the autoclave.

The Institute has also conducted a series of experiments on the problem of cold storage of tapioca roots. A combination of suitable temperature and humidity has been discovered. Under these optimum conditions, fresh tapioca roots can be stored safely for a period of about six months without deterioration.

The details of these optimum conditions and the results of other connected experiments are published in the November issue of *Vigyan Pragati*, the monthly Hindi bulletin published by the Council of Scientific and Industrial Research.

Crop Yield Competition for 1953-54

The Crop Yield Competition in respect of paddy will be held during the year 1953-54 also on the lines of the competition held in 1952-53. The competition will cover all varieties of paddy grown under any system of cultivation and prizes will be awarded from the firka level onwards.

The Crop Competition will be organised also in respect of jowar (cholam), bajra (cumbu) and potatoes. The Crop Competition in respect of jowar will be organised in Guntur, Kurnool, Bellary and Coimbatore Districts; the Crop Competition in respect of bajra will be organised in Coimbatore District, and the Crop Competition in respect of potatoes will be organised in the Nilgiris District.

Prizes will be awarded on the firka, taluk, district and State levels. In the villages in the Community Project areas, the Crop Competition will be organised from the village level in respect of all the selected crops, viz., paddy, jowar, bajra and potatoes, wherever they are cultivated.

New Endeavour to Aid Worker

By SRI V. V. GIRI, Union Minister for Labour

It is a great pleasure to me to be here today to inaugurate the first meeting of the Regional Board for the Madras Region under the Employees' State Insurance Scheme. As you are aware, I have been associated with the trade union movement for a long time, and it is but natural that every new endeavour to improve the lot of labour is for me the realisation of yet another of the many dreams which I have cherished all these years.

The Director-General has described the main features of the scheme in his speech. I would, therefore, deal only with those aspects of the Scheme which, I feel, deserve special mention or have awakened public interest or criticism. The Employees' State Insurance Act was passed by the Legislature as far back as 1948, and since then we have been striving to get the Scheme adequately implemented. A new venture of such a magnitude affecting nearly 25 lakhs of workers and benefiting, sooner or later, at least three times that number of dependants, requires a great deal of preparation and planning in the early stages, but even so I shall not conceal from you the fact that the Scheme has encountered many difficulties, both from within and without, which have considerably slowed down its progress.

Phased Programme

It was obvious from the very beginning that it could be implemented only in stages, and all our efforts were directed towards evolving a properly planned and phased programme of implementation. We chose Delhi and Kanpur for a start and were on the point of putting the Scheme on the ground when employers pleaded that the burden of implementation of the Scheme would place the industry at those places under a competitive handicap.

A solution was ultimately found which was to distribute the burden of

[From the Inaugural Address of Sri V. V. Giri, Minister for Labour, Government of India, at the inauguration of the Madras Regional Board of the Employees' State Insurance Corporation on 12th November 1953]



REGIONAL BOARD: Sri V. V. Giri, Union Minister for Labour, inaugurated the Regional Board of the Employees' State Insurance Corporation at the Madras Secretariat.

the employers' contribution among all employers in the country. The Act was accordingly amended to provide for the collection of an employer's special contribution during the period required for completing the process of implementation throughout the country.

Extension of Scheme

The Scheme was introduced in Delhi and Kanpur in February 1952 and later on extended to the Punjab in May 1953. We have been anxiously working for the rapid extension of the Scheme to the rest of the country, but there have been many unexpected difficulties. Besides employers and employees, who are the main contributors to the Scheme, and the Central Government, which is entrusted with the overall control of the Scheme, there are two other parties whose active co-operation is necessary, viz., the State Government and, under the panel system, the panel doctors.

The provision of medical care for insured persons under the Scheme is the responsibility of State Govern-

ments. They have also to bear a part of the cost of providing the medical care. Sometimes State Governments feel that the one-third share of the cost of medical care which they are called upon to bear is too much for them and that an effort should be made to pass on a part of the burden to the Corporation. The Corporation and the Central Government have then to embark on the prolonged process of convincing the State Government concerned with facts, figures, persuasion and entreaties. After the State Government's co-operation is assured, there are many arrangements to be made and details to be worked out.

Medical Care

The State Government has to make reasonably satisfactory arrangements for the actual rendering of medical care. In some States, it is not immediately possible, for lack of facilities, to introduce the service system. In those States, the possibility of resorting to what is called the panel system has to be explored, which is not an easy matter either. Panel doctors who are not fully aware of the

Gopashtami

By SRI V. C. PALANISWAMY GOUNDER, Minister for Animal Husbandry and Harijan Welfare

It is my pleasant duty to inaugurate the Gopashtami Week, a week during which people are called upon to focus attention on the welfare of cattle. The moment is, therefore, opportune for us to take stock of the situation and to resolve to do our best for the welfare of cattle, a species which labour side by side with men for the betterment of mankind, in the real spirit of the teachings of the great Gita "to do one's duty without expecting a reward".

In an agricultural country like ours, wherein more than eighty per cent of our population depend mainly on agriculture, cattle play a very important role in our economic life. The whole country requires and must use a working bullock. Whatever may be the outcome of the future, as mechanised farming or co-operative farming on a large scale, the main motive power shall still come from the bullock. Hence our country has to depend almost entirely on its cattle for the advancement of agriculture, for plough, transport or mhoite work. The value of such cattle labour in our country has been estimated at about 400 crores of rupees per annum.

The Ideal Food

The whole country needs an efficient milk producing cow. The value of milk and milk products in the diet is very well known to all. Milk is an ideal food as it contains all the essential nutritive elements and vitamins in the most assimilable form. The value of dairy products produced in our country has been estimated at 300 to 400 crores of rupees per annum. Though the cattle population in our country is large, the average consumption of milk per head of population in our country is very small when compared with other countries. There is room for great improvement in the efficiency of the work-bullocks and still greater need for increased efficiency in milk production. These objectives could be achieved by controlled breeding and by better feeding.

Now for the breeding aspect of the problem: The cow should be looked upon, not as a producer of bullocks, nor as a giver of milk nor as a supplier of manure, but as a combination of all these in one. So, attempts should be made to breed a dual purpose cow.

So, our country needs a cow, the male offspring of which does justice to the yoke and the female one to the milk pail.

Pedigree Breeds

There are two ways of accomplishing this objective, depending upon circumstances. If you have got any recognised breed and if you want to improve upon it, firstly you should have a good pedigree breeding bull. This bull is selected with great care for its pedigree, namely, milking characters of its dam, grand-dams, sisters and daughters and conformation. Only such selected bulls should be used on all the female stock. All other male stock are castrated periodically. The female stock also should be selected and built up, by culling out the undesirable ones periodically.

Government Khadi Scheme

It is understood that a variety of cloth produced from mill waste cotton yarn or from a mixture of mill yarn, mill waste cotton yarn or both with khadi yarn, by private merchants at Tiruppur and other places, is being sold as Government khadi in the City of Madras and other places on a large scale.

The public are requested to note that there is no guarantee that the khadi sold by private dealers is genuine khadi, that Government khadi is sold only at the Government Intensive Khadi Centres and by their authorised agencies, such as the Madras Industries Association, Mount Road, Madras, and that Government khadi goods bear the Government stamp, containing the name of the Government centre at which they are produced. The public are requested to look for these stamps on the khadi purchased by them.

In the Madras City, khadi would also be available at the City Khadi Office, 86, Broadway, Madras.

Necessary pedigree and milk yield records should be maintained as it will give valuable information in building up a good herd. Thus, in course of time, you will be able to build up a better herd. A research scheme to improve the milking qualities of the famous Kangayam breed is being carried out at the Pattagar's farm at Palayakottai under the auspices of the Indian Council of Agricultural Research and the local Government.

Upgrading

If, on the other hand, you have only a non-descript breed, it could be improved upon by grading up with any recognised breed suitable to that locality. A bull of a recognised breed is used for mating the females of the inferior stock to raise superior offsprings. That means all local male stock should be castrated before they come up of breeding age. This process is repeated at each successive generation until the nondescript blood is gradually replaced at each generation.

By the fifth or sixth generation, the herd would have taken up the characteristics of the breed to which the bull belonged. This is what is attempted in selected parts of our State, under the Key Village Plan.

Better Feeding

You may have a good cow with all the inherent qualities of milk in her and if she is not well fed, you will not get the maximum production from her. On the other hand, if you have got a nondescript cow with no inherent qualities of milk in her and if she is fed well, she will only fatten herself with no increase in milk yield. So, better feeding should always go hand in hand with controlled breeding.

To maintain our animals in good condition, they should be fed with concentrates like rice bran, cottonseed, oil-cake and dhal husks and with adequate quantity of green grasses and dry fodder. If our village cows are fed adequately, the milk yield is sure to increase from 30 to 50 per cent. Well-fed bullocks will likewise do better work.

Cattle are indispensable to an agriculturist, hence every agriculturist

is a cattle breeder himself. There is no use of owning a large number of weaklings competing for the limited supply of cattle feed. Better and more efficient work can be turned out by fewer strong and robust animals; so also with milk. There is also a proverb in Tamil that the prosperity of a ryot can be estimated by the condition of his cattle.

Fodder

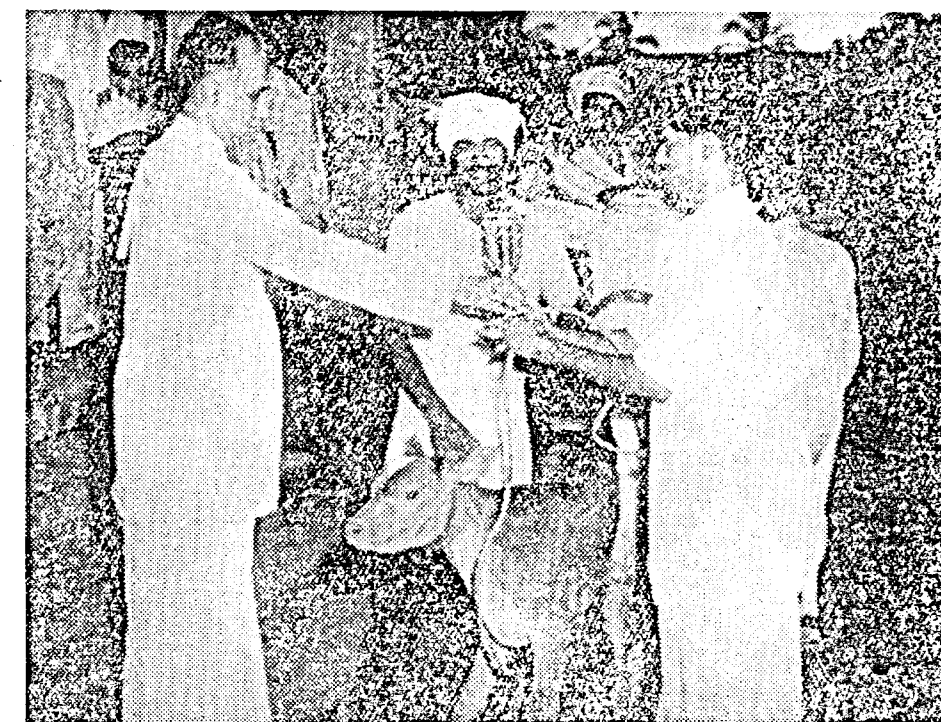
Cultivation should be carefully planned to provide sufficient fodder in reserve for your stock. Those who have sufficient lands should set apart a portion, say 1/10 or 1/20 by rotation for the growing of fodder crops. The straw of cereals can be stored as fodder. When green fodder is available in plenty, it can be converted into silage which can be fed to the animals during summer months when green fodder becomes scarce. The process of silage making is very simple and the departmental authorities are always ready to render all the help when needed.

To keep the animals in good condition and to maintain them economically, you should have plenty of grazing areas. If you go on to the Kangayam tract, you will find that grazing areas are being provided in their own patta lands by every ryot and the whole area being fenced with a live fence of *mullu kiluvai*. The grazing areas are only temporary pastures being worked in rotation. The grazing areas should be improved upon by proper bunding according to the slope of the land to prevent soil erosion and to conserve rain water. They should be enclosed and protected from over-grazing.

Special resistant nutritive varieties of pasture grasses should be established and periodically the weeds should be removed before flowering. In places where there are no facilities for grazing areas, the animals should be stall fed.

Care of Cows

Unfortunately, cows are cared for, only so long as they are in milk. Immediately the cow becomes dry, she is sadly neglected. But I must tell you that during the dry period, the cows should be kept on good pasture and when the cow is in calf, she should be fed with concentrates at least one to two months before calving. In urban areas, it is difficult to maintain dry cows.



GOSAMVARDHAN WEEK: Sri V. C. Palaniswamy Gounder, Minister for Animal Husbandry, awards a prize to Sri Mangali Pillai whose cow was adjudged to be the best at a special exhibition held recently at the Veterinary College, Vepery.

To obviate the difficulty, the Government have opened a dry stock farm close to Madras to maintain the dry cows on a reasonable cheap monthly payment. After calving they are sent back to the owners. There is another Salvage Farm run by the Madras Co-operative Milk Supply Union. While these two farms have demonstrated how this problem of dry cows could be solved, they are not big enough to take in all the dry cows in the State. Many more such Salvage Farms should come into existence throughout the State. Co-operative effort is needed.

Welfare of Calves

Calves should be taken care of properly from birth itself, since they are the basis for the future development and improvement of the herd. They should be given enough milk for a proper growth and they should be fed with concentrates also, when they are able to take them. Unfortunately this aspect has not been realised by the milk vendors in cities. The calves are stunted milk and therefore they do not thrive at all.

Furthermore, some of them actually hasten their death by artificial means and induce the cow to continue to yield

milk by displaying the stuffed dummy calf before it. This cruel practice should be put an end to. If the milk consuming public insist on not taking milk from such cows, such evil practices could be stopped. There are very few Goshalas worth the name in the Madras State. It is my earnest desire that the few that function should reorganise their activities so that modern methods are adopted to improve the quality of the stock in their charge.

Central Council

A Central Council for Gosamvardhan has been constituted in 1952 with the objective of effecting all-round development of cattle throughout India. Under its auspices, and that of the Government of Madras, the Gosamvardhan Day was celebrated during the Gopashtami Week 7th November to 14th November 1953.

I hope the farmers will take their due share in these celebrations. We are traditionally worshippers of the cow. Let us make her worthy by looking after her proper feeding and care. She will then be the source of our prosperity and therefore of our veneration.

—(A.I.R., Madras)

use to which contributions are being put, or are proposed to be put, or of the additional burden which are steadily being placed on the Corporation are inclined to feel, and often to express themselves quite strongly, that the payment proposed to be made to them is meagre. Thus there are numerous difficulties to be overcome before the Scheme can be introduced in all States. All things take time.

It will be one of the main duties of the Regional Board to ensure that better progress is made in the implementation of the Scheme throughout the country and that a better standard of service and satisfaction is rendered to workers. A considerable measure of decentralisation has been envisaged and it is earnestly hoped that the activities of the Regional Board will lead to more expeditious handling of the many details that arise in the day-to-day administration of the Scheme.

I hope that with the co-operation of all the interests represented on the Regional Board, there will be rapid progress in the implementation of the Scheme in this State. This is particularly important as employers in this Region, as elsewhere, are paying the employers' special contribution without at present getting any direct return, and it is only fair that the period of payment without benefits should be as brief as possible.

Service System

Many of you are no doubt aware that the treatment now provided under the Employees' State Insurance Scheme is on what is called the service system. State Governments have opened special dispensaries and have employed full-time doctors, with no right of private practice, to provide treatment to insured workers. Such an arrangement may not always be possible, at any rate in the early stages of the implementation of the Scheme in places where existing medical facilities are inadequate and there are large concentrations of workers.

