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THE TALL TREE FALLS

At the all-Party Public meeting to mourn the demise of Tairu K. Kamaraj held on 5–10–1975 the Tamil Nadu Chief Minister announced several memorials to perpetuate the memory of the late lamented leader, chief of them being the erection of a Mandapam of dimensions equal to those for Gandhi and Rajaji in Guindy.

Tamil Arasu

VOL: VI OCTOBER, 1975 ISSUE: 4

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Tamil Arasu

OCTOBER 1975 50 Ps.

GREAT MOMENTS IN A GREAT LIFE

Picture on the opposite page and this page depict Thiru K. Kamaraj during the many years of his useful life in the Service of the Country. Above with Hellen Keller during a reception in Madras.

THE BEACON OF SACRIFICE IS EXTINCT

CONDOLENCE MESSAGES OF P. M. & C. M.

The Prime Minister Thirumathi Indira Gandhi, in a condolence message, said the passing away of Kamaraj "removes from our midst a remarkable personality who wielded considerable influence and commanded the respect of all sections."

"Starting life as an ordinary volunteer in the struggle for freedom, he rose to the highest positions in the Congress, the administration and in national life through sheer organisational ability and sturdy common sense."

"He was a man of the masses with wide experience of problems at the field and was dedicated to the cause of the poor and the weak. The manner in which he overcame all difficulties is a tribute to his inmate qualities and to the strength of our democratic system", concluded the Prime Minister.

The Chief Minister, Thiru M. Karunanidhi, in his condolence message said : "The beacon of sacrifice is extinct. We have lost a leader, who had secured an abiding abode in the hearts of Tamilians, and one who had completely dedicated his life for the State's progress and for the nurturing of the democratic way of life in the country."

TAMIL NADU GOVERNMENT GAZETTE

EXTRAORDINARY

PUBLISHED BY AUTHORITY

No. 328 MADRAS, THURSDAY, OCTOBER 2, 1975
[PURATTASI 16, IRATCHASA (2006 THIRUVALLUVAR ANDU)]

DEMISE OF Thiru K. KAMARAJ, FORMER CHIEF MINISTER OF TAMIL NADU

AN IRREPARABLE LOSS TO COUNTRY

The Government of Tamil Nadu announce with profound regret the demise of the former Chief Minister of Tamil Nadu, Thiru. K Kamaraj, at 3-15 p. m. on Thursday, the 2nd October 1975.

Born in 1903, Thiru K. Kamaraj, started his life as a Freedom Fighter and while occupying many responsible positions in the Congress party, he lived up to the highest traditions of Gandhian ideals. A great leader, he rendered yeoman service to the masses as the Chief Minister of Tamil Nadu from 1954 to 1963. The death of Thiru K. Kamaraj is an irreparable loss to the country in general and Tamil Nadu in particular.

(By order of the Governor)

P. SABANAYAGAM,
Chief Secretary.

162343

We Will Bring Back Gandhian Enthusiasm To Our Economics

—:o:—

Tamil Nadu Schemes Show it is easy of Achievement

EXCERPTS FROM SPEECH
By
THIRU. K. K. SHAH,
Governor of Tamil Nadu.

Year after year, as Gandhi Jayanthi is celebrated, I get convinced, more than ever before, that there is an ever-increasing awareness in the minds of the people of India about the need to follow Gandhiji in strengthening the fibre of democracy and in building up a solid base for accelerated economic growth. **The unforgettable scenes of enthusiasm that I witness during Gandhi Jayanthi Celebrations at Gandhi Mandapam, Guindy, further convince me that the Government and that people of Tamil Nadu are entirely in tune with Gandhian philosophy in shaping an approach to social, economic and political issues.** The massive demonstration of faith in Gandhiji's philosophy, will, I am sure, herald a new era of understanding and prosperity.

The 20-Point Economic Programme announced by the Prime Minister is not only a reaffirmation of our faith in Gandhian approach but our determination to adopt it completely. Gandhiji's extreme concern for the common man was the talisman for ensuring equality, contentment and peace. Finding that the common man has not so far received a fair deal in spite of the implementation of Five Year Plans and other developmental programmes, the Prime Minister is now making determined efforts to look after the poor, the down-trodden, the backward classes, Scheduled Castes and Scheduled Tribes who constitute a large segment of our population. All these endeavours represent the quintessence of the ideals propounded by Gandhiji, the vision and far-sightedness of Pandit Jawaharlal Nehru and the dynamism of our illustrious Prime Minister Thirumathi Indira Gandhi. The steps taken so far, have yielded satisfactory results and the success achieved so far encourages us to look forward to the future with hope and confidence.

Last year, we entertained a fond hope of undertaking a pilot project for reconstruction of village economy. We now feel confident that it won't take long before the project gets under way. **We have selected a group of ten villages with the help of the Government and active assistance of Gandhigram and preparations are afoot to collect statistics. We are about to draw up plans to ensure that every family becomes economically viable.** We feel that the State and the Central Governments have announced sufficient measures to make our task lighter. If we can take advantage of the Government's anxiety to take industries, especially small scale industries, to backward areas, the task will not be heavy. We are happy that intellectuals and service institutions like Lions Clubs are eager to assist us. We propose to train a cadre of dedicated workers who after initial training and imbued with Gandhian ideals of service and sacrifice, will study conditions in villages and prepare a blue print for self-sufficiency and self-reliance. We propose to utilise the energy and idealism of our younger generation and build up future leadership inspired by Gandhian ideals.

Never before there was greater necessity than today to rembmer that non-violence and truth alone can convert the present trying times into 'Anushashan Parv' as respected Vinobaji has righly observed. Discipline alone can ensure settled conditions for ensuring economic growth and informed electorate. Freedom of speech and action will then cease to be a slogan and everybody's freedom of speech and action will become compatible with the freedom of speech and action of others ; we will then think of responsibilities first and rights later on. As Gandhiji said : "All rights to be deserved and preserved come from duty well done", and right means should be adopted to secure right ends. These basic tenets are woven into the very texture of our culture and civilisation. Those foreign powers who criticise us to-day will realise in no time that had it not been for the promptness with which the situation was handled, truth and non-violence would have been a heavy casualty.

This year, the Government of Tamil Nadu have been good enough to participate in the celebrations by running an eye camp and initiating slum clearance programme. The Government are also providing a Library-cum-Museum Building at Gandhi Mandapam so that the large number of visitors to Gandhi Mandapam can draw inspiration and the younger generation can be nearer to Gandhiji.

We are taking up important aspects of Gandhiji's programme for discussion. We propose to emphasise that Prohibition can succeed if people understand the benefit of Prohibition and adopt it as a creed. Let us remember what Mahatmaji said — "Prohibition means a type of adult education of nation and not merely a closing down of wine shops." **The Government of Tamil Nadu have given the lead by introducing complete Prohibition as a vital economic programme. Let us pledge ourselves to make it a success** They have also taken several measure to eradicate the scourge of untouchability. They have to be supplemented by the active participation of the people. We propose to highlight the point that the cause of women's emancipation can succeed only if the vast masses of women in rural area are made literate and aware of their rightful status in society.

These celebrations will have no meaning if they do not sustain the enthusiasm of the people to back these programmes which were nearer to Gandhiji's heart. To remember Gandhiji is to rededicate ourselves to his ideals and to recapture the imagination of the masses by reviving his constructive activities. Let us pledge ourselves to be his worthy followers.

Vanakkam.

A follow up of PM's Economic Programme

Tamil Nadu.

ABOVE 2 GROUNDS TAXABLE

To restrict the holdings of urban land, the urban land tax raised so as to lay the basis for URBAN CEILING — a step towards the socialistic society.

- Classification has been made as *residential* and *non-residential*
- Rates of taxes have been revised
- Exemptions given already reviewed

The broadest shoulders should bear the heaviest burden

Tenancy laws and house-sites for Agricultural Labour

- Registered tenancies-3,99,350
- Total area covered-6,03,898 acres.
- 7.19 lakh acres of cultivable lands assigned to 3.6 lakhs of landless poor.
- Ownership rights to house-sites conferred on 1.74 lakhs of people—major beneficiaries being harijans and backward classes.
- Government lands for house-sites so far given to five lakhs of persons.
- Amount spent to acquire 2.36 lakh house-sites for harijans — Rs. 4.42 crores.
- Amount spent during last 8 years for acquiring 83, 968 house-sites — Rs. 2.03 crores.

A helping hand to weavers in woe

Rs. 16.5 crores worth of yarn given to weavers by Co-optex and Tamil Nadu Handloom Finance Corporation.

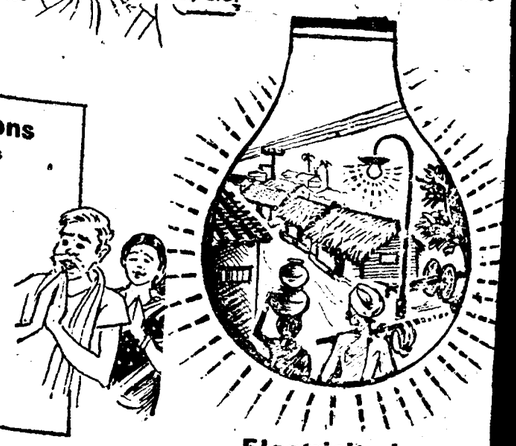
Rs. 15. 8 crores worth of stagnant handloom cloth was taken over by Government and marketing done by Government agencies.

A unique scheme to provide security benefits to handloom weavers is being introduced. If a subscriber to this scheme dies before the age of 55, his family will get the amount paid by him towards this scheme plus a sum from the Government along with interest. Also an amount equal to this sum will be paid by LIC.