In those places, the possibilities of what is called the panel system have to be explored. Under this system, private medical practitioners are selected to provide medical treatment to insured persons. An insured person is entitled to select his doctor and to that extent derives a satisfaction which is denied to him under the service system. Payment to these doctors is made on the basis of a capitation fee

per insured person per annum. It is unnecessary for me to go into the comparative merits or otherwise of the two systems. Each one has its advantages and disadvantages.

If the tendency to save on medicines is, up to a point, inevitable under the panel system, there may be greater scope for sympathy and understanding under the panel system than under the service system. Apart from arguments based on the intrinsic merits of the two systems, the choice of the system may depend, in the early stages of the implementation of the Scheme, largely on the medical facilities available in a State and the speed with which arrangements can be made to set up the service system.

Existing Arrangements

A number of progressive employers have been providing medical care and treatment of a high standard to their employees and sometimes even to their families. On the introduction of the Scheme, the State Government will take over the responsibility for providing medical care to insured persons. In order that the existing arrangements made by the employers may be fully utilised even under the Scheme, the Corporation has been considering the question of utilising the facilities provided by employers on the basis of suitable financial arrangements. They have come to certain tentative decisions which are under discussion between the Corporation and the various State Governments.

We now have experience of the working of the Scheme in Delhi and Kanpur for a period of over one and a half years and in the Punjab for a period of about six months. The principal cash benefits under the Scheme viz., sickness benefit and maternity benefit, became payable in Delhi and Kanpur from the 23rd November 1952, and will become payable in the Punjab from the middle of February 1954. Our experience of cash benefits so far is thus very limited both in respect of time and area.

Cash Benefits

On the whole, however, such experience as we have in respect of cash benefits has been favourable. The payment of cash benefits has generally given satisfaction to insured persons. The claims made have not been unduly high. In regard to medical care, however, complaints have been more numerous—presumably because

medical care is comparatively a subjective matter. It is not always possible for a doctor, whether he be a service-doctor or a panel-doctor, to prescribe the course of treatment which the patient considers is necessary for him. It is here that the building up of mutual trust and confidence between the doctor and the patient will go a long way towards ensuring contentment and satisfaction.

This necessarily takes time, but I am sure that as time goes on doctors serving industrial labour will develop the necessary sympathetic outlook and attune themselves to their patients. Efforts are also being made to improve the medical care in those respects in which it has been found wanting. For example, in Delhi, proposals are under consideration to provide part-time specialists for the purpose of looking after insured persons.

Hospitalisation

There have been complaints that hospitalisation should be provided under the Scheme to a greater extent than hitherto. The Corporation considered the matter last year and decided that efforts should be made to provide hospitalisation on the scale of one bed per 1,000 insured persons. It also considered the question of provision of medical care for families which under the Act could be provided at the request of the State Government. The Corporation intends to provide medical care for families also, but in order that the cost might remain within the resources available, it may be necessary to prescribe some qualifying conditions and to restrict medical care mainly to outdoor treatment.

In view of the hitherto slow pace of implementation of the Scheme, the Corporation has found it possible to effect appreciable savings, which have, for the time being, been invested in Government of India securities. I have a strong feeling, however, that the proper way of utilising these surplus funds would be to divert them for the construction of hospitals or annexes to existing hospitals for insured persons as early as possible.

The Corporation is already examining how this can be done. In order that the limited funds available may be utilised to the best advantage, I feel that where possible, annexes may be added to existing hospitals and that separate hospitals should be set up only where there is a very large concentration of industrial workers.

Joint Venture of Many Parties

By Dr. U. KRISHNA RAU, Minister for Industries and Labour

This Employees' State Insurance Act was passed by the Legislature in 1948 and it has taken time to be implemented in certain parts of our country. Delhi and Kanpur are now working this Scheme and I have had the privilege of visiting these centres and seeing for the first time the working. This Scheme is a venture in which many parties are associated. The Central Government, the State Governments, employers, employees and the medical profession must all work together if it is to be a success.

The benefits under the Scheme consist of medical care which is in kind, and cash benefits in the event of sickness, maternity and employment injury. The Act in the first instance applies to all factories using power and employing 20 or more persons and engaged in a manufacturing process. Seasonal factories and members of the Armed Forces are excluded. Persons drawing a monthly salary of over Rs. 400 are excluded from the scope of the Act.

Provisions

The Act provides that its provisions may be extended to any other establishment, industrial, commercial or agricultural, in the future. In the course of time, medical benefit may be extended to the families of the insured workers also. This Scheme has been implemented in Kanpur and Delhi with effect from February 1952 and in Punjab from May 1953.

It is proposed to implement the scheme in the Coimbatore District of our State. In the whole of our State we have 1,441 employers with a total number of 222,283 employees. At the present moment we propose to implement the Scheme in Coimbatore which has 100 employers and 36,000 employees. The medical benefits would consist of out-patient treatment in dispensaries specially to be set up, free domiciliary visits where house

visitations are warranted and in emergent cases free hospitalisation in recognised hospitals. All medicines would be given free of cost to the worker. In the case of maternity, ante-and post-natal care would be provided.

The entire medical benefit is to be organised and provided by the State Government, although a major portion of the cost thereof would be borne by the Corporation. Cash benefits would be paid by the Corporation by establishing small local offices in the various localities and places where the Scheme is implemented.

Administration

For administering the Scheme, the Corporation has set up five Regional Offices with Headquarters at Calcutta, Bombay, Kanpur, Delhi and Madras. The Madras Regional Office has jurisdiction over the States of Madras, Mysore, Hyderabad, Travancore-Cochin, Coorg and the newly formed Andhra. Regional Boards have therefore been set up for each of the regions, consisting of representatives from the State Governments, the employers and the employees. It will be presided over by the Labour Minister of the area where the office is situated.

This Regional Board is purely advisory. The Union Labour Minister referred to a few of the problems that will have to be solved. The first is whether the Panel system or Service system would be better. This of course depends upon the locality. In Kanpur

and Delhi the Service system has been found to be more advantageous. Perhaps it would be better to associate private practitioners with the Scheme for the full utilisation of existing medical personnel.

There has been some difference of opinion between the Indian Medical Association and the Corporation with regard to the amount payable to doctors for each insured person. The Indian Medical Association has held that the present fee that is proposed to be paid is quite inadequate for covering the expenses which a doctor will have to incur and the time he will have to spend on the cases that will come up to him. There has been a difference of opinion with regard to the sickness rate and the absenteeism rate.

But this will have to be worked out amicably. Having for many years worked as the President of the Indian Medical Association, I find myself in a rather embarrassing position today as I have been called upon, as Minister of Labour, to administer this Act in this area. I am, however, sure that for the successful working of this Act, goodwill and co-operation of all is necessary and I hope that I will have that in an abundant measure.

Doubts have also been expressed as to the provision for hospitalisation of serious cases and the administration of costly medicines. Here again, as I have said before, trust begets trust and it is with that spirit that I prepare to answer these difficulties. These are problems which the Regional Board will have to consider and give their recommendations. I have necessarily a dual role to perform. One as the Chairman of the Regional Board giving advice to State Governments and another as the Minister of Labour with the duty to implement these recommendations. I hope I shall not find them inconsistent or contradictory.

I do not at the present moment propose to commit the State Government in any manner whatever. But I can assure those present here that with the help of my colleagues I shall do my best to see that this Act is worked in the spirit of co-operation and harmony. That is the essence for its success.

Do You Know ?

That in 1945-46, the number of tractors available with the Department of Agriculture (Government of Madras) was six. And that in 1951-52 the number was 293.

In 1945-46 the Agricultural Department had no bulldozer attachments.

In 1951-52 the Department had 154.

(From the speech of Dr. U. Krishna Rau, Minister for Industries and Labour, on the occasion of the inauguration by Sri V. V. Giri of the Ad Hoc Regional Board to be set up under the Employees' State Insurance Act, Madras.)

Economics of Consumption

By SRI. J. M. LOBO PRABHU, I.C.S.

The Five-Year Plan did not invent mixed economy. It had existed before, in India and other countries, even Communist countries in which private enterprise is now reappearing. What the Plan did was to recognise mixed economy, defining the public and private sectors so that they could support each other. The declared objective was "a progressive widening of the public sector and a reorientation of the private sector to the needs of a planned economy".

There should be no mistake about the size of the public sector. The gross value of the assets of the Central and State Governments (excluding Port Trusts, Municipalities and other semi-public agencies) is about Rs. 1,236 crores, railways being Rs. 837 crores and irrigation works Rs. 230 crores. Against this, the assets of the private sector are estimated at Rs. 1,500 crores, factory establishments accounting for Rs. 1,100 crores, plantation Rs. 100 crores and motor transport Rs. 130 crores.

State and Private Enterprise

It would appear that State and private enterprise are about equal, with this difference that a good part of private enterprise supplies to the requirements of the Government. As far as the employment pattern is concerned, even after allowance for the large number employed in the Civil and Defence establishments, the State's share is smaller compared with the large number employed in trade, professions and various occupations.

This follows from the fact that the tax revenues of the State form only about 7 per cent of the national income. Considered from this point of view, the State in India is less important in the economy than in U.K., where tax revenues are 35 per cent of the national income, in U.S.A. 23 per cent and in Japan 27 per cent.

The Public and the Private Sectors

Is there any natural antagonism between the public and private sectors? In several respects, the two sectors are complementary. To the extent the State expanded basic services like power, irrigation, roads and communications, the private sector is provided

with means and channels to expand itself, which may be beyond its own ability.

To the extent expenditure of the State increases incomes and purchasing power, the private sector is assured of its market. In this matter, the contribution of the State is very much larger than suggested by its volume, for the reason that the incomes assured by the State are first, certain and regular; and second, are in the aggregate large and massive, compared with those from diffuse and diverse private employments.

National Income

In respect of purchasing power, development activities of the State to capitalise human and material resources, increase general purchasing power on which private enterprise rests. Though the process may be indirect, it is certain that higher productivity and efficiency are reflected in sales of new and more items.

At the same time, the private sector is no less important to the public sector. Representing as it does 93 per cent of the national income, it is the source of the taxes, loans, and income of the State. The question which is being asked is, if the Five-Year Plan did not ignore this sector, with the result that there is not only unemployment in this sector, but the public sector itself is adversely affected by falling taxes and failing enterprises. It is argued that if this sector had been activated more fully, the public sector which is functional, would have naturally grown.

It is perhaps not correct to say that the Five-Year Plan has neglected the private sector. The Plan covers every department of national activity. The Plan starts with the ideal of full employment for which it recognises that the capital-labour ratio should be increased. This is subject however to two conditions, first, that incomes should not outrun production, and second, that it is therefore necessary to rely on voluntary unpaid labour.

Free Labour

The validity of these two conditions is questioned. In respect of free

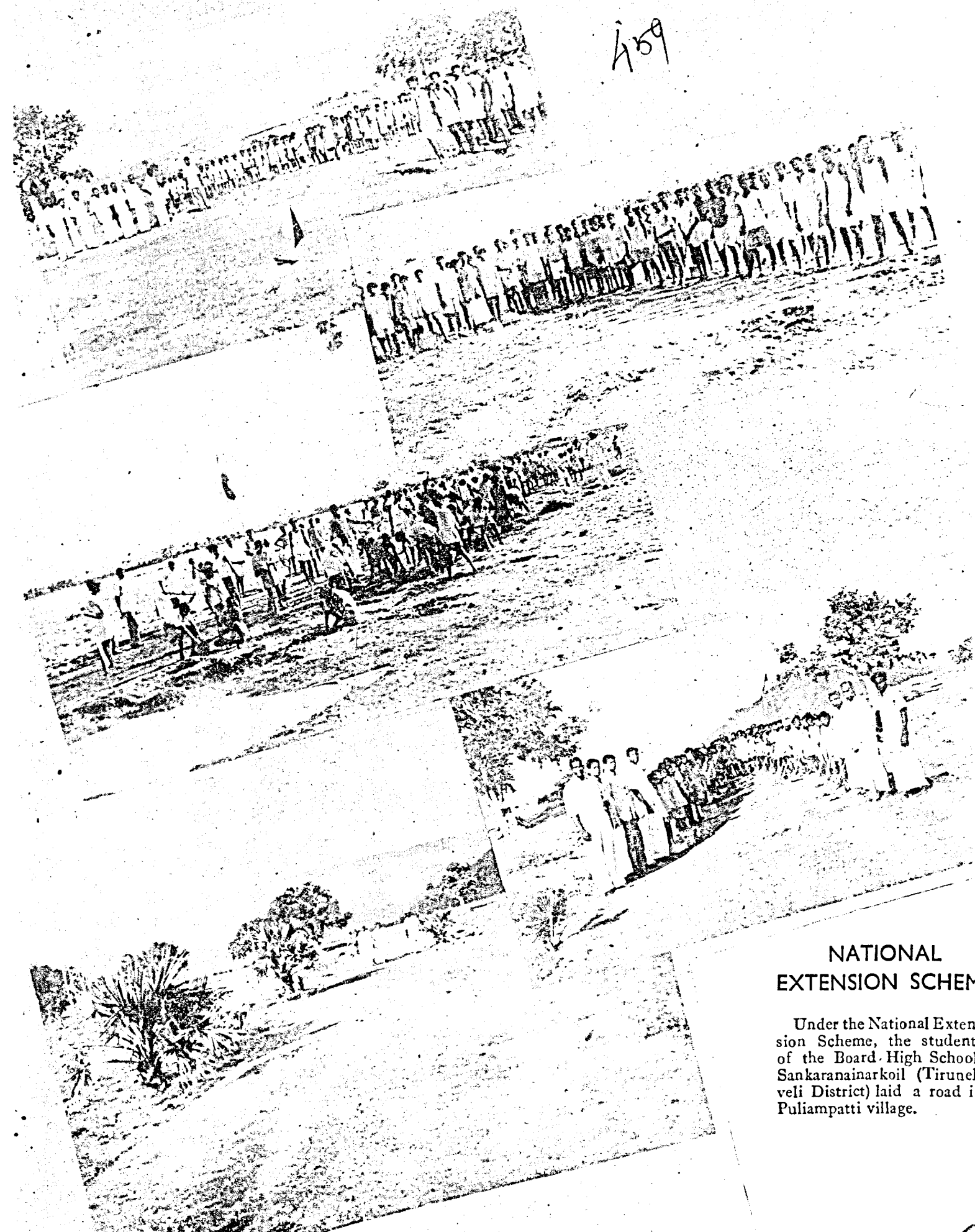
labour, it is contended that this could not, even under pressure of propaganda, be anything but spasmodic and small. It is further argued that labour required for public works is largely rendered by the landless, who are unwilling and unable to donate it. In any case, if they did so, they would receive nothing directly to augment their purchasing power, and what the community receives indirectly from public works would be intangible and distant.

It is therefore argued that the labourer is worthy of his hire not only for his own sake, but for the sake of the community the prosperity of which depends not merely on its amenities, but also on the income of all its members. Any money spent for new employment has what Keynes has described a 'multiplier effect', the man paid in his turn employing some four more in the chain reaction of his increased purchasing power.

Food as Factor

The question perhaps deserves to be re-examined, if idle labour should not be mobilised, by at least part payment, the balance being deferred till the benefit of the new work materialises. This touches the first condition that incomes should not outrun production. It is feared that this may lead to inflation by increasing pressure on articles in short supply, particularly food. There are some who consider that food scarcity is a bogey, that in 1952-53 the food production touched pre-1939 levels, that in the current year with the good rain received, it may well be high enough to cause a serious collapse of prices.

It is also argued that there are limits to the food which can be consumed, that people, employed or unemployed, are eating as much as they can, and that in fact, if their incomes were higher, they would eat less grain, but eat better things instead. This school also thinks that food shortage was due to food controls, which discouraged production to increase fallows even in the last three years by 7 per cent and distorted distribution involving pockets of scarcity which induced cyclonic movements of price.



NATIONAL EXTENSION SCHEM

Under the National Extension Scheme, the students of the Board High School, Sankaranainarkoil (Tirunelveli District) laid a road in Puliampatti village.