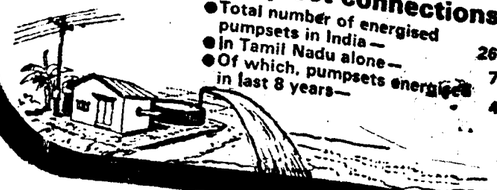
DEBT

Moratorium to weaker sections

- In 1972 debt relief given to all agriculturists ryots and tenants, labourers, wage-earners.
- In 1975 January, debt relief given to all agriculturists. No creditor can institute a suit in a court of law. Payment of interest postponed.
- In 1975 July, debt relief given to non-agriculturists also. No interest will accrue for debts incurred on 22nd July 1975—from 22nd July to 15th January 1976. Pawnbrokers cannot sell the goods pledged. Interest is waived for six months. Millions of poor have thus been saved from tyranny of indebtedness.



Unique record of 7 lakh energised pump-set connections



Total number of energised pumpsets in India —	26,50,889
In Tamil Nadu alone —	7,13,312
Of which, pumpsets energised in last 8 years —	4,23,409

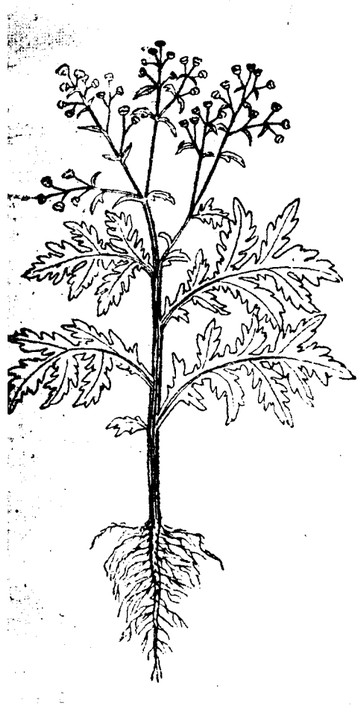
Electricity in every village

Up to 1967 only 20,250 villages and 4,354 harijar. colonies had received electric supply.

In the last 8 years alone:
- 40,985 towns & villages and
- 19,574 harijan colonies

have received electric supply.

HOW TO RECOGNISE THE POISONOUS WEED PARTHENIUM



Parthenium (*Parthenium hysterophoru*) a pernicious weed variously known as 'Congress grass', 'Gajara grass' (Carrot grass), 'Chatak Chandani' (Star flowered) and 'Phendarphuli' (white flowered) is considered to be a dangerous plant causing health hazards to human beings besides being detrimental to growing of crops.

Skin Specialists have reported eczema caused by the weed are beyond medical cure and it might damage lungs, eyes and nose etc. The first symptom is itching sensation around the eyes, spreading to the joint of elbows, the back of the knees and front neet leaving the broken skin to let in germs causing complications. Ultimately it leads to the death of human lives. The pollen grains of the weed which floats in the air are reported to have caused several allergic type of diseases like dermatities fever and asthma.

Parthenium (*Parthenium hysterophorus*) belonging to the family 'Compositae' is an erect erect herb, having white cap like flowers growing to a height of 1 to 1.5 meters, resembling the carrot crop.

Scientists and farmers have reported the presence of the fast spreading weed in several places like Poona Bangalore, Jammu and Kashmir. This has now spread to Coimbatore particularly within the city limits and around.

Parthenium (*Parthenium hysterophorus*) can easily be eradicated by burning, removal by digging and destroying etc. It can also be controlled by spraying either 2, 4-D or MCPA at the rate of 2 kg. a. i/ha dissolved in 900 litres of water. For fully matured plants a mixture of 2, 4-D and Paraquat at a 2 kg. a. i/ha each, will be more effective for the control of the weed. All the chemicals are available in the market

For effective control of this dangerous weed, (*Perthenium hysterophorus*) control campaigns in the affected areas are to be organised creating social consciousness among the public. Health Departments, Universities and all public departments should work together chalking out programmes to prevent the killer weed. The Tamil Nadu Agricultural University will be happy to render necessary facilities in identifying, the weed and in demonstrating control measures. For further particulars kindly address the Director of Extension Education, Tamil Nadu Agricultural University, Coimbatore -3.

Dedication Anew

The Birthday of Anna is a land-mark in Tamil Nadu. For the Chief Minister and his Cabinet Colleagues the day begins with dedicating themselves to service of the State by formally garlanding the Anna Statue on Anna Salai, Madras. Most of the programmes aimed at promoting the welfare of the people are formally given a start on the day. This year saw the complete eradication of the State run raffle, thus putting an end to all forms of gambling in the State. This measure has evoked widespread respect for the State in all parts of the country. Gallantry Awards to Police personnel are also presented each year at a ceremonial parade. The awards have been instituted in memory of the Late Chief Minister Dr. C.N. Annadurai.

Picture alongside shows the Chief Minister Dr. M. Karunanidhi Dr. V. R. Nedunchezhian and Thiru K. Anbazhagan, Health Minister near the Anna Statue on 15-9-1975. Picture below shows the Chief Minister, arriving for the ceremonial parade for presentation of the Tamil Nadu Chief Minister's Police Medal for Outstanding Service/Gallantry on 14—9—75 at the Police Parade Grounds, Vellore.

Police Medal in Memory of Anna

AWARD OF TAMIL NADU CHIEF MINISTER'S POLICE MEDAL FOR OUTSTANDING SERVICE/GALLANTRY.

The following members of the State Police Service and Subordinate services of the Tamil Nadu Police and the members of the Tamil Nadu Fire Service have been awarded the Tamil Nadu Chief Minister's Police Medal for outstanding service/gallantry on 14th September, 1975 by the Governor of Tamil Nadu and the recipients are eligible to draw lump-sum grants at the rates noted against each :

Names	*Lump-sum grant*
1. Thiru V.G. Manoharan, offg. Superintendent of Police, Directorate of Vigilance & Anti-corruption, Madras.	No grant
2. Thiru C.V. Chandrasekaran, Deputy Commandant, Tamil Nadu Special Police II Battalion, Avadi.	No grant
3. Thiru R. Subbarayan, Deputy Superintendent of Police, (Category II) and Asst. Commissioner of Police, Headquarters, Madras.	Rs. 3,000/- (Rs. Three thousand only)
4. Thiru S. Motha, Deputy Superintendent of Police, (Category III) Tamil Nadu Special Police, I Battalion, Tiruchirapalli.	Rs. 3,000/- (Rs. Three thousand only)
5. Thiru M.M. Vasudevayya, Deputy Superintendent of Police and Asst. Commissioner of Police Madras.	Rs. 3,000/- (Rs. Three thousand only).
6. Thiru V. Natarajan, Deputy Superintendent of Police, Directorate of Vigilance & Anti-corruption, Madurai.	Rs. 3,000/- (Rs. Three thousand only)
7. Thiru S. Vellingiri, Deputy Superintendent of Police, Prohibition Enforcement, Coimbatore.	Rs. 3,000/- (Rs. Three thousand only)
8. Thiru G.K. Srinivasan, Divisional Fire Officer.	Rs. 3,000/- (Rs. Three thousand only)
9. Thiru S. Myilswamy, Inspector of Police, Directorate of Vigilance & Anti-corruption, Salem.	Rs. 2,000/- (Rs. Two thousand only)
10. Thiru K.K. Ashokan, Inspector of Police, Vigilance Cell, High Court Coimbatore.	Rs. 2,000/- (Rs. Two thousand only)
11. Thiru C. Muniyandi, Inspector of Police, Madras City.	Rs. 2,000/- (Rs. Two thousand only)
12. Thiru K. Ganesan, Inspector of Police, Food Cell, C.I.D., Cuddalore.	Rs. 2,000/- (Rs. Two thousand only)
13. Thiru K. Ramadoss, Inspector of Police, Special Branch, Chingleput.	Rs. 2,000/- (Rs. Two thousand only)
14. Thiru V. Jayaraj, Inspector of Police, Aruppukkottai.	Rs. 2,000/- (Rs. Two thousand only)
15. Thiru C.R. Natanam, Deputy Inspector of Police, Thanjavur West.	Rs. 2,000/- (Rs. Two thousand only)
16. Thiru A. M. Ghouse, Reserve Sub Inspector, Tiruchirappalli.	Rs. 2,000/- (Rs. Two thousand only)
17. Thiru M. Manivelu, Asst. Sub-Inspector of Police, North Arcot District.	Rs. 2,000/- (Rs. Two thousand only)
18. Thiru S.M. Nagulan, Head Constables 282, Food Cell, C.I.D., Madras.	Rs. 1,000/- (Rs. One thousand only)
19. Thiru M. Natarajan, Head Constable 1657, High Court Vigilance Cell, Madras.	Rs. 1,000/- (Rs. One thousand only)
20. Thiru M. Muniswami. Fireman Driver 554.	Rs. 1,000/- (Rs. One thousand only)
21. Thiru S. Raman Pillai, Police Constable 1768, Directorate of Vigilance & Anti-Corruption, Tirunelveli.	Rs. 1,000/- (Rs One thousand only)
22. Thiru C.N. Subbarayalu, Police Constable 1754, Traffic, Madras City.	Rs. 1,000/- (Rs. One thousand only)

For Gallantry (Or other Distinguished Services) :

23. Thiru C.I.P. Dhanaraj, Dy. Superintendent of Police, Crime Branch, C.I.D. Madras	Rs. 3,000/- (Rs. Three thousand only)
24. Thiru R. Daksinamurthy, Sub Inspector of Police, Crime Branch, C.I.D. Madras	Rs. 3,000/- (Rs. Three thousand only)
25. Thiru C. Pola Reddy, Police Constable 1706, Tamil Nadu Special Police, Vth Battalion, Avadi.	Rs. 3,000/- (Rs. Three thousand only)

The Chief Minister Dr. Kalaignar M. Karunanidhi presented the awards at a special Police Parade held at Vellore on 14-9-1975.