Refresher Courses for Medical Practitioners

By SRI A. B. SHETTY, Minister for Health

These refresher courses were started in Bellary in July this year and they have been held in the succeeding months at Vizag, Guntur and Coimbatore.

Next, it will be held in three more centres, namely, Tanjore, Madurai and Madras City. Next year the courses will be held in other district centres so that in the course of three years there will be a refresher course in every district headquarters. By holding these courses in different centres and shortening the duration of the course it has been made more convenient for medical practitioners in all parts of the State to avail themselves of the benefit of the course.

Keeping Pace

Such refresher courses of various kinds, shorter or longer in duration, are organised by the Universities and medical schools in most western countries as they are considered essential to keep doctors abreast of all new developments. Most practitioners develop a certain routine after a certain number of years and they have great difficulties in keeping pace with the rapidly changing face of therapeutics.

It is important, therefore, that practitioners should have periodical retraining. In the Soviet Union, physicians are invited to attend a course of three to four months duration every three years. Those working in rural areas are more in need of such refresher courses since it is harder for them to keep up with the rapid changes that are taking place. In America, they prefer to use the term "continuation study" instead of the term "refresher course" which may mean that the course is intended to make practitioners remember again what they once knew and have forgotten.

Continuation of Studies

Courses of longer or shorter duration should be available at regular intervals at the teaching centre or at selected hospitals so that the general

(From the address by Sri A. B. Shetty, Minister for Health, at the inauguration of the Refresher Course for Medical Practitioners at Kozhikode on November 5, 1953.)

practitioner may have the chance to improve himself after he sets up practice. The practice of medicine demands life-long continuation of medical studies, if the practitioner is not to become a back number. Yet the education of a general practitioner is left to his own devices to a large extent at the end of his years of formal training. Even selective reading of the mass of current literature requires some guidance.

The first essential for keeping oneself in touch with the advances in medicine is access to medical literature and especially periodicals. One must read standard medical journals, such as those published by the American and British Medical Associations and those published by the Medical Associations in this country. The second requirement is contact and discussion with colleagues and eminent practitioners, visits to teaching or other big hospitals to see the work that is being done there by experts in their special branches.

A year or two of foreign study or visits to foreign hospitals will be of great benefit to doctors. It will enrich their experience by wider contacts with the world of medicine and broaden their outlook by a greater range of interests. British doctors used to visit Continental countries formerly, now they go to the United States also, and such visits are found stimulating and educative.

Visit of Medical Scientists

Our medical men have been greatly benefited both personally and professionally by the visit of the team of 14 medical scientists who came and spent a month here in February this year. They found here many diseases which were new to them or infrequent in their experience. The wide prevalence of communicable diseases seemed to them one of our greatest health problems and the proper method of meeting the situation would be better environmental sanitation and improved nutrition. They found public health and preventive work in a stage of under-development in this country. They have rightly observed that the establishment of even the best curative services would not materially improve

the health conditions of this country and that it is also impossible, for economic reasons, to establish modern curative services for the tremendous number of disease-ridden individuals existing in India at present.

Indian medicine seemed to them more interested in cure than in diagnosis. Thoracic and cardiac surgery has developed fast in the last few years. Here lack of men trained properly in anaesthesia and insufficient development of X-ray diagnostic work are among the factors that impede the progress of surgery. Few of our medical men choose to undergo training in radiology or anaesthesia.

Use and Abuse of New Drugs

This may be said to be the age of chemotherapy, antibiotics, vitamins and hormones. Antibiotics have become a sovereign cure for many primary bacterial infections. They are used on such a large scale that the cost of present-day medical treatment has become prohibitive to individual patients and a heavy burden to the State. Some of the new powerful drugs are lavishly used even for trivial cases. The incidence of strains of organisms resistant to antibiotics seem to have reached alarming proportions in hospital populations in the West. This acquired bacterial resistance threatens ultimately to extinguish the usefulness of the present antibiotic.

The present day wonder-drugs have to be used with care and discrimination. Much is said nowadays about A.C.T.H. and cortisone and their use for treating a number of serious diseases. At the same time, warning is given that they have to be prescribed with great care lest they should cause distressing symptoms which doctors call "side-effects" by being given for too long a period or in too high a dose.

A great many diseases in our country are due to malnutrition. Most of the patients in the general wards of our hospitals are under-nourished. When they are discharged after treatment, a large number of them get a relapse, or suffer from further complications. The administration of vitamin preparations in deficiency diseases shows

remarkable therapeutic effects. There has consequently been excessive and unnecessary use of vitamins. Vitamin preparations are now prescribed and consumed on an enormous scale with little or no benefit in many cases. The proper thing to do is to correct the diet as a whole and to give vitamin supplements only in necessary cases.

The Cost of Health

The habits of patients and doctors alike have become such as to lead to the extensive and indiscriminate use of many medicines which cannot be considered necessary on medical grounds. Commercial advertisement of drugs is, to a great extent, responsible for this state of affairs. Doctors also succumb to the blandishments of manufacturing concerns who inundate them with samples of new preparations, making extravagant claims in regard to them in attractively presented literature.

The rising cost of the drug bill has now become one of the gravest and most urgent problems confronting the National Health Service in Britain. This increase in expenditure is said to be due to the increasing use of new, valuable and expensive drugs and to the increase in the proportion of proprietary remedies, some of which are especially expensive. The British Minister of Health has recently made an urgent appeal to general practitioners to pause to consider each time they prescribe what and how much was justified on clinical grounds. Doctors should educate patients in the use and abuse of drugs. Some diseases are untouched by medicine. A shocking amount of medicine is said to be wasted in the treatment of chronic rheumatism.

Doctors as well as patients have to guard themselves against spurious and substandard drugs which are now finding their way into the market. The defects in the present Drugs Act will have to be rectified and the Act will have to be extended to Part B and Part C States also. The drug control machinery will have to be made more effective.

Psychosomatic Medicine

It is now generally recognised that health and disease are necessarily psychosomatic. It is impossible to treat states of mind apart from states of body or states of body apart from states of mind. Doctors have learnt to respect psychotherapy as a result of

war experiences, when emotional stresses and strains caused a wide range of disorders in both civilians and combatants. Chronic starvation and certain tropical fevers are said to cause mental breakdowns. The incidence of mental ill-health must be high in this land of hunger and poverty. The provision we have for the care and treatment of mental patients is far short of requirements, since we have only two mental hospitals in this State.

The psychosomatic approach to an illness is a method of approach which no good doctor can ignore. Every doctor should have a sufficient knowledge of psychological medicine so that he may tackle his patients by both physical and psychological methods.

Family Planning

The control of the growth of population is now considered a problem of major importance to the future health and welfare of the peoples of many countries. The growing pressure of increasing population on our natural resources has become a matter of serious concern in planning for the social and economic progress of this country. The Planning Commission have dealt with the importance of family planning and population control and put them among the priorities in the health plan.

Medical practitioners, health visitors and maternity assistants must be acquainted with sufficient, effective and chief methods of preventing conception so that proper advice and directions may be given to married persons who require such information and advice.

Facts and Figures

The total amount so far spent on materials purchased for the Damodar Valley Project is Rs. 29.80 crores, of which materials from indigenous sources cost Rs. 8.96 crores.

The gross traffic receipts of the Indian Railways during 1952-53 exceeded an average of Rs. 74 lakhs a day, against a daily average expenditure of Rs. 61 lakhs.

The total capital invested in mechanised soap factories in India is about Rs. 12.5 crores.

Foreign Medical Fellowships

Certain international and foreign agencies have been offering fellowships to Indian nationals for post-graduate training in medical and allied subjects every year. The Ministry of Health, Government of India, propose to prepare a panel of names of suitable candidates early in 1954 for fellowships that might be made available during that year.

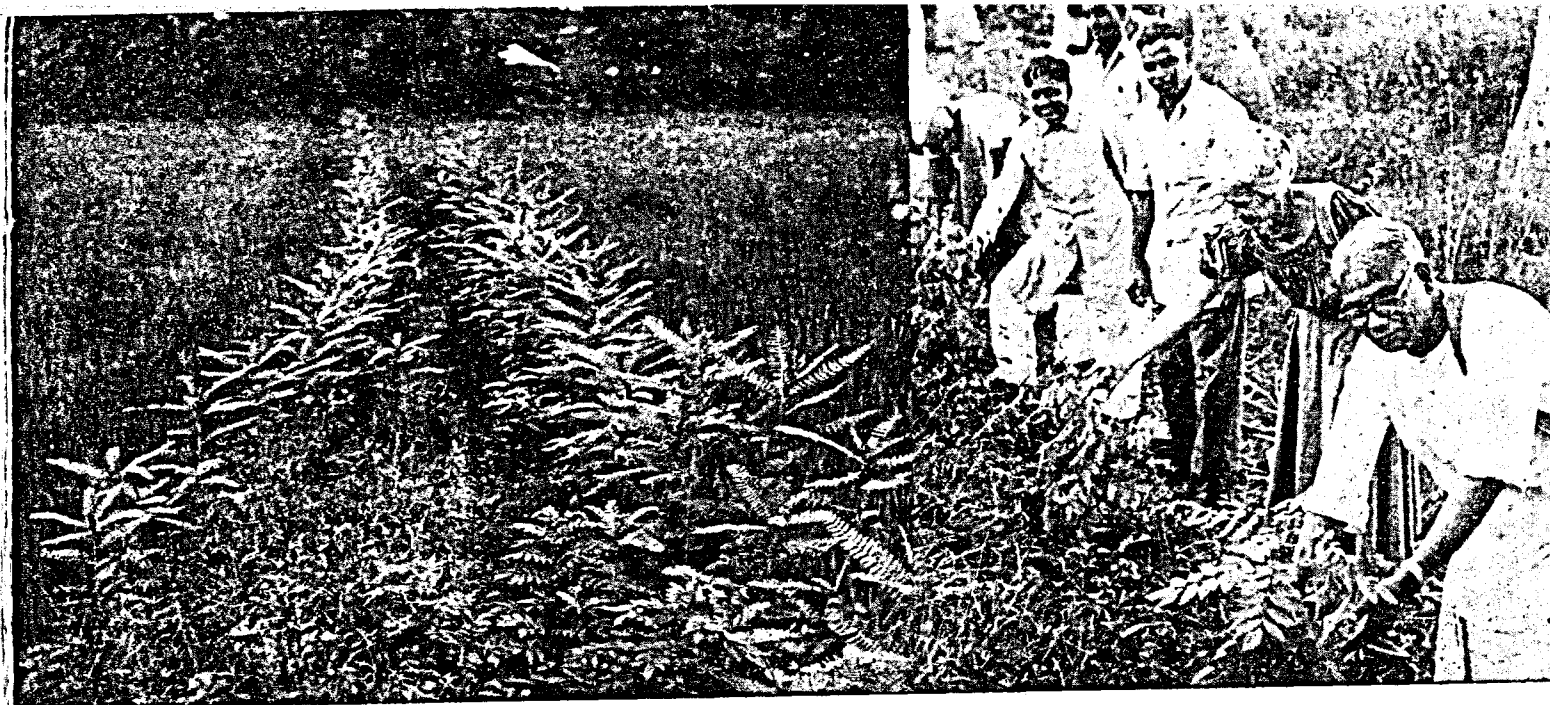
The candidates must be Indian nationals who are in permanent service in medical colleges or their associated hospitals or in other medical institutions under the control of the Central Government, State Governments, local authorities or Government-sponsored voluntary organisations. The sponsoring authorities are required to give a guarantee as regards utilising suitably the post-graduate training obtained by the candidates on completion of the fellowships.

Eligible candidates who desire to avail themselves of the fellowships should apply through the State Governments concerned or, if they happen to be employed in Central Government Departments, through the Heads of those Departments, to the Ministry of Health, Government of India, New Delhi, in the prescribed form, which can be obtained from the Directorate-General of Health Services, New Delhi.

Applications should reach the State Governments or the Heads of Central Government Departments not later than December 15, 1953.

The total collections under the Small Savings Scheme amounted last year to Rs. 40.1 crores.

The new Andhra State grows over three times the tobacco grown in the Residuary Madras State, but its average yield of tobacco is nearly 3 lb. less per acre.



GREEN MANURE: Aided by enthusiastic volunteers, the Collector of Chingleput plants Glyricidea, a useful green manure plant, at the Theosophical Society, Adyar.

PUMP IRRIGATION: Sri M. Bhakthavatsalam, Minister for Agriculture, inspects the working of a filter-point pump at Ayarpadi village in Arkonam Taluk.

FOR BETTER FARMING



COLLECTORS' CONFERENCE: The Chief Minister addressing a conference of District Collectors, held recently at the Madras Secretariat.



PLANNING

17

MADRAS INFORMATION

Waste of National Wealth

They argue that since controls have crumbled, the food problem is now capable of solving itself. At worst, they argue that food prices can always be controlled by automatic levy of all stocks when prices pass a fixed line, declared in advance. This would naturally keep prices below that line. In their opinion, the paramount consideration is to fully employ all labour, money being found without fear of inflation. As this idle population already consumes food and social services, labour in any form rendered by them is addition to the country's wealth, as well as their own.

The spectacle of idlers, beggars and the unemployed in streets and villages is regarded by them as the greatest waste of national wealth. There are innumerable tasks waiting for them, if only the money can be found to set them working. The whole question is important as it is complicated and deserves more precise attention from economists than it has received. The economic climate is threatening to break, not only from the unemployment already in evidence but from over-production of grain which will affect the large agricultural sector.

Clash in Interests

Money is the basis of the Plan, as it is of all development. In respect of it perhaps, there is a clash in the interests of the private and public sectors. For the public sector, the income of which is relatively inelastic, it is necessary that money should not lose its value. This is the basis of the policy of disinflation which the Plan has assumed.

But the private sector cannot expand, if prices fall, for at least two reasons—first, the purchasing power of the consumers is reduced and second, even if manufacturers receive some advantage from the low prices of raw materials, they lose much more from the low prices of manufactured articles. The disinflation enforced during the last two years has affected the market, and is reflected in industrial activity generally. In the second place, the clash is from taxation policies. The public sector depends on taxes, which the private sector must pay.

Capital Withheld

It happens that a very small part of the population pays the largest part

of these taxes. This may be a socialising measure, but to the extent it reduces the savings of this class, industry is deprived of capital which it steadily requires. The Plan recognises that capital formation should be encouraged, because the economic standing of a community is related to the capital per head. The question then is if capital formation for the private sector or tax increases for the public sector should have precedence.

The Taxation Enquiry Commission is examining this question precisely. Its questions seem to suggest that it is trying to discover how taxation can be purposive to the increase of the country's income. This in fact is the only test, and by it not only State revenues can be benefited directly by a greater volume of taxes, but indirectly form a greater field of income to tax.

Combating Conservatism

Our tax structure is largely inherited from rulers whose aims were limited to their trade and interests. In some ways, they could not make taxation an instrument of policy without rousing opposition which may have been too strong for them. Our economy suffers from defects bestowed by history. The disturbed conditions of the last two thousand years imposed a conservatism, which the British did not change, except to some degree in the towns.

Everything has stood still, particularly in our villages, not only because in the struggle for existence no one has courage to change, but also because no one was sure of the fruits of his toil. Agriculture suffers not from want of knowledge so much as want of incentive and will to work. Conservation of water, soil, manures, use of better seeds, implements and methods, demand very little more than labour, of which there is plenty.

The simple expedient of a higher rate of taxation on those who fail to do what is within their ability, could immediately transform agricultural practices. Similarly for good animal husbandry, what is required is that existing communal pastures should be improved by conservation of running water, by rotational grazing and proper seeding, all well within the labour capacity of the owners of cattle. For afforestation so necessary to conserve soil and increase precipitation of rain, it would be enough if the existence of a specified number of trees per acre

of land is enforced by penalty of the cost of raising such trees on those who default.