The Tamil Nadu Chief Minister's Police Medal was instituted in 1969 in memory of the late Chief Minister Dr. C.N. Annadurai.

GETTING RID OF UNWANTED SHRUBS

TIRUPATHI BOTANISTS SHOW THE WAY

By

Bhaskaran Thomas

Semi-arid climatic conditions prevail over a third of India's land area. In these regions, there is scanty rainfall and the vegetation is unproductive, sparsely grown thorny shrubs.

Botanists at the Sri Venkateswara University in Tirupati, are presently looking for ways to eradicate these unproductive plant species. By doing so they hope that more productive crops and grass can be grown on the cleared land.

At the head of the five-year research endeavour is Dr. V. S. Rama Das, Professor and Head of the Department of Botany at the Sri Venkateswara University. The United States Government is supporting the study with a grant of Rs. 253,000 from PL-480 funds.

For their experiments, the Tirupati botanists have taken up a vast area at the foot of the nearby Thirumala Hills where there are as many as fifteen species of woody and thorny shrubs.

Dr. Rama Das says that mechanical means like use of bulldozers, were tried and found ineffective for clearing these plants. There was re-growth within a year after clearance and this was due to the fact that these woody shrubs have deep roots which could not be destroyed by bulldozing, he points out.

Hence Dr. Rama Das notes, one of the alternatives found by his research team for eradicating these shrubs was use of chemicals. "We have tried ten different chemicals and found that two are the most effective on a majority of the species we have here in Tirupati," he says. One of them is called 2, 4 5-T (Weed-one) and the other is Paraquat (Gramoxone).

Dr. Rama Das says that these chemicals have been successfully used in the defoliation of the woody shrubs. In the case of a few species, re-sprouting did occur after four-five months. "However," he notes, "after repeated applications it is possible to exhaust the organic reserves in the plants which are stored in the stems and roots and effect their eradication."

According to this professor, the arid zone plants have special characteristics like thick outer covering, short leaves, thorns and also a thick coating of waxy material on the outer skin which help the plants to adapt easily to the weather conditions prevailing in these areas.

Physiologically, Dr. Rama Das states, the tiny openings (stomata) in the leaves of several of these plants — unlike other kinds of vegetation — generally open during nights for intake of carbondioxide. This helps to prevent loss of water through evaporation during the day from the scorching heat of the sun.

"Now," Dr. Rama Das says, "we want to nullify some of the adaptive characteristics of the thorny bushes as a method for their eradication." This, he adds, can be done by using chemicals to control the leaf openings.

The Sri Venkateswara University scientists have found that 2, 4, 5-T and Paraquat (Gramoxone) help to control the leaf openings. Actually, Dr. Rama Das says, these chemicals enhance the size of the leaf openings. This helps to increase the transpiration rates and thus cause loss of water in the plants leadings to their death, he adds.

Their studies have also shown that certain other chemicals can be used for preventing the formation of the waxy outer covering of these woody shrubs. These chemicals too, Dr. Rama Das observes, can cause severe loss of water in plants.

As far as the replacement of the woody shrubs with more productive grass varieties is concerned, Dr. Rama Das says that work is still at a conceptual level. His research team has already observed one aromatic grass growing interspersed with the thorny shrubs. When this was grown at the university botanical gardens, it was found to have profuse growth. "Therefore we feel that we can perhaps replace the woody species by this grass," he adds.

He further states that this grass, when tender, can be used as fodder for livestock and as thatching material for hutments. Several other kinds of millets can also be grown in the arid areas after eradicating the woody shrubs because millets require less water. "This would go a long way in improving the rural economy of this area and other semi-arid lands," the Tirupati botanist predicts.

Read

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AIMS OF OUR FAMILY PLANNING PROGRAMME

GOVERNOR'S MESSAGE FOR FAMILY PLANNING FORTNIGHT

The necessity for preventing population explosion has been recognised the world over, but our country was the first officially to introduce a massive family planning programme. In view of large population comparatively meagre resources, low standard of living and tardy economic development, uncontrolled population growth has a severely crippling effect on our development. If this population growth rate, popularly known as "population explosion", were to continue any longer, there is very little scope or hope of improving the present low standards of living. Whatever savings and capital formation are possible under the circumstances, will be consumed by millions of additional mouths that are added every year. The Government of India therefore wisely embarked on a national family planning policy and a population control programme, twentyfour years ago, as an integral part of our development plans.

Our family planning programme aims at reducing the birth rate. We must remember there is a sharp decline in the death rate, on account of better medical facilities, control of communicable diseases, introduction of preventive public health measures and the wide use of anti-bacterial drugs. The programme, being a voluntary one without any element of coercion, provides enough option for adopting any one of the approved and tested methods according to one's aptitude.

Even an ordinary man with common sense will agree that within the limited means available, vast masses of our people cannot look after more than two children. Modern ways of living have luckily created a psychology of making no distinction between son and daughter. A contained family is a continual feast. An unbridled growth of the family leads ultimately to a generation of malcontents who would pull down the fabric of society and all that we have been striking to build over the years since our attainment of independence.

The State Government has launched many incentive schemes of Social Security and other welfare measures which are meant to improve the quality of life of the people and safeguard their future. These programmes are not likely to have any impact unless growth of population is arrested simultaneously.

With a view to promoting effectively this national programme, the Government of India have introduced a package of health services which include nutrition, prophylaxis against Anaemia, blindness, Immunisation against Diphtheria, Tetanus and Pertussis (Whooping cough), B.C.G., Small Pox etc. to create confidence in parents that adequate measures are taken to ensure longevity and good health of their limited family and especially the children. This programme is calculated to prevent diseases and promote health among mothers and their children. Every mother who has become an active acceptor of family planning programme is provided with the aforesaid health package from the nearest Maternity Centre. I would like the importance and easy accessibility of this package of health made known to all the people through active and sustained propaganda in Children's clinics, private nursing homes, public and private sector hospitals, Primary Health Centres, Social Service Organisations, Madhar and Magalir Manrams and the like. The Lions and Rotary Clubs and other similar social service organisations could help in achieving the aim of limited family. I am told that the children and mothers who receive supplementary feeding at the centres run by the Social Welfare Department receive also the benefit of this health package programme.

Family Planning programme has now become a target-oriented programme and every year the Government of India fix a target for different methods of Family Planning. Tamil Nadu has been able to exceed the sterilisation target during the past 3 years consecutively. Monetary incentives have played a large part in promoting the sterilisation programme in this State. They have also assisted special intensive Family Planning drives which have involved all departments under the leadership of the Collectors. The Government of India have accepted time-bound programme to reduce the birth rate to 25 per thousand by the end of the 6th Plan. As a result, the birth rate for 1974—75 is estimated to be 28.5 per 1,000 population as against 30.7 per 1,000 population during 1971.

The twenty-point economic plan which our Prime Minitser has recently placed before the Nation has created a new enthusiasm amongst the masses and has revitalised their faith in the destiny of India and confidence in their ability to shape it. The best scientific talents in the country will, I am sure, help develop expertise and achieve a break-through in reproductive biology and contraceptive technology. Similarly I hope the private and public Sector undertakings will put their shoulders to the wheel and help create an atmosphere among their employees and their families for their wholehearted and willing co-operation. It is imperative that a systematic effort is made by educational institutions to attune the minds of the growing generation to the merits of the 'limited family.'

The Cine field has not lagged behind in assisting this national venture. I would, however, welcome the producers and directors to participate in a larger measure in this national effort and produce films and documentaries which would emphasize and highlight the advantages of a limited family. Other voluntary agencies can also extend their co-operation.

As you all are aware, this year is celebrated as the International Women's Year. The women play a pivotal role in creating healthy conventions and in imparting sense of urgency to every deserving cause. A limited family of two children would enable the mother to concentrate effectively on bringing them up and grooming them to be useful citizens of tomorrow. I am sure every woman in this country would realise how a large and unwieldy family not only affects the mental and physical well-being of the mother but also incapacitates her. Once she is incapacitated, the family loses its moorings. I therefore earnesly appeal to every woman of child-bearing age to participate wholeheartedly and cheerfully in this national programme. The success of the vasectomy camps held, for instance in Thanjavur district and Madras City, is so encouraging that we may plan such camps periodically in every district. I have no doubt that Tamil Nadu will set an example to the rest of the country.

EQUAL PAY TO MEN AND WOMEN WORKERS

ORDINANCE ISSUED

An Ordinance ensuring " equal pay to men and women workers for the same work or work of similar nature," was issued to-day by President Fakhruddin Ali Ahmed.

Under the Ordinance no employer shall pay to any worker remuneration at rates lesser than those paid by him to workers of the opposite sex for performing the same work or work of a similar nature.

Where prior to the commencement of this Ordinance, different rates of remuneration were payable for men and women workers doing the same work or work of a similar nature, the higher or highest of such rates shall be the rate at which remuneration shall be payable, to all such workers on or from the appointed date.

To ensure that enforcement of equal pay for men and women workers does not lead to discrimination against recruitment of women, the Ordinance provides that no employer shall, while making recruitment to the same work or work of a similar nature, make any discrimination against women except where the employment of women in such work is prohibited or restricted by or under any law.

The proviso to this clause ensures that certain priorities/reservations in the matter of employment as for example, in the case of Scheduled Castes, Scheduled Tribes, ex-servicemen and retrenched employees, which have been accepted as a matter of public policy ,are not whittled down.

To promote employment opportunities for women, the Ordinance provides for the setting up of an advisory committees by the appropriate Government. The committee shall consist of 10 persons of which one-half shall be women.

It seeks to appoint officers to look into complaints of non-observance of the provisions and to decide disputes relating to similarities or otherwise of jobs.

Where an offence is committed by a company, every person who was incharge of and was responsible to the company for the conduct of the business of the company, as well as the company shall be deemed to be guilty of the offence.