Purposive Taxation

In industry, those who fail to follow standards within their capacity, may pay excise duties on their outturn. Export and import may be subject to taxes precisely related to national policies for development. Fallow land and vacant sites could be similarly taxed into being used. Even social service could be secured by taxing ascertained leisure.

The whole purpose is first to pressure the population to render the best and full account of their labour, and second to secure for the State a large volume of taxes from those who make no return for their capacities and opportunities. There is a moral as well as a material basis for taxing unused potentials. The question simply is, whether we are prepared to orientate taxation to the definite purpose of increasing productivity by penalising inefficiency and indifference.

By the minimum of pressure, not only will production be stepped up to optimum levels, but the State will at the same time benefit from increase in the rate and field of taxation. Purposive Taxation, the new concept which I have elaborated, holds infinite promise to enrich both the private and public sectors of our economy. The concept deserves examination by economic experts, if the Taxation Inquiry Committee is to accept it.

Finding the Money

Otherwise, how is money to be found for development? During the first two years of the Plan, imports of capital goods have declined, production and investment in manufacturing industries has fallen and unemployment has been growing. The Plan has been behind schedule in most States, and a total of Rs. 1,485 crores, that is more than 70 per cent, remains to be spent in the remaining three years. Is this due to change in monetary policy, which coincided with this period? The report for the first two years of the Plan refers to the decline in money supply by Rs. 115 crores.

At the same time, the cash balances of the State and Central Governments have been reduced by Rs. 102 crores. The Reserve Bank is holding Rs. 40 crores less of Government securities. In the first two years, no net increase

TRAINING BOYS FOR THE INDIAN NAVY

At the *I.N.S. Circars*, the Boys Training Establishment of the Indian Navy at Visakhapatnam, boys are trained for service in the Indian Navy. Boys between the ages of 15½ to 19½, from all over India belonging to various communities and creeds, come here to receive training before they are sent to sea to become the sailors who defend the coast of India.

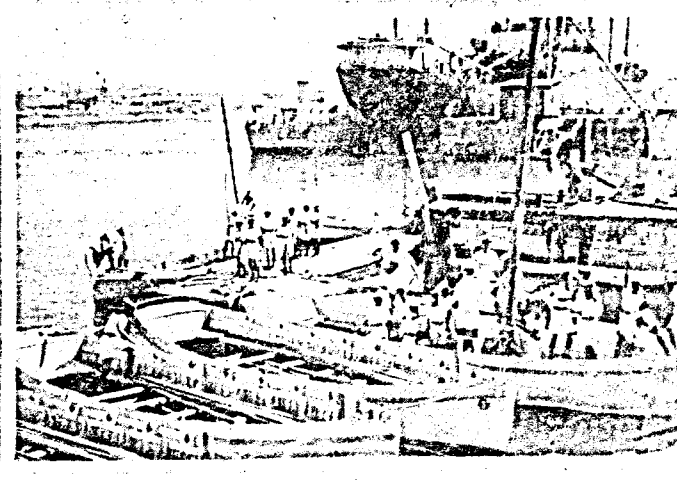
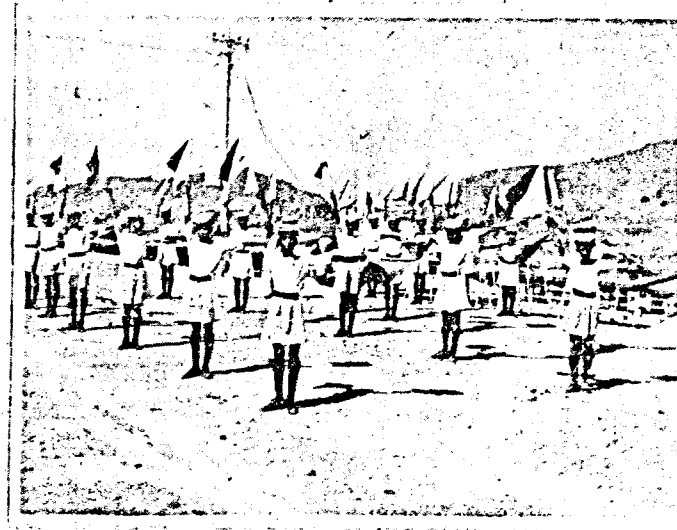
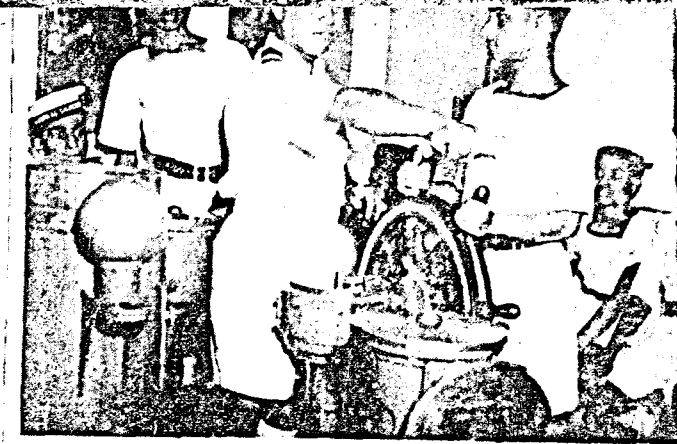
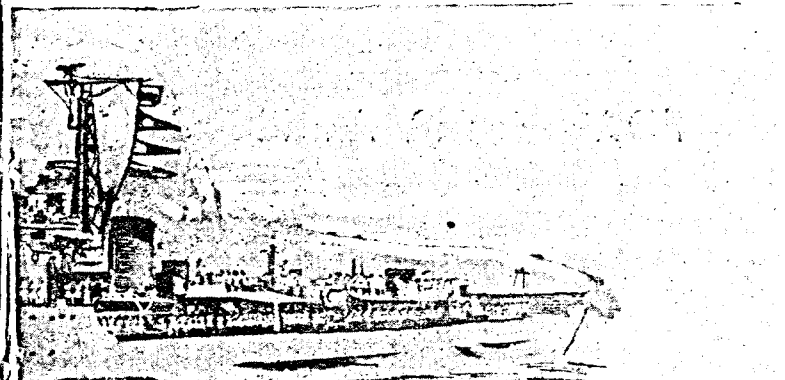
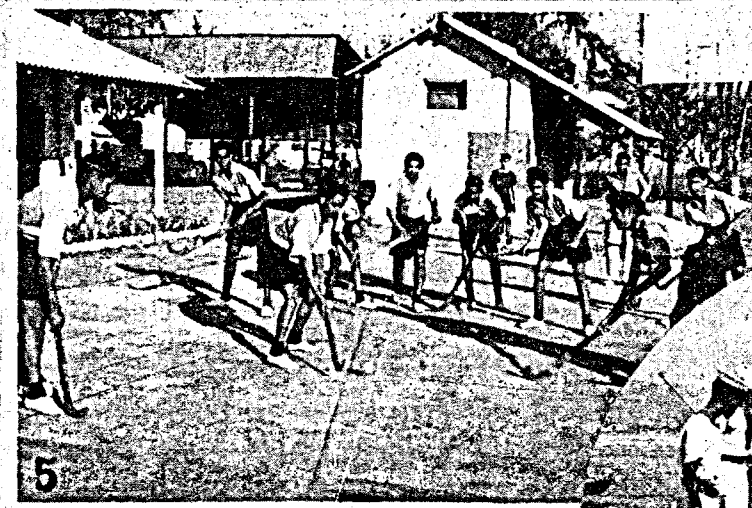
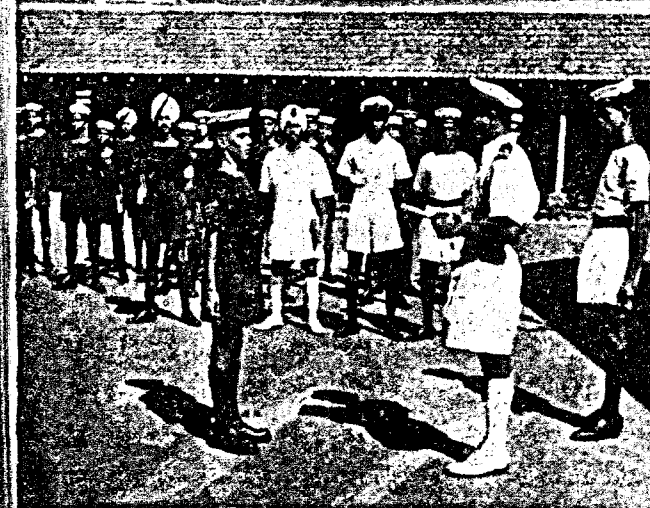
The training extends over a period of 15 months, in various branches as Seaman, Stoker, Electrical and Communications. Classes are also held in English, Mathematics and General Knowledge. Indoor and outdoor games are encouraged. A well-equipped library and information room are provided. A Hobbies Club has been organised.

At the New Entry Camp the boys receive initial introduction to the Navy. Here the individual is judged by psychological and educational tests for posting to the different branches.

The boys are accommodated in big dormitories and they dine together. They are given free food, clothing and medical and in addition to their pay.

Pictures show :—

(1) Recruits arriving at the New Entry Camp; (2) Putting the uniform; (3) Taking the Oath of Allegiance; (4) Field training—on parade; (5) Hockey; (6) Browsing in the Information Room; (7) The beds in the dormitory; (8) Class in seamanship; (9) Artillery class; (10) At the helmsman's wheel; (11) Visual signalling—semaphore; (12) Telegraph and Wireless training; (13) Rigging boats for sailing.



The colonists are eligible to the following advances :—

	RS.	
1. Land reclamation charges	100	per acre of land.
2. House construction	250	
3. Agricultural expenses	500	
4. Domestic expenses	350	(350 in the first year and 100 in the second year).
5. Construction of well	50	
6. Construction of latrine	25	

Health Measures

As a result of all-out anti-malarial measures carried out by the Public Health Department, the spleen and parasite rates in the area have been reduced by a considerable extent, and the colony has been removed from the list of unhealthy localities. However, there is no room for complacency, and energetic efforts are under way to combat diseases like pneumonia, and to improve general health standards.

At Ambalavayal there is a dispensary under a Civil Assistant Surgeon. The extension of the hospital is under consideration.

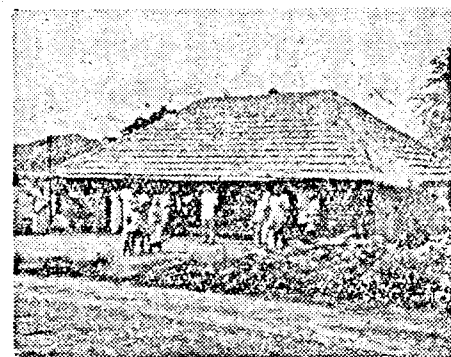
Better Agriculture

Also at Ambalavayal the Agricultural Research Station is carrying out research for improving methods of

agriculture in the colony. Two new paddy varieties evolved here promise to give good yield, and the colonists are trying them out.

Yams, tapioca, ginger and other root crops have come up very well; 250 colonists are trying out the Japanese method of cultivation of paddy. Each colonist is expected to cultivate about two acres with coffee and orange plants; several settlers have raised these crops successfully, and good yields are expected in a couple of years. The colonists expect to derive comfortable incomes from coffee, oranges and also pepper.

An Agricultural Demonstrator and four maistries give instructions to the colonists on agricultural practices. As it is not possible for a single Demonstrator to reach all the colonists, the



NEW HOME: This tiled house was built by an energetic colonist

Revenue Inspectors and Tahsildars have been trained at the Ambalavayal Farm in the fundamentals of Agriculture; most of the cultivation in the colony is carried on under their supervision.

Public Works

The Wynaad Colonisation Subdivision of the Public Works Department was formed in 1944, with headquarters at Valuvanchal, exclusively for execution of works connected with the colony. The subdivision looks after



CHOLAM comes up in a bumper crop

All engineering works in the area, such as the formation of new main and feeder roads, construction of bridges over the rivers crossing these roads, and the building of quarters for staff of the various Government Departments working in the colony.

A length of 26 miles of metalled roads with bridges and culverts was constructed and handed over to the Highways Department for maintenance on July 1, 1951. A new feeder road connecting Sultan's Battery-Chenambady Road with Kunthany is nearing completion. Two minor irrigation works to benefit about 150 acres have been completed. The colonists themselves have constructed several useful feeder roads.

Development Schemes

A new scheme for afforesting the large extents of poramboke lands in the colony has been proposed. The scheme envisages the grant of these lands on lease for cultivation for a period of three years, free of land revenue, on condition the lessees plant and rear at least 100 trees in every acre. By this method considerable extents of grassy slopes can be clothed and grazing facilities improved.

Proposals for the formation of a land colonisation co-operative society in the colony are under way. Many of the thriving colonists own one or more cows, and earn a little by selling milk. The colonists of one block have recently organised a milk society, and they send milk by bus to Calicut, 40 miles off. Pasteurisation may be necessary in the summer months, to keep the milk fresh in the long ride.

Poultry keeping was tried by many settlers, but jackals proved too great

a menace. Sericulture, however, may have a future here. The Sericultural Expert from Kollegal who recently visited the area, has submitted proposals to start cultivation of mulberry and to raise imported varieties in selected spots.

Education

Education receives plenty of attention. Fifteen elementary schools have been started all over the colony; a high school with agriculture as a special subject has been started at Sultan's Battery this year, and recognition is awaited for Form IV.

Life at the Wynaad Colony is not easy, but it affords the type of satisfying labour for which the pioneering spirit yearns, the opportunities for getting off the beaten path, for the



TRANSFORMATION: This valley has been cleared and converted into paddy plots. In the background is the jungle to be cleared.

adventure-loving to wrest a living from the encroaching wilds, transforming by honest toil jungle into farms.

APPENDIX

I. Advances disbursed to the colonists up to June 30, 1953

	RS.	A.	P.
1. Land reclamation charges	10,51,945	10	2
2. House construction	4,55,535	11	0
3. Agricultural operations	9,32,009	12	7
4. Domestic expenses	6,10,253	7	8
5. Wells	78,151	2	0
6. Latrines	30,071	0	4
Total ..	31,57,966	11	9

II. Total Expenditure

	RS.	A.	P.
Total expenditure from the Post-War Services Reconstruction Fund ..	29,26,716	9	2
Total expenditure from the Madras Government Fund ..	2,31,250	2	7
Total ..	31,57,966	11	9

III. Expenditure incurred up to June 30, 1953, by all Government Departments working in the Wynaad Colonisation Scheme

	RS.	A.	P.
1. Revenue Department—			
(i) Advances to colonists	5,18,425	4	0
(ii) Discretionary grants	1,579	11	0
(iii) Establishment charges	7,39,644	7	11
(iv) Land Acquisition charges	7,41,821	9	7
2. Public Health Department	7,02,730	1	5
3. Co-operative Department	14,539	15	0
4. Medical Department	92,497	3	9
5. Public Works Department	13,15,574	15	6
6. Agricultural Department	6,41,929	0	2
7. Highways Department	48,426	7	0
Total ..	48,17,168	11	4

The Country Smiles With New Hope

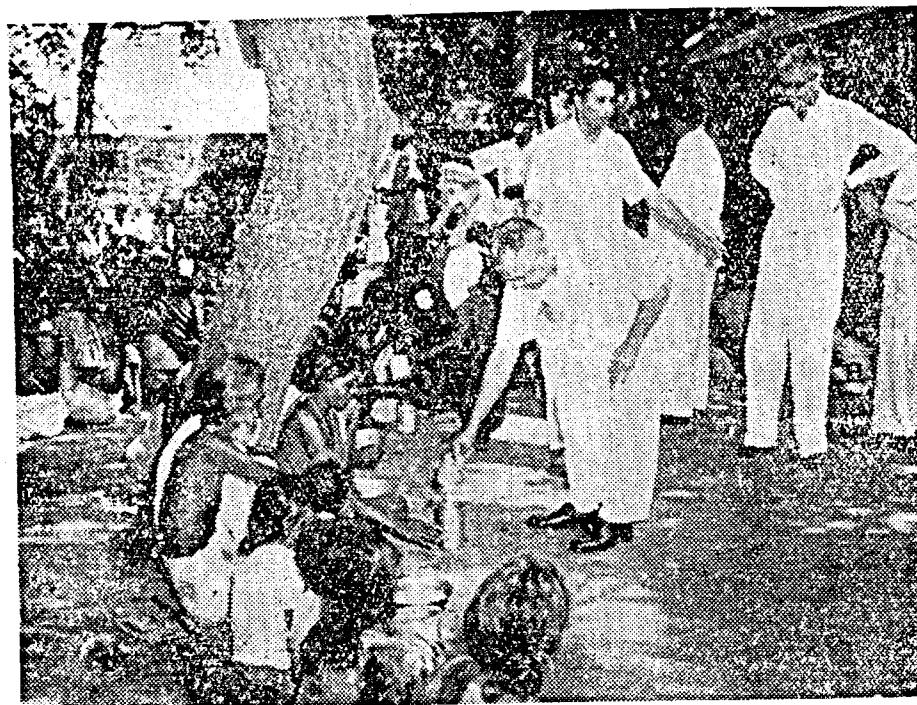
I have come back from what may be truly called a rural tour in Salem and Coimbatore with most pleasant impressions. This is not only because of the bright eyes and smiling faces of the men, women and children in the countryside that thronged everywhere in the streets and gatherings. These of course were there to fill one with hope, but the water flowing everywhere like liquid gold, surplusing from tanks and rushing in the streams and water courses in full flood, this it is which filled me with joy.

Every inch of land, even the corners at the turning of roads and the nooks in between granite rocks, all had a fine crop growing on them, be it cholam or ragi or tapioca or dhall or rice or castor-oil plant or something else, confirming the confidence and the pride I have in our peasantry. There is none to beat these dear folks in their work. Black-marketeers are all depressed. In fact that tribe promises to disappear.

Every village panchayat, every Congress committee, every youth organisation, every sabha presented "welcome" addresses referring to this scheme or that proposal for that locality to store water and better the prospects of agriculture or to improve the place. It was very noteworthy that unlike before, a considerable amount of restraint, modesty, precision and constructive thought was shown in all these addresses and financial implications were not forgotten. The whole countryside is now "plan-minded".

All this has filled me with hope. If we banish jealousy and hatred and pull together and behave as men worthy of the trust of these good men and women and angel children that shout *Jai to Rajaji and Jawaharlal Nehru*, we shall do well and see that these people are as happy and well-cared for as they deserve to be. The clouds have blessed us in our task.

C. Rajasopalachar



GRUEL CENTRE FOR DISTRESSED WEAVERS: Sri S. K. Chettur, I.C.S., Revenue Secretary, Sri J. M. Lobo Prabhu, I.C.S., Industries Secretary and Sri T. S. Ramachandran, I.C.S., Director of Community Projects, paid a visit to the Gruel Centre organized by the Madras Corporation for the distressed handloom weavers who have migrated to the City. Sri T. S. Ramachandran is seen serving.

in public debt has taken place; on the other hand, the net outgo from maturing securities was of Rs. 9 crores. The floating debt of the Central Government has been reduced by Rs. 45 crores. The Government's financial position has never been stronger, arising from the definite policy of reducing currency and credit.

Production Economy

Less money has not however meant lower retail prices. No doubt productivity programmes already under way have not been affected. Food, as stated previously, has touched the 1939 mark. During the two years production of textiles, steel, cement and power has improved, the general index having risen from 104 in 1950-51 to 121 in 1952-53. Scarcity of money has however affected consumption.

The Five-Year Plan and the monetary policy of the country have been based on production economics, without reference to consumption economics. It seems to have been ignored that in economics, demand is more important than supply. Not to maintain demand, is to flatten supply by its own weight. Even if the

smallest share of attention had been paid to demand, all policies regarding money, wages, employment would have been different. If demand is created, supply comes sooner or later into existence, but not vice versa.

Increase in Money Supply

Consumption economics which have been ignored must now receive attention. The aim should be to equip people to consume more, at least as much as is being produced. This implies first, increase in the money supply. Dr. Bernstein of the World Monetary Bank, a conservative in his economics, thought that money supply can be increased at least equivalently to the increase in production. Since 1952, production has increased by 12 per cent while money supply has decreased by at least the same percentage.

While there has been more to sell, there has been less to buy it with. This has recoiled in accumulated stocks which are now reducing production, and increasing unemployment. The process is a vicious circle, only to be broken by more money. In the second place, even when money is available it

has not been spent in the same direction as the production planned. This has meant that certain shortages have persisted side by side with surpluses in other directions.

Pattern of Spending

The economics of consumption require therefore first, more money, second, a pattern of spending related to the pattern of production. I have been pressing for some time for the issue of development currency to increase the supply of money on one hand, and to canalise its use on the other. As long as this currency is encashable only against specified production, it will not cause inflationary pressure, even while it accelerates turnover.

A problem like that of handloom cloth could be solved in the shortest time, if people had part of their incomes paid in currency which can buy only this and other specified items. Otherwise, the pattern of expenditure may be determined by compulsory savings of all incomes in a fixed proportion, in the form which was enforced in U.K. during the War.

Production and Consumption

These savings however should be ploughed back at once into production, either as capital for industries, or amenities for the contributors concerned. Thirdly, consumption may be activated by concessions and preferences in State taxes and services.

The tax structure on one hand, and services like transport, irrigation, power will have to become purposive also in respect of the consumption pattern. They are so to some extent already and what is required is more precise attention and action. The private sector therefore depends a great deal on Government policies being more purposively related to consumption economics. This is a very important service the public sector can render to the private sector. The Five-Year Plan has to consider both production and consumption, the latter a little more now, as it has been neglected so far.

My thesis is first, that taxation should be purposive, and second, that planning must take account also of consumption economics. Only thus can mixed economy prove a success.

Jungle into Farms

Wild elephants rampaging along the jungle fringe, devouring the tender shoots; mischievous monkeys indulging in wanton destruction; bears irritably pursuing a faint scent for honey; a lone tiger on the prowl stalking the straggler in the grazing cattle-herd—these are the normal hazards that confront a Wynaad colonist.

Pioneers learn to take in their stride adventures about which others read only in books. The settlers in Wynaad unconcernedly tackle snakes and apes which infest their plot. Elephants however confine their activities to the timberline of the Reserve Forests, so the damage is comparatively less.

Striped Terror

The greatest danger is from the striped terror—for the tiger not only depletes stock but also scares the cattle. The local populace therefore take energetic steps to counter the threat and the cattle-lifter is dealt with in a fascinating manner.

After a tiger has killed and eaten, and lies replete in the jungle, the aborigines put up a net about five feet high in a ring around it, a hundred yards in diameter. All the people of the surrounding hamlets are invited to the kill and a feast is held, after which the gods are consulted through oracles.

Then nigh on three hundred men armed with spears surround the net, and excite the animal to activity by shouting and throwing stones. The infuriated tiger charges at the ring, only to face a rain of spears. Sometimes it takes a whole day or even two days to finish off the animal; accidents too are not uncommon, thereby making the hunt a hazardous though thrilling event.

The entire crowd assembled for the spearing is fed by the prominent chetty of the place; since this involves considerable expense, nowadays the cheaper method of shooting the tiger is more frequently adopted. However, last year there were two cases of spearing in the colony and many settlers took part in the hunt.

Task before Settlers

Such adventures are not the only features of the Wynaad Colonisation Scheme. There is always the back-breaking, heart-rending job of reclaiming land from the jungle; at Wynaad

weeding is a farm task which is never completed. And in the early days of the colonisation, the most dreaded scourge was not the mighty tiger but the tiny mosquito. Yet the settlers set to work with a will, for at last they had a stake in their toil, an objective to their labour.

Wynaad, a taluk of Malabar District, is a hilly forest region adjoining Mysore, Coorg and the Nilgiris, with an elevation ranging from 2,500 to 3,500 feet above mean sea-level. The climate is mild, the mean temperatures ranging from 66°F to 80°F. The average rainfall of the region is about 100 inches, of which above 70 inches is received during the south-west monsoon.

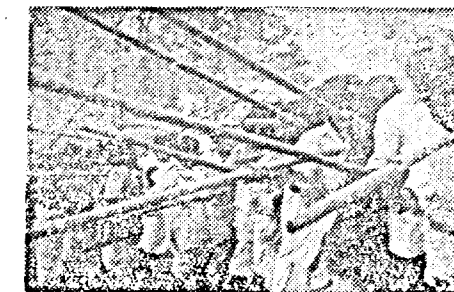
Though malaria was rampant in this region, the cheapness of the land and fertility of the soil make the area suitable for colonisation.

Scheme Inaugurated

On April 17, 1944, the Madras Government inaugurated the Wynaad Colonisation Scheme. Estimated to cost Rs. 1,05,91,310, the Scheme was envisaged to settle ex-servicemen and other colonists over a spread of land of 53 square miles of heavily wooded jungle and wet land lying in the four amsons of Kidanganad, Noolpuzha, Nenmeni and Mypainad of Wynaad Taluk.



THE KILL: The superb head of the slain tiger is held up by excellent settlers.



THE HUNT: Settlers are armed with spears for the tiger hunt

Each colonist is given five acres of dry and two acres of wet land, or alternatively ten acres of dry land only.

The settlement commenced in February 1948 and 207 ex-servicemen and 388 other colonists were settled in 1948. In August 1948 the Government stopped the advances that were granted to the colonists. However the Post-War Services Reconstruction Fund Committee promised to provide for ex-service colonists, provided 62½ per cent of the colonists were ex-service personnel. The Committee has sanctioned a free grant of Rs. 38 lakhs settling about 2,000 ex-servicemen as colonists in the Wynaad Scheme, at Rs. 1,900 per colonist. In April 1951 the Government sanctioned advances for colonists other than ex-servicemen also.

Settling the Colonists

As the proportion of 37½ per cent was found to be insufficient for settling other categories of colonists, the Government sanctioned the extension of the colony by taking in 2,179.69 acres of Government dry land and 151.54 acres of wet land in the adjacent village of Chingeri. On the whole 9,325.85 acres of land were acquired, the rest being the land at the disposal of Government.

And so came the first settlers in February 1948, and up till now 2,763 colonists have been settled, comprising 1,747 ex-servicemen, 3 ex-I.N.A., 251 aborigines, 5 ex-tappers, 6 landless civilians, 750 existing settlers and one political sufferer. About 250 colonists deserted as they found life here too vigorous for their liking, but fresh colonists are taking their place.

Parents and Children

[The Chief Minister of Madras has stressed in his speeches the desirability of educated parents replacing the teacher in the education of their own children. The following extract from "New Leviathan" by Dr. R. G. Collingwood, Fellow of Magdalene College, Oxford, will be interesting reading.]

William Cobbett has described how he brought up his children by joining in their daily lives and encouraging them to join in his own.

'The book-learning crept in of its own accord. Children naturally want to be like their parents, and to do what they do; and as I was always writing or reading, mine naturally desired to do something in the same way. Fond of book-learning, and knowing well its powers, I naturally wished them to possess it too; but never did I impose it upon any one of them.

'A large strong table in the middle of the room, their mother sitting at her work, used to be surrounded with them, the baby, if big enough, set up in a high chair. Here were inkstands, pens, pencils, india rubber and paper, all in abundance, and everyone scribbled about as he or she pleased.

'All the meddlings and teasings of friends and, what was more serious the pressing prayers of their anxious mother, about sending them to school, I withstood without the slightest effect on my resolution.'

"Bless me, so tall, and not learned anything yet!" "Oh, yes, he has," I used to say, "he has learned to ride and hunt, and shoot and fish, and to feed his dogs and to go from village to village in the dark."

'Cobbett could do it; he made his living by farming and writing at home. He was not tied to an office all day like us.'

Very true; but is that really our reason for not doing like him? Or is it that you have not the courage to educate your own children; but prefer to hand it over to professionals so that, in time, they can wear a recognisable old school-tie?

Cobbett's method is so vastly more efficient than any method which can possibly be used in a school, that a very little of it would produce better educated children than a far greater amount of even the best schooling.

You probably think the opposite; you probably think that the professional

is more efficient. The parents' power over the child is much greater. The parent as educator has the resourcefulness, the versatility, of a non-specialist.

But in a world of office-drudges and factory-drudges, to ask for even a little of Cobbett's method is to ask for the moon.

That is, no doubt, a good reason for smashing a world of office-drudges and factory-drudges. Not simply that it is a world unfit for men to live in; but it is a world consuming its own capital of civilization through having wantonly thrown away the power of educating its young, and is heading straight for bankruptcy.

The future of the world lies with peoples among whom there are no professional educators and every man educates his own children.

And if I were Mr. H. G. Wells or one of these highly-paid Utopia-mongers I should draw up a list of the Rights of Man beginning with the right to educate one's own children.

And a lot of good that pious wish would do to me or to anyone else.

Let us think seriously what can be done and what must be done to liberate civilization from the stranglehold of this Old Man of the Sea, the professional educator.

But there is something to be done before we begin. As a preliminary step we must make up our minds that whatever is done must be done individually.

There must be no waiting for legislative help, and no attempt to do what we want by legislative action.

Legislation is controlled by the Old Man of the Sea in his own interest.

The sort of professionalized, bureaucratized education which is our Old Man of the Sea is the only kind politicians can produce.

The difficulty is that we are so deeply accustomed to leaving things to the professional that we have no longer the self-confidence to do anything in which we are not experts, except when we forget this frightful fact and do the thing irresponsibly, for the fun of it.

The first move in our campaign against the Old Man of the Sea is for every man or woman who has a child to decide in future to spend more time in its company.

Every parent can do this, and do it now. Have the child share your

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meals or, if you are an office-drudge or a factory-drudge, the meals you have at home. Have it share your bedroom. If doctors say that it is unhealthy, they lie; they are paid to lie by the Old Man of the Sea.

If you are rich enough to have a nurse, sack her and look after the children yourself. If you are a delicate lady, trained to be idle, and find the work too much, cut it down. If you don't positively enjoy the work of keeping the children clean, let them run about dirty. They will not be a penny the worse if nothing is done for them but what you find it fun to do yourself.

Fathers, if you get promotion in your job, try to arrange matters so that promotion shall give you more time with your children. And when you are with your children don't always be thinking about doing them good and keeping them in order and all that; enjoy their company and make them enjoy yours. It is surprisingly easy to get fun out of children, once you make up your mind that fun is what you want.

Mothers, if you are rich enough to pay a governess, sack the governess and have the children to yourself. If you are too ignorant to teach them, don't try; all modern children are grossly and criminally overtaught. Read to them out of any book they enjoy or play with them at any game they like, the sillier the better; if you are young enough to have little children you are young enough to enjoy romping with them. If they 'get on your nerves', neglect them a bit; don't take them so seriously; be irresponsible about them. Above all, remember that you must be mistress in your own house. You must never allow a granny or an aunt or a neighbour to bully you about the way you bring up your children.

Once parents take the step (a bold one, I admit) of deciding to enjoy their children's company, the illusion will vanish like a dream at waking.

The second question now stares us in the face. The professional educator having been rendered harmless, how can we render him useful? By keeping him as a pet; when you will find him to possess many engaging and even profitable accomplishments.