Equality of opportunity and remuneration for women has proved a difficult target to achieve not only in the developing countries but also in the developed countries. India has made significant and sustained progress in promoting the interest of women. More and more avenues of employment, at all levels of skill and responsibility, many of them hitherto inaccessible, have been created for women. Their working conditions have steadily improved. These developments have not only resulted in increase in women's participation in economic activity but also bringing about a diversified pattern of participation. There is, however, still a wide gap in the opportunities and facilities available in general to women as compared to men.

One of the reasons for women being paid less than men is that most of the women are either unskilled or their vocational training is inferior to that of men, therefore, vocational guidance and training facilities need to be provided. It has been aptly said that in order to play their due role in the modern world women's education and training programmes should be so designed as not to confine them to feminine jobs but to give them equal opportunity with men in all fields. **The laws are on women's side but prejudices, hostilities and resistance still hold them back.** Therefore, it is necessary to set up an effective machinery for the implementation and enforcement of labour laws. The report of the ' Committee on the Status of Women in India,' submitted recently, has recommended that a unit should be set up in each State to attend to matters concerning women's welfare and that the work of such units should be co-ordinated by a body at the Centre. Women have to organise to exercise their right to equality and mobilise public opinion. Last, but not the least, is the need for self-help. To quote a U.N.O. publication, " ..... Neither laws nor collective agreements nor other methods are automatically self enforcing. All require constant interest and supervision by those responsible for their enforcement and by those concerned with their enforcement. In particular, women themselves must be prepared and be alert to take full advantage of their economic rights as defined by law and contract. In the field of practical application, the trade unions have a particular important task, to perform. In many countries, they have carried out this task with skill and realism. The women's organisations chiefly concerned have also a highly important part to play."

The first modern organisation of women was started in 1917 by the great pioneering woman, Mrs. Margaret Cousins, in Madras under the inspiration and leadership of Mrs. Annie Besant and her Home Rule Movement, which was then a dynamic stream giving expression to the people's restless urge for freedom. Mrs. Besant was interned by the British Indian Government as a result of this agitation.

TheWomen's Indian Association, though functioning mainly in the South, became from its very inception a rallying point for women for action on an all India plane. One of its first ventures was to lead a women's deputation to Mr. Montague, then Secretary of State for India, touring this country in 1919 to formulate political reforms to meet the rising demands of India. The first world war then raging had lent urgency to the situation. Indian women demanded the franchise and the right to participate in the political life of the country. The deputation was led by Sarojini Naidu. In the 1926 elections women participated, but on restricted franchise.

Before long the Women's Indian Association took the initiative in launching the All India Women's Conference, the first mass Indian women's organisation to come into being. At first it sought to concentrate its attention largely on the question of education, but the field gradually widened.

INDEPENDENCE WOULD BE INCOMPLETE WITHOUT THE CO-OPERATION OF WOMEN

—GANDHI.

Gandhi held absolutely the view that men and women are equal. He felt that each is complementary to the other and one cannot live without the other's active help. He gave his earnest support to Indian women's movement. He made a sterner protest against child marriage and child widowhood. He deplored the criminal indifference of parents who kept their daughters utterly ignorant and illiterate and brought them up only for the purpose of marrying them off to some young man of means. Gandhi pleaded for women votes and for their equal legal status with men.

Gandhi said that " men have considered themselves to be lords and masters of women, instead of considering women as their friends and co-workers. Wives should not be dolls and objects of indulgence, but should be treated as honoured comrades in common service. To this end, those who have not received a liberal education should receive such instruction as is possible from their husbands."

The dowry system has to go. Marriage must cease to be a matter of arrangement made by parents for money. The only honourable terms in marriage are mutual love and consent.

Widow re-marriage is no sin, if it be, it is as much a sin as the marriage of a widower. All widowhood is not holy. It is an adornment to her who can observe it.

In a plan of life based on non-violence, woman has much right to shape her own destiny as man has to shape his. Independence would be incomplete without the co-operation of women."

The resources of women power remained untapped for hundred years. He made them secure equality with men before law and politics. Gandhi had played a notable role in the emancipation of women. He brought women straight out of the social barricades. During the civil disobedience movement, women, some of whom had till that day never ventured outside their households, could be seen sitting openly on stools outside liquor shops or foreign cloth shops, quietly, composedly plying their little hand-spinning wheels. Such was the potency of Gandhi's appeal to the hearts of Indian women that scores responded to his call.

In a political awakening brought about by satyagraha, women had been largely emancipated and bore their due share in the national life of India.

Writing about women Gandhi said, " women are special custodians of all that is pure and religious life. Conservative by nature, if they are slow to shed superstitious habits, they are also slow to give up all that is pure and noble in life.

Dear sisters, the future of India lies on your knees, for you will nurture the future generation. You can bring up the children of India to become simple, God fearing and brave men and women or you can coddle them to be weaklings, unfit to brave storms of life and used to foreign fineries which they would find it difficult in afterlife to discard."

To be short, at Gandhi's clarion call Indian women left their sheltered hearts and homes in thousands to take part in the freedom struggle. Shoulder to shoulder with their men folk, they picketed liquor and foreign cloth shops, braved the police brutalities and courted heavy jail sentence. Since independence women enjoy the same freedom and opportunities in public life as men do and they are eligible for the highest office in the country...

" Faith is the function of the heart. It must be enforced by reason. The two are not antagonistic as some think. The more intense one's faith is, the more it whet one's reason. When faith becomes blind, it dies ", declared Gandhi. —*From the Book "Thy will be done" by Dr. E. K. Swamy*

Women's Rights under the Constitution

With the advent of independance, a new impetus was given to social reforms for women. The constitution granted them equality of status and opportunity and the fact that there should be no discrimination on grounds of sex is enshrined in the Fundamental Rights. The Directive Principles of State Policy empowered the state to make special provisions for the progress of women. There are, in fact, a wide range of constitutional and legal provisions to protect and safeguard the interests of women from exploitation. Legal disabilities with regard to marriage, divorce, inheritance, guardianship, adoption, etc., have also been removed by the enactment of laws such as Special Marriage Act of 1954, the Hindu Marriage Act 1955, the Hindu Succession, Adoptation and Maintenance Act of 1956, Abolition of Dowry Act of 1961, etc.

In the past two decades, the country has made spectacular strides in promoting the interests of women. There is today for example no profession or academic body in India where women have not entered and have not made a mark ; Women have held outstanding positions. In civic bodies eminent women have been elected as Mayors in metropolitan cities. There are women ministers, legislators, judges, lawyers, engineers, architects, sculptors, writers and artists. Women have increasingly started venturing into new venues of public and private employment, such as the Indian Administrative Services, the Indian Police Services, as mountaineers, pilots, etc. There are women in the armed forces including even a contingent of parachute jumpers trained in medical relief. In broadcasting and television, several women find themselves in executive positions Thus, women are beginning to influence the functioning of the mechanism of the state in several spheres, very rightly fulfilling the prophecy of Gandhi.

From times immemorial, women in India have been working in the active economic field and at homes

though not in the strict sense of earning wages. 'The traditional village community in India consisted of the cultivators, the artisan, and those performing menial services. In each of these, the women played a distinctive and accepted role in the process of earning a livlihood for the family putting in sometimes more, sometimes less but often an equal amount of labour in both production and marketing of products of agriculture and handicrafts." In the early days of industrialisation women-folk belonging to the lower strata of the society sought employment in the plantations, mines and factories which had a strong rural base. In agriculture, women have been traditionally working shoulder to shoulder with men. With the planned economic development and spread of industrualisation in the post-independence era, the participation of women in economic activity was quite marked. Articles 16 (1) and 16 (2) of the constitution grant the right of equal opportunities in regard to employment to women along with men without any distinction. The constitutional and legal measures have been taken not only to protect women from exploitation, but also to secure their increasing participation in different fields.

EMPLOYMENT.

According to 1971 census, the total female working population was 31.3 million or about 17 per cent. of the total working force of 180.4 million. The bulk of the women workers (25.1 million or slightly over 80 per cent.) was employed in agriculture. Of the rest, 7 per cent. were engaged in industry (household industry 4.4 per cent, and other than household industry 2.6 per cent.) 3 per cent. in plantations, orchards, fishing, hunting and allied activities and mining and quarrying, 7 per cent. in services and 3 per cent. in other spheres such as construction trade and commerce and transport and communication.

The percentage distribution of women workers by industry divisions during the 1961 and 1971 censuses is shown in Table I.

The tables shows that about 80 per cent of women workers in both the census years were engaged in agriculture and only about 20 per cent. in non-agricultural pursuits. While the percentage of women in

TABLE I

Sl. No.	Industry Division	Percentage Distribution 1961	1971
1.	Agriculture (cultivators and agricultural labourers)	80.0	80.0
2.	Industry :		
	(a) Household	7.7	4.4
	(b) Manufacturing other than households ..	1.3	2.6
3.	Plantations, orchards, fishing, hunting and allied activities mining and quarrying ..	2.0	3.0
4.	Services	7.0	7.0
5.	Others (construction, trade and commerce, transport and communication)	2.0	3.0
	TOTAL	100.0	100.0

ONE CANNOT EXIST WITHOUT THE OTHER ; SO THE RIGHTS SHOULD BE ENJOYED EQUALLY BY BOTH MEN AND WOMEN

household industry declined sharply from 7.7 per cent. in 1961 to 4.4 per cent in 1971, it improved in other industries.

The highest number of women employees in the organised sector are found in Tamil Nadu, next only to Maharashtra and Kerala. As on 31-3-74 there were 2.41 lakh women employees in Tamil Nadu Constituting 14.7 per cent of the total workers in the State against 11.3 per cent for All India Compared to the previous year, the number of women employed in the organised sector registered an increase of 2,659 persons.

These are certain occupations which attract female workers most. About 75 per cent. of the urban female workers are engaged in the following 19 occupations which is shown in table II.

The occupation which attracts the maximum number of urban female workers is teaching followed by the category of labourers. Barring the categories of teachers, clerks and nurses, all other occupations are such as do not have any educational pre-requisite. In the decade 1961-71, female employment rose in the first 9 occupants, but fell in the remaining 10. Increase of women workers has been the highest in clerical jobs followed by teaching and nursing Women in these white-collared occupations, however, constituted less than 3 percent of the total women workers, in 1971. **It is also noticeable that women folk are losing interest in those occupations which require manual labour and that their entry into occupations which have certain educational standards as pre-requisite has shown a rising trend.** Women teachers in Universities and colleges have shown tremendous growth followed by high school teachers. Women have also started entering high positions in increasing number. The number of women administrators and executives at the centre rose from 1,811 in 1961 to an estimated 3,100 in 1971 ; physicians and surgeons from 5,600 to 41,100 ; dental surgeon from 200 to 500 ; lawyers from 450 to 1,300 ; and accountants and auditors from 650 to 2,100.

The Public sector offered the maximum number of employment to women in Madras City (22,518) while the private sector offered the maximum number of employment to women (29,308) followed by the Nilgiris (22,137). The trend discloses the conclusion that in urban sector the learned occupations and in the rural sector, the plantations and textile industry offered more scope for women employment.

TABLE II

Occupations popular with female workers, their percentage to total and percentage growth

Sl. No.	Occupation	Percentage to total urban female workers (1971)	Percentage increase (+), decrease (—) during 1961– 1971
(1)	(2)	(3)	(4)
1.	Clerk, general	2.89	+ 146.48
2.	Teachers	14.91	+ 93.55
3.	Nurses	2.45	+ 55.90
4.	Ayahas, Nurse-maids	1.07	+ 44.33
5.	Well diggers and construction labourers ..	1.73	+ 41.39
7.	Plantation Labourers	1.39	+ 21.03
8.	Cook and cook-bearers	2.74	+13.40
9.	Bidi makers	5.23	+ 5.47
10.	Sweepers, cleaners, water-women ..	5.35	— 1.56
11.	Merchant and shopkeepers—retail ..	5.51	— 7.73
12.	Tailors and dress makers ..	1.40	— 22.92
13.	Weavers and related workers ..	4.75	— 24.51
14.	Butlers, bearers, waitress and domestic servants ..	6.82	— 27.61
15.	Street vendors, canvassors and news-vendors ..	1.38	— 36.31
16.	Laundrywomen, washer-women and dhobie ..	1.83	— 44.29
17.	Basket weavers and brush makers ..	1.41	— 45.66
18.	Labourers	8.81	— 57.59
19.	Spinners and winders	3.31	— 58.74

Of the total female workers 65.9 per cent are illiterate. Of the literates, per centage of those who have attained the matriculation standard is the highest i.e., 33.13. The percentage of those working women who have educational levels below graduation is 82.75 ; only 17.25 per cent are graduate and above.

Organised and Unorganised Sectors :

The organized sector accounts for employment of 6 per cent of all women workers. Of these, a little more than half (3.3%) or 10.9 lakh women are employed in factories.

In the factory industries, under the Factories Act, 1948, a falling trend has, by and large, been observed in the decade 1963-72 in respect of women employment which came down from 4,00,364 in 1963 to 3,90,269 in 1972, bringing down the per centage of women to total factory workers from 10.37 to 8.73 per cent. During the decade about 88% of the women workers in the Factory Sector were employed only in 7 states, namely, Andhra Pradesh, Gujarat, Karnataka, Kerala, Maharashtra, Tamil Nadu and West Bengal, while in terms of industry groups only 3, namely, 'Food except beverages', 'Cotton textiles' and

Gandhi said that "The wife is not husbands' bond slave, but his companion and his help mate and an equal partner in all all his joys and sorrows - as free as the husband to choose her own path".

'Tobacco including beverages' were responsible for maximum number of women workers during this period.

Next in importance to factory industries are the plantations, covered under Plantations Labour Act, 1951, which provide considerable employment to women in the country. However, women employment in plnatations also declined over the years from 3,87,899 in 1968 to 3,80,085 in 1972. During this period (1968-1972) women employment rose in coffee, rubber and other plantations, but fell in tea plantations. Of the 3,80,085 women plantation workers in 1972, as many as 88.3% were in tea plantations ; 6.8% in coffee plantations ; 3.6% in rubber plantations ; and the remaining 1.3% in other plantations. In that year the maximum number of women workers in tea plantations was employed in the states of Assam (1,76,858 i.e., 52.7%) and West Bengal (87,600 i.e., 26.1%) In coffee plantations the bulk of women employment was in Karnataka (11,861 i.e., 45.9%). In rubber plantations, Kerala was responsible for maximum number of women workers (12,860 i.e., 93% In other plantations also bulk of women workers were in Kerala (3,248 i.e., 68.8%).

While plantation, forestry, etc., manufacturing and services divisions taken together as well as individually covered a large chunk of women employed in private sector, in public sector the service division alone claimed bulk of women employment. **In both the sectors, Southern Zone employed the largest number of women employees in 1974 (42% in private sector and 30% in public sector). Of the women employees in the public sector. Central Government employed 8.2%,; State Governments 42% Quasi-Government establishments 15-5% and Local bodies 34.3%. While primary and middle school teachers and professional, technical and related workers are largely concentrated in the public sector, there is predominance of craftsmen and production process workers and unskilled workers in the private sector.**

TAMIL NADU LEGISLATIVE ASSEMBLY CONSTITUENCIES 1975 FURTHER INCLUSION OF NAMES IN THE ELECTORAL ROLLS

The Electoral Rolls for all the 234 newly delimited Assembly Constituencies in Tamil Nadu were revised with reference to 1—1—1975 as the qualifying date and were finally published on 28th February, 1975. The Electoral Rolls so published have come into force from the date of this publication. The Final Integrated Electoral Rolls of 1975 are available for the convenience of the public in villages, panchayats, municipalities and other places for inspection.

They are open to inspection by the public at the offices of the Electoral Registration Officers concerned, *viz.*, the Revenue Divisional Officers, Personal Assistant (General) to the Collector of the Nilgiris, Commissioner, Corporation of Madurai, Commissioners of Salem, Coimbatore and Tiruchirapalli Municipalities so far as districts are concerned and the Revenue Officer, Corporation of Madras for the Madras City. Full particulars regarding the electoral rolls, can be obtained from the Office of the Electoral Registration Officer.

All attempts have been made to ensure that correct particulars are entered in the electoral rolls in respect of the voters. However, it is just possible that in a few cases, some errors or omissions may have crept in, in respect of some voters. In order to remove such defects in the rolls, the public are requested to inspect the rolls and apply under Sections 22 or 23 of the Representation of People Act, 1950 to the Electoral Registration Officers for the correction of the incorrect entry or for transposition of entry in the rolls or for inclusion of name in the rolls, in the appropriate forms, details of which can be had from the Electoral Registration Officers.

The prescribed fee for preferring in application is 10 paise in the case of applications to the Electoral Registration Officer and Rupee one for appeals to the Chief Electoral Officer against an order of the Electoral Registration Officer under Section 22 or 23 of the Representation of People Act, 1950. The fee shall be remitted into the Treasury or the Reserve Bank of India or its agents under the head of account "065. Other Administrative Services-*b*. Elections C.Other Receipts—Union." The challan should be enclosed with the application in proof of the fee having been deposited. The fee can also be paid in cash to the Electoral Registration Officer or to the Assistant Secretary to Government Public (Elections) Department, Fort St. George, Madras—600009, in case of appeal.

Tips To Women—For Those Over Forty

For women over forty, in addition to the ordinary routine, special exercises are recommended for strengthening and envigorating the facial muscles, intensifying the blood circulation, and consequently improving the complexion.

These exercises must be done every day after the usual daily dozen. Make yourself comfortable in a chair in front of your dressing table. The skin has to be well cleansed first, and a hot compress would be very good — with water or with an infusion of herbs. Once the exercises are done, wash your face lightly with cold water and put on some cold cream. Repeat the exercises two or three times the first few days, then gradually increase to ten times. Here are some of the simplest and most useful exercises :

For the eyes :

(1) Close your eyes tightly, count to three and open them wide.

(2) Shut your eyes tightly and open them wide, holding the outer corners down with the tips of your forefinger and middle finger.

(3) Slowly roll your eyes, first left then right.

For the double chin :

(1) Put your elbow on the table and cup your chin in your hands. Now press down on your hands with the whole weight of your head.

(2) Put a pencil in your mouth, thrust out your chin and draw circles in the air with the pencil, first clockwise then counter-clockwise.

(3) Thrust out your chin and make a semicircular motion with your head from one shoulder to the other (the shoulders must not be raised).

For the neck :

(1) Turn you head from right to left, then from left to right.

(2) Keeping your mouth closed, press your tongue hard to the roof of your mouth, then relax the pressure.

(3) Sit up. Turn your head as far right as you can, face front, turn it to the left in the same manner.

The older the woman, of course, the more painstaking the care she must take of her skin. And it must be done under the constant supervision of a beauty-parlour physician. In extreme cases, when the process of ageing continues despite conventional treatment, surgery may be resorted to.

Many will ask, if it isn't too late to start worrying about one's face at that age ? No, it is never too late. And please remember that in preventing premature ageing and preserving the freshness and attractiveness of the face and body a lot depends on yourself.