These will be in the main of two kinds. First, let him go on teaching. There may be things a child wants to

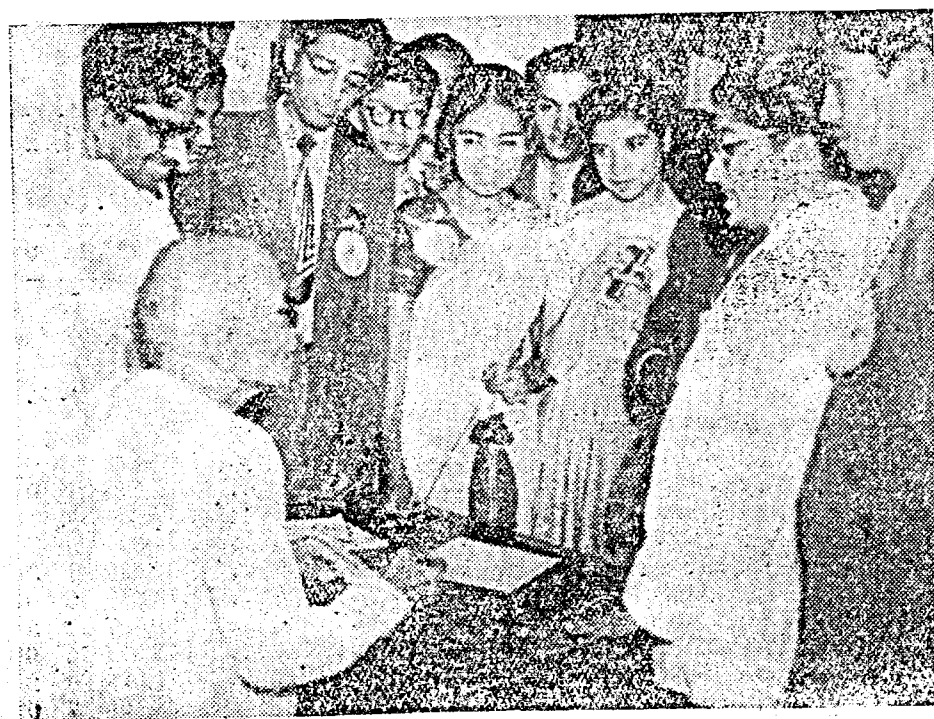
know that its parents cannot teach. Let it be sent to learn them from a professional teacher. And the parent, if it wants, can go too. Every professional teacher in the country will jump at the chance of getting quit, once for all, of pupils who do not want to learn and getting pupils who do.

Secondly, let him go on researching. Every community that is to any degree civilised needs that research in a vast diversity of sciences and branches of learning shall go on. Let us keep our educational institutions or as many of them as are needed for the purpose, partly as teaching institutions where specialised teaching is on tap for all comers who want it, and partly as

institutions of research where science and learning shall be kept alive instead of being, as they too often are in our educational institutions of today, dead.

Such a distribution of functions as between the amateur and the professional is already customary for the medical profession, where nobody has ever demanded its abolition; why should it not work as well in the educational profession? Children do not leave their homes for medical reasons to reside for half the year in a doctor's house or in a clinic. They live at home, and if they have a cold or bark their shins their parents give them first aid. If they want more, they go to a doctor.

—*New Leviathan*, by R. G. Collingwood



OVERSEAS VISITORS: The Chief Minister chatting with a group of students from Africa, now on an educational tour of South India



HOME-MAKERS: Students of the Faculty of Domestic Science (University of Baroda) called on the Chief Minister during their recent southern tour

More Densely Populated than Europe

"Europe which is the most densely populated continent of the world is less densely populated than India. The average European has brought only 30 per cent of his land under the plough. The average Indian on the other hand has brought under the plough 43 per cent of his land, even though it has a far larger proportion of thin and poor soils and a less adequate and less evenly distributed rainfall.

"In relation to the natural resources available for the production of food, India is even more heavily populated than Europe.

"The total number of people living in both the U.S.A. and the Soviet Union put together is slightly smaller than the total number of people of India. But the land area of these two countries is far more than nine times as large and not far short of ten times as large as India."

These are some of the facts brought out in the All-India Census Report (Part I-A) issued recently by the Registrar-General and Census Commissioner, Sri R. A. Gopalaswami.

The All-India Report is divided into five parts. Three of these parts (Parts II-A, B and C) consist of statistical tables accompanied by introductory notes which explain the manner in which the data were secured and the tables were compiled. Part I-A is the narrative proper and Part I-B consists of Appendices. The Report is divided into five chapters, the first three presenting the picture as observed in 1951. The other two chapters are entitled "Before and Since 1921" and "The Prospect-1981".

Land and the People

The first chapter dealing with the land and the people focuses attention on the area of land per head of population available in the country as a whole, describes how this varies in different parts of the country and how this variation is related to variations in topography, soil and rainfall. After dividing the country into five natural regions and 15 sub-regions in terms of these factors, a description is given of the salient facts of population and land use in three groups of sub-regions which are distinguished from one another as high, low and medium density sub-regions.

Finally, a comparison is instituted, with other countries of the world, which leads to the conclusion not only that there is a very notable shortage of "land area per capita" in our country but that the utilisation of usable land within this limited area has proceeded very far already.

Pattern of Living

The second chapter headed "The Pattern of Living-1951" begins with an account of total numbers and numbers in different size-groups of villages and towns and the distribution of the people among them. Then there is a description of houses and households—information regarding the relative proportion of households of different size-groups as well as their composition, being a new feature of this Census. This is followed by a description of the variations of the sex ratio in different parts of the country. The age-structure of our people is then described and compared with that of other countries of the world.

As a result of systematic study, reasonably firm conclusions are reached regarding the levels (which prevailed during the decade ending 1950), of our true birth rates and death rates (as distinguished from our registered birth rates and death rates). Estimates are furnished not only for India as a whole, but six broad zones (North India, East India, South India, West India, Central India and North-West India); and they are then compared with similar rates of other countries.

Sex Ratio

Under the Section 'Sex Ratio' in this chapter, the Report states that the Census figures have revealed not only that males and females are unequal in numbers but also that the magnitude of this inequality is also different in different parts of the country. In the country as a whole, the sex ratio was 947 (i.e., 947 females per 1,000 males) according to the 1951 Census. It varied widely among the zones. The lowest value was 883 in North-West India and the highest was 999 in South India where practical equality of the sexes was attained. The other four zones varied thus: 910 in North India, 938 in West India, 945 in East India and 973 in Central India.

Regarding the Marital Status Pattern, the Report states that in the country

as a whole roughly every other male person is unmarried, while rather less than two out of five females are unmarried.

Birth and Death

On the subject of Birth and Death Rates, the All-India picture is as follows:—

Births have occurred during the ten years 1941-50 at an average rate of 40 per thousand per annum; and deaths have occurred during the same period at an average rate of 27 per thousand per annum. Hence the natural increase of the population has been occurring during the decade preceding the 1951 Census at an average rate of 13 per thousand per annum.

The third chapter entitled "Livelihood Pattern-1951" contains a complete account of how the people obtain their means of livelihood and explains how the pattern varies from one zone to another. According to the survey, there are 402 landless agriculturists for every one thousand agricultural landholders. There are enormous differences in this respect from State to State. This number of landless agriculturists per thousand agricultural landholders is smallest in U.P. (161) and largest in Travancore-Cochin (782). The numbers for other major States arranged in order are as follows:

Mysore (190), Assam (235), Orissa (271), Bombay (383), Madhya Bharat (397), Madhya Pradesh (413), Hyderabad (507), Bihar (510), Rajasthan (544), West Bengal (609), and Madras (714).

The "Great Divide"

The fourth chapter headed "Before and Since 1921", like the three previous chapters, is strictly factual; but it lays the foundation on which the assessment of the population problem present in the last chapter is subsequently erected. It is a fundamental conclusion of the study—of which the results are set out in this report—that 1921 is the "Great Divide". Our pattern of growth subsequent to that year is entirely unlike the pattern of growth before that year. The fact that there is a sharp contrast is first established by a detailed analysis of the relevant figures of all parts of India. Then the reasons which account for that fact are established by documentary evidence.

The growth of population had been checked by famine and pestilence repeatedly before 1921. Except for one tragic exception, population grew unchecked after 1921. The next section of this chapter is devoted to showing that 1921 is the "Great Divide" in another respect—before 1921, cultivation had more than kept pace with the growth of population; after 1921, cultivation was lagging far behind while the population total was forging ahead. "Developing the conception of 'land area per capita', we have the area of cultivated land per capita, and based on it, of productivity of cultivation per capita. This had been stationary or moving up before 1921; after 1921, it was falling steeply.

The value of the material presented in this section consists in this: great care has been taken to sift available data about cultivation, locate the areas for which statistics of high quality are available on a comparable basis over a long period and then work out the results for these areas.

Food Shortage

The third section of this chapter explains how the livelihood pattern has been changing in response to unchecked growth of population and the decline of cultivation per capita. The economic strength of the average household is seen to have weakened. The last section of this chapter brings out the final and most important aspect of the "Great Divide"—the growth of food shortage. Notwithstanding the famines of the last century, India used to be surplus in food.

Round about 1921, India developed a shortage of foodgrains and this shortage has been growing ever since, slowly but steadily. The relevant statistics have been brought together from different sources and they bring out unmistakably how the change came about over a series of years. The change-over is dealt with in different aspects. First, there are the statistics of imports and exports of grains already referred to. Then, there are the statistics of grain prices (from which we can form a good picture for the last 150 years and institute an illuminating comparison with the trend of grain prices in the United States of America).

Finally, there is the profound change in the whole conception of the responsibilities of the State in respect of the

supply and distribution of grains, the breakdown of free trade, the Bengal Famine, and the development of 'State trading system' on which crores of our people depend today.

Future Growth

The last chapter entitled "The Prospect-1981" poses the question: What will be the pattern of our growth during the next thirty years? The Report states: "We know whither the current on which we have been drifting since 1921 is taking us. We also know of the great attempts now being made to stop this dangerous drift and steer the ship of State to safety. How strong is the current? And how strong are these attempts? How is a favourable outcome to be assured? These questions are discussed at length and firm conclusions reached.

"It is fully realised and made clear at every stage of the discussion that the nature of the material is such that widely varying views can be and are being held both in respect of the facts themselves and the appreciation of the significance of the facts. As the Royal Commission in the United Kingdom observed, 'Parts of the subject may be likened to that fabled morass where armies whole have sunk.'"

The various views held on the subject are set out and reasons given for reaching a particular conclusion, which reads thus:

"We have come to the end of our attempt to project our mind some way into the future and visualise the prospect for 1981. We have seen clearly the drift of the current on which we have been moving since 1921 and whither it was taking us. We have taken note of the efforts now being made to steer the ship of State in an altogether different direction and studied the chart of this new course—the First Five-Year Plan. Let us summarise the broad conclusion—

First,—If we can be sure that food will be available to the people during the next thirty years, at least as well as it has been during last thirty years, and if no popular movement in favour of limiting births develops (as it has done among Western peoples), then the further course of population growth may be foreseen with confidence. Our number will grow from about 36 crores in 1951, to about 41 crores in 1961, 46 crores in 1971 and 52 crores in 1981.

The growth will, indeed, be somewhat more rapid as (in the conditions assumed) the expectation of life will continue to increase.

Secondly,—The likelihood of the last figures being actually reached is, however, small. The governing assumption—continued availability of food supply at undiminished rates of consumption along with unchecked growth of population—is unlikely to hold good for as long as thirty years.

This conclusion is reached after taking full account of the technological possibilities of development of agricultural productivity.

Thirdly,—The experience of 1943 gives warning of the possibility that growing food shortage might lead to a breakdown of the distribution of food supply and thus open the way to a return of those 'natural' checks to population growth which were in operation during the thirty years preceding 1921.

This possibility, however, is unlikely to be permitted to materialise. The system of planned 'State trading' in foodgrains, developed during the last decade, is now well established. So long as we hold fast to it, there is a guarantee that food shortage will be kept under control and prevented from developing into a breakdown of food supply. Sufficient time will, therefore, be available for wise planning and efficient execution of measures designed to overcome food shortage permanently.

Fourthly,—It is possible to overcome food shortage permanently by taking suitable measures over an extended period of about fifteen years.

For this purpose, development of agricultural productivity on an even larger scale than that undertaken in the First Five-Year Plan will be necessary, but it will not be sufficient. Effective steps should be taken concurrently to limit births to approximate parity with deaths and thereby achieve a substantially stationary population.

Fifthly,—Births will get limited to approximate parity with deaths, if what has been described as 'improvident maternity' is avoided by all or most married couples. ('Improvident maternity' consists of all births occurring to mothers who have already had three or more children, when at least one of them is alive.)

Sixthly,—A combined approach to the solution of our problem calls for the following targets:

(i) Increase of agricultural productivity from the present level of approximately 700 lakhs of Annual tons to about 940 lakhs of Annual tons.

(ii) Reduction of improvident maternity from over 40 per cent (its incidence at present) to under five per cent.

If these two targets are accorded equal priority and ranked higher than all other development targets, they can be attained before the population increases beyond 45 crores—our total number will then become substantially stationary round about 45 crores; and

Seventhly,—The attainment of the target of reduction of improvident maternity will necessitate the prior creation and permanent maintenance of a nation-wide organisation of maternity and child welfare services.

"This is difficult, but feasible and essential."

Reports from the States

The reports on the 1951 Census are issued in 17 volumes which are divided into 63 parts. The first of these volumes contains the All-India Census Report comprising five parts of which the first has been published. The statistical information contained in the All-India Census Report is limited to demographic and economic data relating to the country as a whole. Other types of data are published in 13 brochures of which six have already been published and the rest are in the Press.

The other 16 volumes which are divided into 58 parts contain the State Census Reports. These are prepared by the Superintendents of Census Operations in the respective States. Of these the following have been released to the Press and the rest are in the Press. (See statement)

These volumes give a detailed analysis of the statistics furnished by the Census, an exposition of the significant changes during the past decades and interpretation of statistics wherever possible. A noteworthy feature of these reports is that they differ from the reports of 1931 and censuses previous to that year in a substantial way insofar as the tabulation of the data collected through the census questionnaire was carried out not on

Name of Superintendent.

Sri S. Venkateswaran, I.C.S.	..
Sri J. B. Bowman, I.C.S.	..
Sri Ashok Mitra, I.C.S.	..
Sri J. D. Kerawalla	..
Sri Lakshmi Chandra Vasishta	..
Sri Yamunalal Dashora	..
Sri U. S. Nair	..

Name of State.

..	Madras and Coorg.
..	Bombay, Saurashtra and Cutch.
..	West Bengal and Sikkim.
..	Madhya Pradesh.
..	Punjab, Pepsu, Delhi, Himachal Pradesh and Bilaspur.
..	Rajasthan and Ajmer.
..	Travancore-Cochin.

the basis of religion or religious group but on the basis of livelihood classes.

The Six Chapters

Apart from an introduction and some appendices, the subject-matter of these reports has been arranged mainly under these six chapters; General Population, Rural Population,

Urban Population, Agricultural Classes, Non-Agricultural Classes and Families, Sexes and Principal Age Groups. Each chapter has been divided into a number of sections and at the end there are a set of subsidiary tables which form the statistical basis of the narrative review and exposition.

In addition to the All-India Report and the State Census Reports, 307 District Census Handbooks have been compiled; each handbook relating to one district separately and containing all the 1951 Census statistics relating to different local areas within the districts as well as the basic totals of population for every village and every ward of every town of the district. The handbooks which are issued as State Government publications also include other items of information relating to the districts which could be readily assembled and seemed likely to be useful for purposes of reference. Of these 112, District Census Handbooks have been published already and the others are in the Press.

Cost of the Census

Regarding the cost of the 1951 Census, the Report states that the Government would have spent Rs. 1,49,00,000 in all on the 1951 Census. This works out to a sum of Rs. 41-12-0 per 1,000 persons enumerated. The corresponding rate for the 1931 Census, the last census for which full tabulation was undertaken, was Rs. 15-8-0. The rise in the unit cost is smaller than the increase which has occurred in the general level of prices, wages and salaries since 1931.

The value of these Reports depends entirely on their lucidity, precision and conciseness, and they would be of value mainly as the starting point of more detailed studies, to be undertaken subsequently, of the inter-relationship of population changes and economic changes in the country as a whole as well as in the different States and natural divisions of the country.