—*Courtesy* : 'SOVIET UNION'

By

Yelena Ryzhkova

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HOW TO SAVE BARREN MARRIAGES

ADVICE AVAILABLE IN GOVERNMENT ROYEPETTAH HOSPITAL

The striking advance in the Family Planning Programme in Tamil Nadu is often attributed to the very vigorous implementation of the Maternity And Child Health Programme ; evidently the small family idea has caught on simply because the very agency which advocates the small family is also taking such good care in ensuring the health and well-being of the children of parents who have contained their family size. This apart the Government which projects the idea that " the small family is a happy family ", is also alive to the fact that a childless family cannot be happy. Childlessness or infertility can be due to male or female factor. Infertility due to the female factor is easily dealt with in the Gynaecology departments of all hospitals ; infertility due to the male factor however needs a specific clinic. One such clinic has been running in the Government Royapettah Hospital, Madras. Some of the conclusions arrived at in the clinic are given below :

A society is composed of many families—the social and psychological welfare of a family is a sacred as society itself. It is common knowledge that the childless couple develop a complex in society and waste a lot of their time and energy in superstitions and fell a prey to all beliefs and quick treatments. It is to avoid this that the Government Infertility Clinic has been established.

Need for Investigation of Male partner:

Over long years in all cases of infertile marriage, the wife bore the burden of blame and she was despised, hated and maltreated for the " offence " of not bearing children. In over 400 cases studied by us at least 35 men got remarried for want of a child and in about 22 of them, they were found to be partly or solely responsible for the barren marriage. Hence it is necessary that in the year of women's liberation these unfortunate women, victims of such unnecessary second marriages could be spared. Hence it is necessary that the possible male factor in barrenness should spread to the masses so that more of them could resort to thorough investigations before resorting to remarriage. **However there seems to be a general awareness among the urban population in that 60% of males invrtigated by us have come within 5 years after marriage to assess their possible role.** From a figure given by one of the maternity hospitals in city at least one sixth of men who were advised investigation for their possible role in sterility refused to get investigated.

Though Genito-Urinary Surgeons by their training experience and technical facilities are capable of investigating the male factors, the first such organised effort was made by starting an exclusive clinic for this purpose in July 1974 at Genito-Urinary Surgery Department of Government Royapettah Hospital. Over 400 males have been investigated who were referred from the maternity Hospitals and private Medical Practitioners. This clinical study involves thorough examination of the husband, semen analysis, Testicular Biopsy endocrine investigations and genetic studies. This clinical research programme is being carried out with the co-operation of the Department of Endocrinology and Dept of Genetics, University of Madras and Department of Pathology, Kilpauk Medical College. At present all the possible investigations for this study could be made at Madras itself.

Possible Male Factor Infertility:

In about 50% of them some clinical problem could be detected to account for Infertility a figure comparable with other western countries.

Preventable Causes :

Small Pox:—Thanks to the energetic measures taken eradication of small pox from our country has been achieved However the sequell of small pox in early life could produce infertility in men.

Mumps : —(Swelling of the salivary glands due to a virus) occurring during adult hood produce inflammation of testis and unless promptly treated result in severe damage to the sperm producing tissues and result in Infertility *Venereal problems (Gonorrhoea and Syphilis)* and Tuberculosis affect the Testes and other sperm conduction channels and produce Infertility.

Undescended Testies. —For normal functioning of the tetis they should lie in the scrotom. Due to some reason, they fail to descend and remain intra abdominal with elevation of temperature and it affects spermatogenesia. **Thanks to the organised efforts by the Government of Tamil Nadu, through the school Health programme more children could be detected with this anomaly and corrected which if carried to adulthood would certainly produce Infertility.** We had 2.5% Incidence of such cases in married males to whom no treatment could be offered. The possible role of filariasis and Hydrocele common in our parts, are being studied.

Treatable Causes of Infertility in Male:

Varicocele (Tortuous engorged veins of the testis that depress the sperm production) can be operated successfully and it improves the results, It is possible to correct the endocrine *deficiencies* with proper assessment by hormone studies. Indudicious use of hormones to be avoided.

Impotency Problems :

The problems of erection and ejaculation and the accompanying disorders do come within the scope of this study. In about 90% of cases they were found to be psychologically oriented. However a thorough investigation could be made to rule out any possible organic causes.

Artificial Insemination of Husband Semen.:

Though certain western countries have used artificial insemination of donor semen, they cannot be accepted in our country due to our social conditions. In those cases with substandard semen or mechanical disturbances. Artificial insemination of husband semen offers to be of success.

Dr. A. RAJASEKARAN

Genito Urinary Surgeon & Medical Officer, Male infertility clinic.

MEDICAL RESEARCH PROVES WEEK-END HOLIDAY DISASTROUS

When we in India are thinking of the 7-day work week in the context of the Emergency and labour unions are giving due consideration to the idea, authoritative support is put forward by one of the toughest critics of customary working hours and holiday arrangements in industrial countries, Professor Wolf Muller Limmroth, specialist in industrial medicine at the Munich University of Technology.

His demand for a revolution, in working hours at least, is based on recent studies by labour physiologists — the specialists who study man's performance graph. Even a two-day weekend wreaks havoc with the body's biological clock, they claim. By Sunday people are so far removed from the daily grind that Monday really comes as a jolt ; they have their work cut out getting back into the swing and output accordingly suffers.

It stands to reason that a three day weekend would upset the biological clock even more thoroughly. Countries thinking in terms of introducing a longer weekend would be well advised to shorten the working day substantially instead, the Professor claims.

Tests conducted with laboratory animals in Munich indicate that breaches of the biological rhythm or later harm health. After ten or fifteen years of strain caused in this way the heart and circulation begin to feel the worse for wear.

This damage is irreparable. Professor Muller-Limmroth is by no means surprised that " despite shorter working hours and longer holidays the number of people pensioned off early for health reasons is steadily increasing in industrialised countries."

Scientists have long known how this clock works. The body is at its most productive in the late morning, then backslides between one and two before peaking once more between four and six in the afternoon. " This second peak should be spent in relaxation at home or at a hobby rather than in battling one's way through the rush hour, which is what at present normally happens."

The Munich industrial doctor would thus prefer the work rhythm to resemble school, which in Germany starts first thing in the morning but for the most part ends at lunchtime — but which to the horror of the Anglo-Saxons has also a Saturday forenoon session. " When you work half-days six or seven days a week you can spend some time every day with the family" Professor Muller-Limmroth says.

The Professor also takes a dim view of short holidays (" two holidays of at least three weeks would be preferable "), but this ideas have yet to catch on with either employers or unions in Western Europe. Regardless of medical research, the two sides of industry are still thinking more in terms of a longer weekend. But India would find unexpected support from these medical researches.

BONE MEAL MEANS MORE GRAINS

Bone meal is an important organic manure rich in phosphoric acid. Bones consist of calcium, Phosphate and some organic matter consisting mainly of fats and proteins. Hence, they are a good source of lime, phosphorus and nitrogen. Bone meal is available to farmers in two forms, namely, raw bone meal and steamed bone meal.

Raw Bone Meal :

Raw bone meal consists of crushed, unsteamed raw bones. Its nitrogen content varies from 3.5 to 4.5 per cent. It contains about 7.9 per cent phosphoric acid and about 28.32 per cent lime. The percentage of phosphoric acid and nitrogen varies with the quality of bones and age of animal from which these are obtained. Normally, the bones of grown up animals contain more phosphoric acid and less nitrogen than those of the young ones.

Steamed Bone Meal :

Bones along with calcium phosphate also contain fats and proteins. The fat hinders decomposition. Therefore, bones are sometimes first treated with steam to remove fat before they are crushed. Steamed bones are more brittle and easy to crash, and at the same time they decompose more readily than the raw bones. Hence, steamed bone meal is generally preferred to raw bone meal. It contains 25 to 30 per cent phosphoric acid and one to two per cent nitrogen.

Steaming, however, removes a small proportion of nitrogen and, thus reduces the nitrogen content of the treated product. At the same time it increases its phosphoric aicd and lime content.

How to apply :

When applied to the soil, the bone meal decomposes, releasing phosphoric acid and nitrogen gradually for the crops. The bones should be ground fine, for it is only then that they decompose rapidly. Particles smaller than 2.3 mm in size are considered suitable for use as manure.

Bone meal is ideal for all types of soils. However, best results are obtained in acidic soils. It gives good results in light, well drained soils with good aeration. It is less effective on heavy clay and calcareous soils. It has particularly notable effects in soils which are well supplied with organic matter.

The lime in bone meal helps reduce the acidity of the soil. It is suitable for application to all crops. Being mainly a phosphoric fertilizer, it should be used in combination with nitrogenous manures and fertilizers.

Though it can be used for all crops, paddy, wheat and other cereals respond well to bone meal, particularly in acidic soils. Sugarcane, vegetables and fruit crops also respond to bone meal. You can also apply it to leguminous crops, pastures and grasses.

Time of application and Dosage :

It is best applied at the time of sowing or planting the crop. It should not be used as top dressing. It may be either drilled or broadcast into the soil.

The dosage will vary from crop to crop. Usually 100 to 200 kg. per hectare of bone meal is sufficient for most cereal crops. For vegetables and fruit crops a higher dose of 500 kg is needed. Always use bone meal with bulky organic manures like farmyard manure or compost. The nitrogen requirements of the soil should be met with oil cake or ammonium sulphate.

Newer and Better Vocations for women are opening up

EQUAL STATUS MAY BE A FAR CRY FOR WOMEN

But Government's Employment And Training Efforts Bridge The Gap

WORK OF EMPLOYMENT EXCHANGES

With a view to promoting the employment of women, the National Employment Service under the Directorate General of Employment and Training with its net-work of 535 employment exchanges and University Employment Information and Guidance Bureau offers placement services to women job-seekers and provides special assistance to them. Most of the employment exchanges have special section for women registrants and separate Live Register. Names of women applicants are submitted not only for jobs notified specially for women applicants but are also considered for other vacancies from the general pool. Employment officers visit the training institutions for women to give occupational information with regard to available employment opportun ties. Heads of training institutions of women are supplied with Employment Market Information. Career Pamphlets and other occupational literature for the benefit of women candidates are brought out periodically. Special care is taken to give career talks in schools for both men and women specially at the delta stage which is a point of diversification of courses. Vocational Guidance and Career Counselling Facilities are available to women at a number of Employment Exchange and University Employment Information and Guidance Bureaux.

The number of women job-seekers on the Live Register of employment exchanges has been steadily rising and went up from 5,83,177 in 1971 to 9,73,066 in 1974, *i.e.*, by 67% which means more women are now entering the labour market. However, it may be pointed out that in 1974 women registrants were only 11.54% of total registration. The percentage of placement to registration in case of women in 1974 was 9.3 which compared favourably with the over all percentage (for men and women combined) of 7.7 per cent. Comparatively low educational attainments and that too in the traditional streams were to a large extent responsible for low percentage of placements in the case of women. Of the 9,73,066 women registrants in 1974 as many as 38.6% were either illiterate or below matriculates, 47.7% were matriculates and undergraduates, while 13.7% were graduates and post-graduates. Of these registrants, as many as two-thirds were without any professional or vocational training or work experience. Most of the women graduates and post-graduates belonged to Arts group and only very few had obtained their degrees in professional or technical subjects like engineering, medicine, law, etc. Some of the popular occupations in which women seek employment assistance are teachers, typists, general clerks, midwives, general nurses, etc. Besides employment of the unemployed, employment service has taken upon itself the task of imparting vocational guidance and employment counselling.

During the year 1974, the number of vacancies notified exclusively for women was 31,808, but only 28,044 could be filled and a large number of vacancies had to be cancelled even though sufficiently large number of vacancies had to be cancelled even though sufficiently

large number of candidates were available for the concerned occupations on the Live Register of the employment exchanges. This was due to non-availability of suitable persons and various other factors such as lack of mobility, socio-economic difficulties, lack of housing facilities, physical, cultural, sociological and technical patterns, family obstacles, etc.

Although women have occupied themselves with traditional jobs like teaching, nursing, social work, plantations, etc., yet with the beginning of professional consciousness women are now seeking various positions in the occupational hierearchy which only a few of their predecessors had attempted. There has been gradual switch-over of employment of women from traditional occupations to more remunerative and higher status jobs. They are now taking up professions of administrators, educationists, doctors, engineers, architects, town-planners, nuclear physicists, journalists, officers in community development projects and in many other professions. It is indeed a happy trend that educated women in India today aspire for a professional career. The increased opportunities for training and education have enhanced their employability. However, the opportunities for entering an occupation and progressing in it have not increased proportionately. In the absence of wage-paid employment, women have, in the recent past, sought self-employment in the form of domestic industries such as knitting and embroidery, tailoring, pickles and spice making. In addition, they have also engaged themselves in jobs like freelance journalism, translators, interpreters, commercial artists, fine artists, cartoonists and also some unconventional fields like hair dressers, beauticians, mass-scuse, tourist guides, etc. These jobs are becoming popular in bigger cities and metropolitan towns.

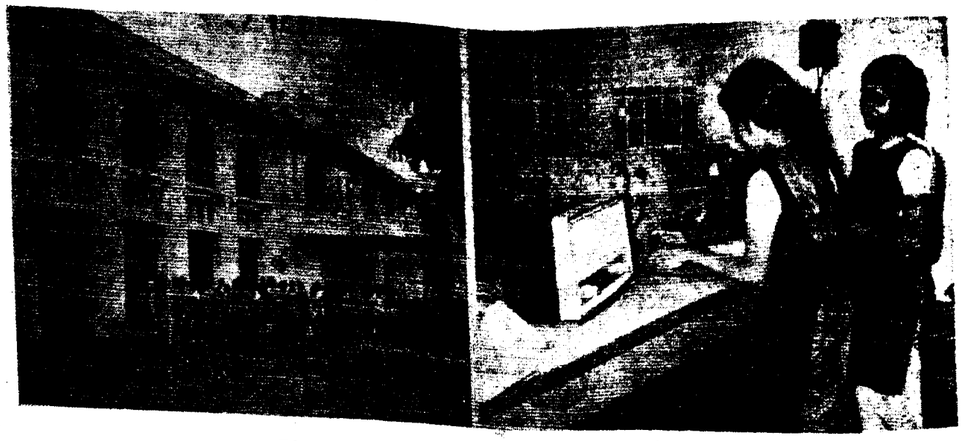
WOMEN IN SPECIALISED JOBS

The proportion of women employed in the organised Sector in 1971 was 6 per cent of the total women workers in the country with 2.7 per cent in industry and 3.3 per cent in the tertiary sector. The occupational classification of selected categories of women workers based on the 1971 census reveals that there were 55,000 administrative and executive officers, 23,800 physicians and surgeons, 16,000 social scientists and related workers ; 5,300 working proprietors, directors and managers, 2,500 engineering technicians, 1,700 jurists, 500 elected and lelislative officers, 300 aircraft and ships officers. The urban educated middle and upper class working women are emerging as a new social group. This, in itself is an indicator of the significant socio-economic changes taking place in India.

While the need for the women from lower middle class families to earn is basically to supplement their family income, the women from higher income groups have been entering various professions with a view to utilising leisure time or attaining social prestige and status. However, much has to be achieved so far as working women's role in society and their total fulfilment as professional individuals is concerned.

Vocational Training :

The extent of unemployment among the educated men and women with purely academic back-ground is high. It is obvious, therefore, that unless education for women is vocationalised we shall be adding to the mass of educated unemployed. For this purpose Government launched the Vocational Training Programme on a modest scale soon after independence. Since then there has been a steady growth of training centres all over the country. The number of Industrial Training Institutes (I.T.Is) including those exclusively meant for women has increased from 166 in 1961 to 357 in 1974. These provide training in engineering engineeringand non-trades. There are at present. 54 (32 engineering and 22 non-engineering) trades in which training is being provided. There has also been a steady increase in the number of Polytechnics and Technical Schools which provides technical education at school and post-school level. The number of polytechnics in the country is 308 including 24 exclusively meant for women. There are 160 other institutions, of which 80 are meant exclusively for women, which provide training in vocation trades. The actual out-turn of women trainees at various I.T.Is. in 1973 was 4,782 in non-engineering trades and 304 in engineering trades. It is proposed to enlarge and diversify the training facilities at these Institutes during the 5th Five-Year Plan, the primary object being to add new trades for which there is an increasing demand and to abolish the ones which have outlived their utility. Under the Apprenticeship Training Scheme training facilities are available to both men and women in 61 engineering and non-engineering trades in as many as 201 industries. Unfortunately very few women have availed these facilities and their number was just 104 as on 31st March, 1974. However, it is proposed to increase the number of trades from 61 to 150 during the 5th Five-Year Plan period.



Education and Training fit women for challenging tasks

Unorganised Sector :

As many as 94% of the women workers are engaged in the unorganised sector of the economy, 80% in agriculture and the rest in non-agricultural occupations. Next to agriculture the largest number of women, about 4 million are employed in various industries, trades and services including handloom, khadi and village industries, sericulture, coir and cashew industry. Workers in this sector include a varied assortment — unpaid family workers, attached, casual and contract labour, workers in fields, homes and workshops, self-employed, agents, wage workers etc. There is, however, a virtual absence of any reliable data —about number of workers, trends in employment, working conditions and prospects of recruitment training and development — relating to this sector.

Wages :

While steps are being taken to increase the employment of women and their employability in different spheres, simultaneous efforts are being made to bring the wages of women at par with their male counterparts. The equal pay principle has been enshrined in the Constitution of India as a Directive Principle to State Policy. The Government of India have also ratified I.L.O. Convention No. 100 regarding equal remuneration for men and women for work of equal value. The various Wage Boards, Industrial Tribunals and Wage Fixing Authorities under the Minimum Wages Act, 1948 kept it as a guiding principle while recommending wage scales. Various measures taken in this direction have no doubt fairly reduced the wage differentials but there are still disparities in various fields. In this context, mention may be made of the data thrown up by the Second Occupational Wage Survey, 1963—65 conducted by Labour Bureau in occupations in which men and women workers were employed in fairly large proportions The survey has revealed that the average earnings per day paid for in respect of men workers was relatively higher than for women workers in all the three important sectors of industrial activity, *viz.*, manufacturing, plantations and mining. Disparity was the highest in the manufacturing industries, with 'match factories' topping the list where men earned about four and a half times more than women on an average. However, there were a few instances like that of the 'fine chemical industry' where average earnings of women workers were reported to be higher than those of their male counterparts. In mines and plantations, men were earning consistently more than women but the dispartiy was considerably less in 'tea plantations' while it was the highest in 'Iron Ore Mines.' Under the Minimum Wages Act, 1948, which empowers the appropriate Government (Central or State) to fix and revise the minimum wage rates of workers in the scheduled employments, the wages fixed/revised generally do not make a distinction between men and women workers but still there are some cases of differentiation between men and women in some employments. It will be of importance to mention that Government of India have appointed so far 22 Wage BorWage Boards (including Wage Board each for Cotton, Sugar, and Cement Industries) which ,excepting for Tea, Coffee, and Rubber Plantation, did not make any distinction between the wages of men and women workers. The Boards for these Plantations had narrowed down the disparities while recommending different wages for men and women workers.