Central Aid to Handloom Industry

With a view to assisting the handloom industry, the Government of India in January 1953 passed orders restricting the production of dhotis by mills to 60 per cent of their average monthly production during the period April 1951 to March 1952. Under these orders the production of mill-made dhotis was brought down to about 30,000 bales per month, compared to the average monthly production of 50,000 bales in 1951-52.

While the average quantity of dhotis produced by mills has been within this figure, certain units have produced dhotis in excess of their permissible quota. Government have been considering what would be the most suitable method of achieving their objective, namely, to ensure that the production of dhotis by all mills is restricted to their permissible quota.

By an Ordinance issued on October 26, 1953, it has been decided to levy an additional excise duty on dhotis produced in excess of the quota. The duty would be on a graduated scale ranging from two annas per yard to eight annas per yard on the quantity of dhotis produced in excess of the permissible quota.

Madras Handloom Weavers Co-op

The Madras State Handloom Weavers' Co-operative Society was started in 1935 in order to give an impetus to the development of the primary weavers' co-operative societies affiliated to it. Its main functions are:

To procure yarn and make it available to the affiliated societies at uniform and reasonable rates; to give technical advice to the primaries in the production of varieties of handloom cloth that can be easily marketed, to secure contracts for the production of goods for supply to merchants or for export abroad, to purchase a part of the output of the primaries and market them through its various emporia and depots throughout the State and outside it and to give financial help.

This society was recently reconstituted restricting its area of operations to the Residuary Madras State and the seven taluks of the Bellary District which have been merged with Mysore, consequent on the formation of the Andhra State. This reconstituted society consists of 530 primary weavers co-operative societies having in their fold 108,882 looms, besides other members. It has a share capital of Rs. 6,12,858.

Assets and Liabilities

In the division of the assets and liabilities of the composite State Handloom Weavers Co-operative Society as between the reconstituted society and the Andhra Handloom Weavers' Co-operative Society, the reconstituted society has been given assets and liabilities amounting to Rs. 96,22,021 and Rs. 63,08,325 respectively.

It plays an important part in providing work to a large body of weavers by arranging to market a part of the production of the weavers co-operative societies affiliated to it. The Government of India have sanctioned a sum of Rs. 124.9 lakhs for financing several schemes for the promotion of handloom industry out of the cess levied on mill cloth.

Prime Minister's Visit

During his recent tour of South India, the Prime Minister of India was pleased to visit the Madras State Handloom Weavers' Co-operative Society on 2nd October 1953.



HANDLOOM PRODUCTS: Prime Minister Sri Jawaharlal Nehru examines the handloom goods exhibited in the Madras State Handloom Weavers' Society premises.

On arrival, the President and the members of the Board of Directors of the State Handloom Society received the Prime Minister. Sri C. Rajagopalachari, Chief Minister, and Dr. U. Krishna Rau, Minister for Industries and Co-operation, Madras Government, were also present on the occasion.

After introduction to the gentlemen present, the Prime Minister was shown select handloom fabrics produced by weavers' co-operative societies which were kept on view. The Prime Minister was pleased to express his appreciation of the goods exhibited. He was then taken to a specially decorated pandal, where the elite of the Madras City and representatives of handloom weavers' co-operative societies and other co-operators were present. The President of the State Handloom Weavers' Co-operative Society presented a welcome address to the distinguished visitor. A memorandum containing certain requests and suggestions for improving the handloom industry was also submitted.

Future Assured

In reply the Prime Minister observed that it was not necessary for them to

impress upon him the importance of the handloom industry and the future of the weavers in this State as well as other parts of India, and that the Government of India were particularly conscious of the importance of the industry because of the fact that large numbers of their countrymen were concerned with it. He stated that the object of the promotion of this industry and welfare of the weavers was shared by all and that the handloom products, more especially if they could keep wide awake to the changes of the day, had an assured future.

The Prime Minister said in conclusion: "The question of giving first priority and first importance to this industry in India is certainly recognised now though not before. You may rest assured that all of us will give the fullest attention to the needs of the weavers and this great industry of India."

Sri A. G. Arunachalam, Vice-President of the Society, in proposing a vote of thanks, referred to the attempts made by Sri C. Rajagopalachari, the Chief Minister, to promote the industry and give relief to the weavers.

Public Warned Against Confidence Tricksters

A criminal organisation having their bases in the Travancore State and the Tirunelveli, Krishna and Nellore Districts were operating extensively in Tirunelveli, Ramanathapuram, Madurai, Tiruchirappalli, Salem, Coimbatore, Krishna, Nellore and other districts between the years 1945 and 1947 and had cheated the public to the tune of three lakhs of rupees by what is known as the "Counterfeit Currency Note Confidence Trick". Fifteen persons belonging to this gang have been convicted and sentenced to various terms of imprisonment. This warning is issued in order that the public may be wary, as other members of the gang are still free.

The modus operandi of the gang is follows: Some members are sent out to act the role of brokers and agents. They get themselves acquainted with their prospective victims and gradually gain their confidence. Thereafter, they tell them that counterfeit five-rupee currency notes which look exactly like genuine notes would be supplied at half their face value. Some genuine five-rupee notes are shown; confidence is gained by the ease with which they could be passed off without any suspicion whatever. The victims are then told that these notes are supplied only in lump according to their purchasing capacity and they are asked to meet the head of the gang with full purchase money, which should be only in one hundred-rupee notes, at a suitable time and place. Sometimes advances are also taken.

The broker or agent will usually accompany the victim to the appointed place, which is generally a small railway station, a river-bed or other lonely place. The seller of the counterfeit notes would then appear with one of his associates, in the role of a servant carrying a hand-bag or attache case, containing two or three bundles of genuine five-rupee notes at the top, with several other bundles underneath, each consisting of a genuine five-rupee note at the top and another at the bottom, with plain paper in between, cut to the size of five-rupee currency notes. The latter bundles are kept separately tied with twine. The bundles of genuine notes are then shown to the victim to make him

believe that all the bundles in the hand-bag or wallet also contain similar notes.

At the crucial moment, one or more members of the gang would be seen moving at some distance, as if watching the transaction. The seller would then casually draw the attention of the victim to this incident, hinting at the same time that those persons might belong to the C.I.D. The victim is thus hustled into parting with his money and accepting the hand-bag without verifying its contents. To further strengthen the confidence of the victim, the "servant" is directed to accompany him, carrying the bag for him, while the rest of the gang disappear.

The victim and the servant together get into the train. One or two members of the gang dressed in Police uniform appear on the carriage and arrest the servant and victim on the ground that they are in possession of and trafficking in counterfeit currency notes. The victim invariably keeps quiet, having been scared, and he is only too glad to slink away unnoticed while the "servant" with the hand-

bag is detained and marched off as if to the Police Station.

Similar hold-ups are staged by the members of the gang in river-beds or lonely places, where they appear dressed as Policemen.

They waylay the victim, seize the bag from the servant, threaten to arrest them, beat the servant and take him away with the bag, deliberately leaving or allowing the victim to escape.

The nature of the shady transactions and the fear of being implicated in the counterfeit trafficking cases naturally militate against victims coming forward with complaints.

On the complaint of a bold victim, investigation was taken up by the Crime Branch, C.I.D., Madras, and this gang of cheats was unearthed and rounded up and fifteen persons were convicted and sentenced to various terms of imprisonment.

The public are warned against falling victims to this trick and requested to pass on to the nearest Police Officer any information regarding the subject and co-operate with the Police in their efforts to eradicate this gang.

Preservation of Semi-dried Prawns

The Fisheries Department of Madras manufacture semi-dried prawns on a large scale which is considered to be an improvement on the usual method of beach drying. Recently, the Fisheries Technological Station, Kozhikode, carried out studies on the conservation of nutritive values by this process.

The quantity of prawns landed annually on the Malabar and South Kanara Coasts alone is 196,000 maunds valued at Rs. 23,50,000. Since the season for prawn fishery in this region is during the monsoon and its peak period is very short, the need for proper processing and preservation of the catch is greatly felt.

The semi-dried prawns are manufactured in this way. The prawns are blanched in boiling six per cent brine for two to three minutes. After shelling, the meat is immersed in cold saturated brine for about 15 minutes. The brined prawns after draining the excess brine are dried in

an electric oven at 50 ° C. Drying is considered adequate when the prawns become rubber-like and lozenge-pink in colour with a moisture content of about 45 per cent.

The investigations showed that the bacterial count of fresh prawns is reduced by 98 per cent by blanching alone, brining effects a further reduction of 99.45 per cent. Addition of 0.075 per cent ascorbic acid to brine during brining brings down the bacterial count in semi-dried prawns by 99.93 per cent by the end of eight weeks, in spite of heavy initial bacterial load.

A batch was dried to give a hard product (moisture content 21.7 per cent). Hard-dried prawns keep well and no fungal growth was noticed even after 20 weeks; very slight fading was observed in the colour of the product. Semi-dried prawns show intensive fungal growth and fading in colour by eight weeks.

Medieval Hindu Archives

The term archives as used today usually refers to documents written on paper. But paper was introduced in India only in the thirteenth century and its use in the beginning was confined to the north-western parts of the country. From about the seventh century A.D. till almost the end of the seventeenth century, it was not paper but stone and copper which were used for writing documents. Western India abounds in thousands of these documents and an article by Dr. B. A. Saletore, Director of National Archives, in the latest issue of *Indian Archives*, just published, gives interesting material on these medieval Hindu archives.

The stone archives varied in size, ranging from about three feet by one and a half feet to eleven feet by three feet. The most ancient archives are in large and deliberately deep-cut letters on massive, ponderous slabs. Calligraphy reached its perfection in the twelfth and the thirteenth centuries, the documents being inscribed on beautifully polished slabs of black hornblende in regular and ornamental characters. The opening of the eighteenth century saw the stone inscriptions giving place to paper documents which were called after the North Indian (Persian) models, *sanads*.

Records for Reference

The archives were decorated with sculpture, carried dedicatory verses and gave details of royal donors, feudatories who received gifts and also included warnings against the destruction or violation of the gifts. This last was very impressive: "Whoso usurps a gift made by himself or by another shall assuredly be born a worm in filth for sixty thousand years."

This last part of the documents stamps them as records which were meant for future reference. These archives were fixed in the ground, most often in public places, along highways or in temple precincts or the courtyards of palaces, buildings, etc.

Mason-Poets

These extraordinary stone archives came to be inscribed in the following manner. The Royal Secretary communicated the King's order to the

Chief Secretary. The latter on approval, transmitted them to the revenue officers. There then assembled the Revenue Accountants, who made entries accordingly in their revenue registers. The literary expression was the extempore performance of the poet, who was in state employ and who was on the spot, while the actual engraving was the work of the stone-mason. In some instances, the stone-masons were themselves learned poets.

In addition to details dealing with the rulers, feudatories, dates and donees, there were very many important details in the documents which

are of the greatest historical value. The administrative officials, their designations and duties; details of the assessment of lands; the revenue yield of the province; the burden of taxation, the judicial procedure; famine conditions; municipal affairs; details about education; water-supply and rural administration; conditions of society; religion and commerce—these are a few of the major subjects which are dealt with in these unique records of Medieval Hindu India, which form the anchor-sheet of our study for about 1,000 years, from the seventh till the seventeenth century A.D.

Chrome-Vegetable Tanning

Leather is a material of infinite variety of form, texture, appearance and use. Such a diversity of use and property for leather, calls for a skilful and scientific technique to make it. A single type of tannage like full chrome or pure vegetable tanning results in leather with certain characteristic properties. Vegetable tanned leather is soft and full with a good feel and strength. The full chrome leather is tough, durable and stable to heat. It is possible to impart the good qualities of different kinds of tanning to the same leather by pretanning the pelt with one kind of tanning material and retanning the material, i.e., by combination tannage. The combination tannage not only influences the properties of the end-product but it sometimes reduces the time of tanning, thus lowering operating costs.

The problem of combination vegetable-chrome tanning is of immense interest to the Indian tanning industry. It is possible to carry out chrome and vegetable tannages in three ways: chrome pretannage and vegetable retanning; vegetable pretannage and chrome retannage; simultaneous chrome and vegetable tannage. The sequence and intensity of tanning agents in combination tannages influence the quality and properties of leathers.

The vegetable retanning of the chromed leather is usually employed in the U.S.A. for making upper leathers

for army boots, for farm shoes and work shoes. The advantages of this retanning practice are several. Fixation of vegetable tanning is increased by previous chrome tanning. More concentrated vegetable tan liquors can be used after a chrome pretannage. The leathers produced retain the good qualities of both pure chrome and vegetable tannage, and an increase in the thickness of leather is achieved as compared to full chrome leather.

Semi-chrome tanning is widely practised in England and on the Continent; the chief leathers produced are semi-chrome kip sides, gloving sheep, grace and levant grained goats, roller skins, lining leathers, suedes, upholstery leathers, insole leathers and sole leathers to an extent. The advantages of semi-chrome tanning are the following. The best leathers can be selected before retanning. Less chrome liquor is required, and much durable leather is obtained with lesser amount of chrome.

The simultaneous use of chrome and vegetable tanning is a comparatively recent practice. The method is still in the development stage and further research is required before it can be widely practised.

An article published in the October issue of the *Journal of Scientific and Industrial Research* reviews various combination tannages for the processing of leather and indicates the important problems to be investigated in this connection.

The Human Body

The human body is the result of an evolution which has taken millions of years. Most of us are familiar with the story of how life began, long long ago, in the form of animals so small as to be invisible to the naked eye, whose body consisted only of a single cell. From this humble beginning life began to evolve, assuming complex forms.

The basic unit of the human body is the cell which is very much like the single-celled animals in the lowest rung of the evolutionary ladder. But there is a very important difference. Whereas the single-celled animal is an independent organism, the cells of the body do not have this independence, but share a common life and they are organised as units of a complex whole.

Division of Labour

There is a fine and varied division of labour within the body enabling it to carry on the varied functions of nutrition, respiration, etc. Although the body works like a machine, it is a living thing. It grows and its routine processes involve the expenditure of energy. For both these purposes it needs nutriment. The organs of digestion carry on this work of assimilating food. They form one long tract, the major elements of which are the stomach and the intestines. Associated with this tract are also organs which secrete juices which help in the assimilation of food.

The food we take is very much unlike the body substance and unless it is broken down and made somewhat like the body substance, the human system cannot assimilate it. Utilisation of food is somewhat like burning. For burning food, therefore, within the body, we need oxygen. The respiratory system of which the most important element is the lung, provides for the supply to the body of this precious gas from the atmosphere which surrounds us.

Assimilation of Food

The food is digested and assimilated mostly in the intestines. The nutriment has to reach every part of the body because every part is living. Blood circulating in the body is the agent which executes this work. The main organs of circulation are the

heart and the blood vessels. The body is producing waste products continuously and they have to be cleared, as otherwise the whole system will collapse due to poisoning. The main organ of excretion is the kidney. Waste products are also excreted through the sweat glands in the skin and through the exhaled breath.

The shape and structure of the body are stable. If this stability is not preserved, the body will not be able to execute its complex functions. The skeletal system, consisting of a complex arrangement of bones, is what gives to the body its stability of form. The body has also to make innumerable movements in the routine process of living. These movements are not confined to simple instances like walking or running or lifting an arm, but include the movements of the organs within the body of which we

are not conscious. Muscles whose fibres have the property of contractility enable the body to make these movements.

Influenced by Environment

The human system is living in a perpetual inter-change of influences with its environment. Various sense organs like the eye, the ear, the nose, the tongue and the skin, signal information regarding changes in the environment to the nervous system. And the body makes the necessary adjustments by means of the nervous system signalling commands to the musculature.

So, the highest co-ordinating function within the body resides in the nervous system of which the most important elements are the brain and the spinal cord.

Racing Permitted for Further Period of Five Years

The Madras City Police and Gaming (Amendment) Act, 1949 (Madras Act VII of 1949) provides for prohibition of betting on horse races on and from a date to be notified by the Government. It was announced in March 1951 that the Government had decided to give effect to these provisions from 1st April 1953. The Government have examined the matter further and have decided to suspend the provisions of Sections 2 and 4 of the Act and to permit racing in this State for a further period of five years from 1st April 1953.

Remittances from Ceylon

With reference to difficulties experienced by persons of Indian origin in Ceylon in remitting funds for the education of their children in Madras, the High Commissioner for India in Ceylon has written to the Chief Minister of Madras that no complaints have been received so far from Indian residents in Ceylon.

It appears from the High Commissioner's letter that according to the present exchange control regulations in force in Ceylon, any Indian who holds a residence permit

to stay in Ceylon can obtain an exchange control card from a post office of his choice and remit the maximum sum of Rs. 30 per mensem by money order through that post office, without any formalities. Exchange control cards are also granted to those Indians who are legally resident in Ceylon but possess no residence permits.

For persons of larger income groups, falling within the above two categories, remittances are allowed for an amount not exceeding 1/3 of their proved income for maintenance purposes, which include expenses for the education of their children.

Explaining the above position regarding remittances to India from persons of Indian origin in Ceylon, the High Commissioner for India has assured that any specific cases of hardships to Indian citizens brought to his notice will be taken up with the Government of Ceylon.

Motor Vehicles Tax

The Government have ordered that the concessional rates of tax, levied in respect of the motor vehicles, plying solely within the former Pudukottai State, should be in force for a further period of three months commencing from October 1, 1953.

Aid to Welfare Organisations

The Advisory Panels of the Central Social Welfare Board, whose composition has been finalised, will undertake tours of certain selected States to establish contacts with voluntary organisations engaged in welfare work which have asked for financial aid from the Board.

The panels, which consist of experienced social workers in different fields of welfare, will submit their reports, on completion of their on-the-spot inquiries, to the Board, which is expected to meet in the middle of November to decide the grants-in-aid to be given.

Side by side with sanctioning grants, the Board will advise the various welfare bodies on the lines on which they should develop their activities and encourage the setting up of new ones at places where none exist at present.

While attaching great importance to the development of social services, the Five-Year Plan has made a provision of Rs. 4 crores for financial help to deserving social welfare institutions. It has to administer this provision, as also to guide and direct voluntary welfare effort, that the Central Welfare Board was constituted by the Government of India recently in pursuance of a recommendation of the Planning Commission.

The other main functions of the Board are to assess the requirements of welfare organisations, to evaluate their programmes with a view to dovetailing them in the general pattern laid down in the Plan, and to co-ordinate the assistance under the Central Ministries and State Governments.

Personnel of Panels

The Children's Welfare Panel, which consists of Srimati Krishna Hutheesingh (Bombay), as Chairman, Sri N. Raghavrao (Madras), Dr. B. H. Mehta (Bombay), Srimati Jamil Khan (Uttar Pradesh) and Srimati S. Manjubhashini (Madras), will visit the States of Madras, Mysore, Travancore-Cochin and Hyderabad.

The Women's Welfare Panel, which includes Srimati Manmohini Sehgal (Delhi), Srimati Sarla Devi (Orissa), Srimati Perin Mistri (Gujarat) and

Srimati Kameswari Kuppuswami (Mysore), will tour the Punjab under the guidance of Srimati Indira Gandhi, a member of the Central Welfare Board.

The Juvenile Delinquency Panel, which comprises Srimati Mary C. Clubwalla Jadav (Madras), as Chairman, Srimati T. Krishnaswami (Madhya Pradesh), Srimati Fatima Ismail (Bombay), Srimati Pramilaibai Gadgil (Poona) and Sri Brajanandan Sarma (Bihar), will visit the States of Bombay and Saurashtra.

Srimati Durgabai Deshmukh, Member (Social Services) of the Planning Commission, who is Chairman of the Board, has called upon the general public and welfare organisations to avail themselves of the opportunity provided by the visits of members of the three Advisory Panels to the various States and to extend their wholehearted co-operation in their study and understanding of the problems of social welfare.

Execution of Electricity Extension Schemes

In November 1952 Government directed that schemes for the extension of supply of electricity be taken up in the order of relative percentage of contributions from beneficiaries. When in July 1953, however, Government floated its loan the people of the State responded liberally and double the target fixed was raised.

The Government have therefore decided to cancel the orders issued last year about contributions to be paid for electricity extension schemes and have directed that a sum of Rs. 50 lakhs should be spent in the ensuing months of the current year, on the completion of partially executed schemes and in order of priority, on a few schemes already sanctioned and awaiting provision of funds. The total cost of the schemes to be so executed will be Rs. 80 lakhs.

At the same time where consumers offer loan contributions voluntarily to meet the full cost of an extension scheme or a service connection, that scheme or service connection, as the case may be, will be taken up for execution out of turn under top priority.

Rubies in Burma

The Geology and Gemstones of Mogok Stone Tract, Burma, by Sri L. A. N. Iyer, just published by the Geological Survey of India, deals with the Mogok Stone Tract which is situated in Upper Burma. This tract has been known from very ancient times as the supplier of the world's finest rubies.

Being very mountainous and clothed with dense jungle, coupled with rapid weathering of rocks, this area has been difficult for geological mapping. The present publication is based on field-work done during 1932-35 and gives a detailed account of the geology of the place with special reference to the precious stones. The gem minerals of this area consist of ruby, sapphire and spinel. Other semi-precious stones obtained are topaz, quartz, zircon, aquamarine, tourmaline, lapis-lazuli, moonstone and peridot.

Mining on a large scale with machinery proved unremunerative in this area, but indigenous mining practices are still being vigorously pursued. The methods are primitive. In one technique, men go down a small round pit, the diameter of which just allows a man to get down by placing his feet in niches on the sides. The pits are untimbered and go down to 20-40 feet in depth, though some pits may go as far down as 90 feet. The pit is generally lighted by a mirror at the surface. The large stones find a quick sale and are sent to Europe or America, while the small stones are brought for the Indian market.

Do You Know?

The total capital invested in the electric industry in India is Rs. 18.31 crores, out of which foreign capital is Rs. 4.77 crores.

The Upper Sone railway bridge in India 10,052 feet long, is the longest in Asia and the seventh longest in the world.

At the end of August 1953, the number of towns under statutory food rationing was 101 with a total population of 24.2 millions.

During 1952-53, the total value of purchases made by the India Stores Department, London, was £ 19.2 millions.

India has 230,047 miles of trunk telephone connections.

Abolition of Zamindaris: Deposit of Interim Payments

On behalf of the Government, the Director of Settlements, Madras, has deposited interim payments with the Estate Abolition Tribunal at Chittoor in respect of zamin estates notified in South Arcot District and the particulars thereof are published at page 1221 of Part II of the *Fort St. George Gazette*, dated September 23, 1953.

Claims in respect of the moneys deposited with the Chittoor Tribunal may in future be made to the Vellore Tribunal.

On behalf of the Government of Madras, the Director of Settlements, Madras, has deposited with the Estates Abolition Tribunal, Chittoor, certain sums towards advance compensation in respect of certain zamin estates in North Arcot District notified under Section 1 (4) of the Madras Estates (Abolition and Conversion into Ryotwari) Act, 1948. In respect of Arni Jagir Estate, he has withdrawn a certain amount as indicated against it from the amount previously deposited. The name of the estates, the amount deposited or withdrawn and the date of the transaction are published at page 1029 in Part II of the *Fort St. George Gazette*, dated August 5, 1953.

Claims in respect of the moneys deposited with the Chittoor Tribunal may in future be made to the Vellore Tribunal.

On behalf of the Government, the Director of Settlements, Madras, has deposited certain amounts towards advance compensation with the Chairman, Estates Abolition Tribunal at Madurai, in respect of Uthukuli Zamin Estate in Coimbatore District notified to be taken over by Government on February 4, 1953. The amounts deposited and the date of deposit are published at page 1132 of Part II of the *Fort St. George Gazette*, dated September 2, 1953.

On behalf of the Government, the Director of Settlements, Madras, has deposited certain amounts towards interim payment for Fasli 1362 with the Chairman, Estates Abolition Tribunal, at Chittoor in respect of Venkatapuram Zamin Estate in Madras State. The amounts deposited and the date of transaction are published at page 1194 of Part II of the *Fort St. George Gazette*, dated September 16, 1953.

Claims for payment from the amount deposited with the Tribunal at Chittoor may in future be made to the Tribunal at Vellore.

Transfer of Pensions from Dominions

With regard to the procedure for transfer from the Dominion of Pakistan to the Dominion of India and vice versa of pensions of pensioners of the Central and State Governments, the President has decided to extend, for a further period up to 31st March 1954, and subject to the existing conditions, the present arrangements for the payment of advances of pensions to displaced pensioners, pending the transfer of those pensions from Pakistan. Advances will continue to be admissible during this period only to those pensioners who are already in receipt of such advances, and to the same extent.

Term Extended

The Government have directed that the term of office of members of Panchayats, constituted under the former Madras Local Boards Act, 1920, as well as of the members of the Panchayats in the merged territory of Pudukkottai, be further extended up to the noon on January 2, 1954, or until the date of election of members or president of these Panchayats, whichever election is held earlier.

This action has been taken, as elections to some Panchayats still remain to be completed.

Tests for Essential Oils

The Indian Standards Institution has issued a standard on the methods of test for essential oils. The standard is a necessary adjunct to the standard specifications for individual essential oils, such as lemongrass oil and sandalwood oil, recently published by ISI. It prescribes the tests which are common to most essential oils.

The standard has been formulated by the ISI's Essential Oils Sectional Committee and contains definitions of terms used in trade and industry, methods of sampling and instructions regarding the preliminary examination of the material and samples.

Facts and Figures

India's exports during the first half of this year are valued at Rs. 284.48 crores.

The Community Development programme and the National Extension work benefit today 44,000 Indian villages.

During the five years ended September 1, 1953, a sum of Rs. 9.93 crores has been paid to coal miners who had subscribed to the Coal Mines Provident Fund Scheme.

A sum of Rs. 4.17 crores was realised by the Government of India during the five months ended July 31, 1953, through the disposal of surplus stores.

Income-tax collections during the first six months of the current financial year amount to Rs. 58.18 crores.

India has the two longest railway platforms in the world, and eight of the ten longest platforms in Asia.

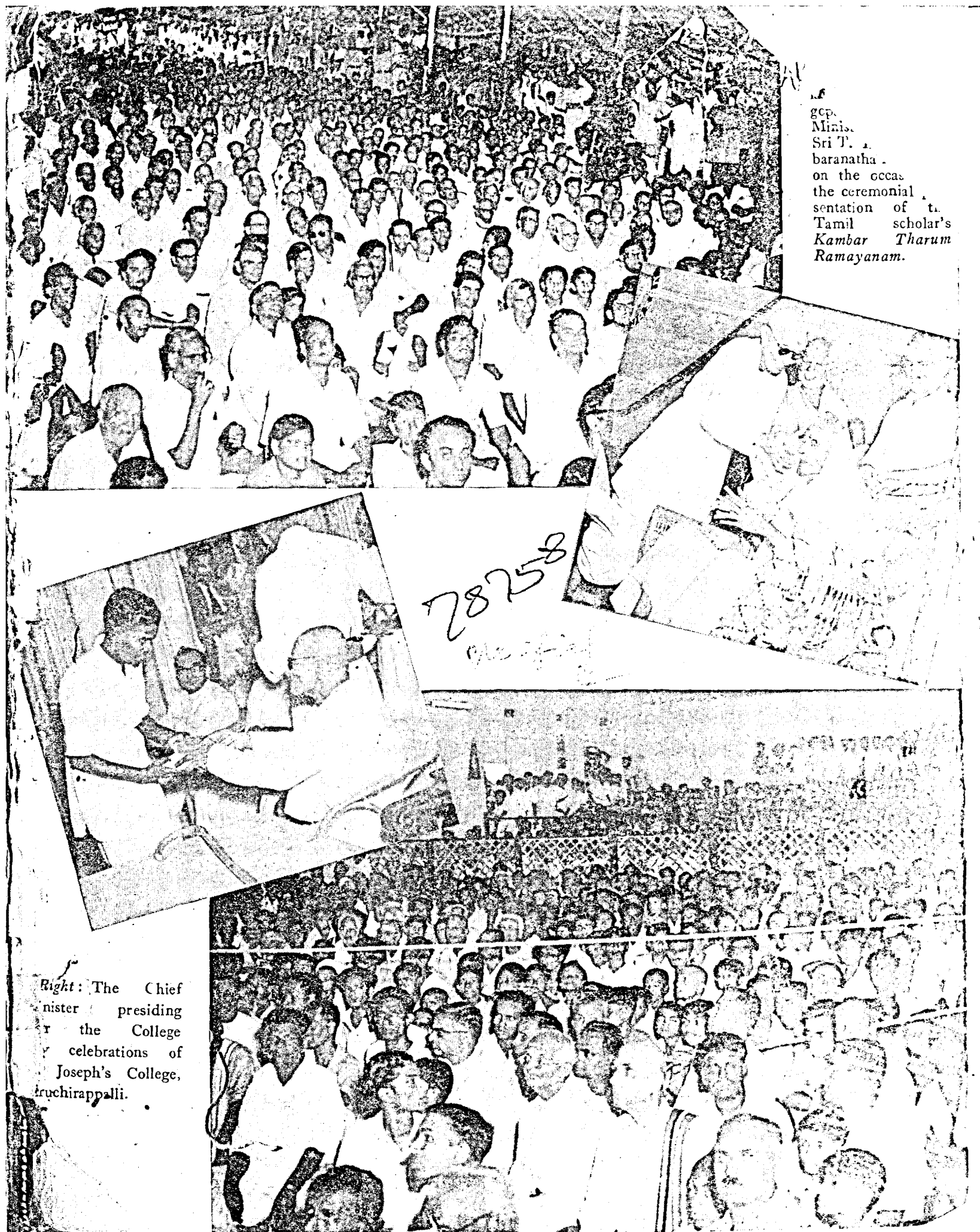
Executed

Chittan Kaladi of Mallayagoundanpatti in the Dindigul Taluk of Madurai District, who, on the 4th October 1952, killed Solai Ammal and Pachai Perumal and who was sentenced to death by the Sessions Judge, Madurai, was executed on the 2nd November 1953, at the Central Jail, Madurai.

Kalianna Goundan of Kolathupalayampudur, Erode Taluk, Coimbatore District, who, on the night of July 19, 1952, murdered his brother's son and was sentenced to death by the Sessions Judge, Coimbatore, was executed on the 10th October 1953, in the Central Jail, Coimbatore.

Punished for Corrupt Practices

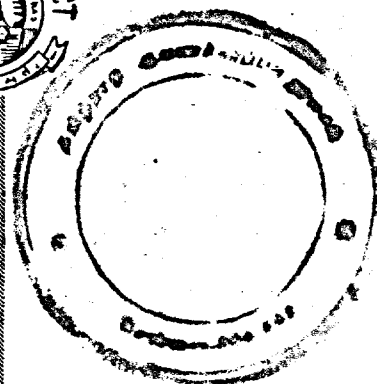
During the month of August 1953, a Deputy Superintendent of Police, a Revenue Inspector and a Sub-Inspector of the Excise Department were dismissed, a temporary Field Surveyor of the Revenue Department was discharged from service, an Inspector of Police, a Constable and a Head Clerk of the Judicial Department were compulsorily retired and a Constable was removed from service. Two other Government servants were awarded less severe punishments.



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Right: The Chief Minister presiding over the College of Agriculture celebrations at Joseph's College, Trichirappalli.

FOR
DAYLONG
FRESHNESS
AND
FRAGRANCE



Kerala
SANDALWOOD
SOAP

PURE OIL BASE
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A Division of the Department of Industries and Commerce, Madras