Data on wages of women workers belonging to agricultural albour households in agricultural and non-agricultural occupations are available from the Agricultural Rural Labour Enquiries' conducted by Labour Bureau. According to the date of these Enquiries, average daily earnings of women in non-agricultural occupations have increased from Rs. 0.62 in 1956—57 to Re. 0.92 in 1964—65 *i.e.*, by about 48 per cent. The average daily earnings

Plantations and Agriculture still offer the maximum job opportunities for women

in agricultural occupation increased from Re. 0.59 in 1956—57 to Re.0.95 in 1964—65. The actual average daily earnings of an adult agricultural women worker in agricultural operations remained below the lowest rate of minimum wages in the States of Uttar Pradesh, Madhya Pradesh, Kerala and West Bengal during 1956—57. But the position improved in the States of Assam, Gujarat, Maharashtra, Punjab and Tamil Nadu in 1964—65 when the earnings of womenagricultural labourers were above the statutory minimum rates of wages. But for a number of States like Uttar Pradesh, Madhya Pradesh, Bihar, Mysore and Orissa, it is observed from the results of the Rural Labour Enquiry (1964—65) that while the men's average earnings were within the range of minimum wages fixed, the womens' average earnings were less than the lowest minimum wages.

According to the observations of 'the Committee on the Status of Women in India' "..... differences in wage rates between men and women were present in both minimum and maximum rates for most occupations in different industries. There are, however, a few instances where the gaps have narrowed considerably or even become favourable to women at the level of minimum rates (jute-residual occupations, wool-darners, electrical machinery—industriess examiners Grade II, Machine Tool, Machinist (Gracde I). Even in such cases, the maximum rates for women are lower, leading to lower average earnings. The difference in wages rates of unskilled labourers or mazdoors and semiskilled worker like packer, loaders, unloaders, etc., support our view that prejudices, rather than skill or productivity differentials determine wage-difference between the sexes. In the plantations, the margin of difference is much smaller than in factories and there are cases where the average earnings of women exceed that of men. These are, however, exceptions. The other significant trend is in the case of electrical and engineering industry where women are found in a few operations of highly skilled type."

Working Conditions and Welfare :

Women workers require special treatment as they need more protection than men in their working environment in view of their tenderness, sensitiveness and their functions at home and specially the bringing up of future generations of the country. In India, positive steps had been taken from time to time and are being taken through appropriate labour legislation to provide healthy and congenial conditions to women workers at work places. The main inspiration for such legislation had been provided by the pasic standards formulated by the International Labour Organisation. The basic enactments regulating the working conditions, etc., of women workers employed in different sections of the economy are the Factories Act, 1948, the Mines Act, 1952, Plantations Labour Act, 1951 and Maternity Benefit Acts (State as well as Central). Besides ensuring certain minimum welfare facilities exclusively for women worworkers, the Acts safeguard them against such evils as night work, excessive hours of work, under ground work in mines, maximum permissible load to be carried, employment during maternity and immediately after confinement, etc. They are not allowed to clean, lubricate or adjust heavy machinery while it is in motion nor are they allowed to handle excessively heavy weights. Further, the most valued and significant of the protective measures adopted for women employees in India, as elsewhere, are those dealing with maternity leave and other allied benefits. In addition, women workers enjoy certain other facilities/amenities such as medical, educational facilities, vocational training, etc., provided by the State Governments, Employers' Associations, Workers' Organisations and Special Welfare Funds for certain mines constituted by the Government of India, *e.g.*, Coal Mines Labour Welfare Fund, Mica Mines Labour Welfare Fund and Iron Ore Mines Labour Welfare Fund.

Women and Trade Unions :

Women workers, initially had not shown any particular enthusiasm in joining trade unions, interalia, due to social factors but their participation increased in the late fifties. On the basis of latest information available from the registered trade Union (workers' and Employees') which were submitting returns, the membership of women was 4,21,067 (8.2%) out of a total of 51,21,011 for the year 1968. Amongst the workers' unions States which normally accounted for sufficient number of female trade unionists (40,000 or above) during the same year, were Andhra Pradesh, Assam, Kerala, Maharashtra and West Bengal. Amongst workers' unions, the industry-groups which normally accounted for sufficient number (30,000 or, more) of female trade unionists during 1968 were 'Manufacturing,' 'Agriculture,' 'Forestry,' 'Fishing,' etc., 'Mining and Quarrying' and 'Services,' It is ,however necessary that women workers should come forward in greater numbes to join trade unions and then only, these organisations can look after and fight for their interests in a more effective way.

Photo taken when Thiru K. Rajaram Minister for Transport released the Book, "Thy will be done" by Dr. E. K. Swamy (seen next to Minister) was released Excerpts from the book appear on p. 15.

THE MANY FORMS OF TAMIL NADU BRONZES

By

K. LAKSHMINARAYANAN

Government Museum, Madras.

Chola Period Nataraja Bonze at Govt. Museum, Madras

Of the many contributions of Tamilnadu to the art world her bronzes occupy an important place. Bronzes of Tamilnadu can be studied under the three classifications : Primitive, Folk and Classical. Though primitive and folk bronzes are not collected and exhibited in the Museums as much as that of classical bronzes, there are bronzes in primitive and folk styles in Tamilnadu. The existence of folk bronzes from the time of Sangam period can be inferred from literary sources. Some primitive bronzes of prehistoric period have been obtained in Tamilnadu.

The term primitive bronze here stands for the bronzes made by the people who have or had primitive or tribal life. As the result of excavations conducted in Adichchanallur, a place near Tirunelveli, on the South bank of river Tamiravaruni, some primitive bronzes have been obtained. They are of birds, animals, and one small female figure. Cocks, Goats, Antelopes, tigers and elephants in bronze had been made by the pre-historic people of Adichchanallur for burial ceremonies. The features of the small female bronzes make us to consider her as mother goddess. A number of bronze terminals with branches containing small figures of birds and animals were also unearthed from this site. Some of these bronzes are kept in the pre-history gallery of Madras Museum.

Folk Bronzes are made by villagers and common folks who do not know much about the technical sophistications and religious canons. So, naturally they are simple in style and workmanship and resemble the styles of the folk terracottas of their period. They have lesser ornaments and represent styles of ordinary masses. They are not made with the usual five metals blend (ஐம்பொன்) the usual metal-blend of classical bronzes. Generally they have been made in "Lost-wax" process. Most of them are bronzes of village deities.

Amman, Ellaikkali of Pidari with her six sisters Kannagi, Ayyanar, Karuppan, Madurai Viran and Muvadiyan are some of the important village deities worshipped in Tamilnadu. Amman is worshipped throughout Tamilnadu in various names. They are represented only by their head portion. So, the Amman bronzes are found only as godess head. The head is either crowned by a conical head-dress or designed with fire flames.

Ellaikkali or Pidari, Ayyanar and Karuppan are guardian deities of villages and towns. The former is called by different names in different places. Often she is called by the name of the village or town in which she has temple as in the case of Samayapurathal of Samayapuram, a village near Trichy. Pechi Amman of Pudukkottai and Ramnad Dists, Vattapparai Amman of Thiruothiyur and Thiru Amathur, Villupuram, Nadi Amman of Pattukottai, Kon Amman of Coimbatore and Veiyali Ukanda Amman of Tirunelveli all belong to Ellaikkali Group. Bronzes for them are made both in standing and sitting poses. They are portrayed with weapons similar

Chola Patronage Perfected Bronze Styles

to the classical Kali bronzes. They are represented with two or more hands. In the case of two hand figures one hand holds sula or flower while the other carries a kapala or nose or simply let down.

Karuppan and Madurai Viran are attendants of Ellaikkali ; we have bronzes for Karuppan and Madurai viran. Karuppan has many forms and names such as Sappani Karuppan, Sankili Karuppan and Nondikkaruppan. Bronzes of Karuppan are made in standing pose with two hands. He holds a sickle in one hand while the other hand is either kept on his hip or hangs loosely. Sankili Karuppan holds a chain. The chain may be symbolic of his authority to catch and tie the evil doers for punishment. Madurai viran bronzes are made in standing pose with a pair of hands. He has sword, bow and arrow and dagger or any one or both of them.

Madurai Viran Bronze — Madras Museum

Murugan and Ayyanar are made both in folk and classical bronzes. Ganesa with his elephant head, paunch stomach and stumpy legs is always a very favourite subject of village artisans. They make stuccos and bronzes for him. Ganesa has four hands. He is represented with all appurtenances that are found in classical bronzes. Ayyanar bronzes are made either in standing or sitting poses. He is also represented in the equestrian pose riding a horse or mounted on an elephant. He has only two hands. Murugan bronzes are made either as Dhandayuthapani, with a mace or as Palaniyandi with a stick. In both forms he is naked except his loin cloth.

Though Devaram and other Thirumuraikal, do contain references to classical bronzes we have bronzes which could be dotable only from 8—9th century A.D. They can be classified into styles such as Pallava, Early Chola, Later Chola, Pre and Post Vijayunagara and Modern. They are classified into these styles and dated on the basis of their ornamentation and styles. The bronzes which have been got with epigraphical evidences and the sculptures of dated monuments help the students of this art to have a standard by which he lixes the dates of bronzes. **Classical Bronzes of Tamilnadu are solid and are made by 'Lost-wax' process.**

The art of bronze making was nurtured by the powerful Devotional Movement started in Tamilnadu about 4th or 5th century A.D. and reached its zenith under the good patronage of imperial Cholas. Agamas teach four paths to salvation to be followed step by step. They are charya pada, Kriya pada, Yoga Pada and Jnana Pada. Of them Kriya Pada gives the details of temple constructions and image makings. Though these portions of Agamas are not equal to the works of Mayamata and Silparatna in technical matters like iconography and iconometry, they reveal theological prescriptions for the bronzes and temple structures.

Bronzes for Siva, Vishnu, their family members and great Baktas and their various forms and incarnations were made by Saivites and vaishnavites. Jains and Buddhists who enjoyed greater influence in Tamil Nadu till the advent of the Bhakti Cult, also made bronzes for their deities. The bronzes collected from Nagapattinam, Tanjore District and kept in the Bronze gallery, Madras Museum, represent the Tamil Nadu Buddhist bronzes. The Gomatisvara bronze obtained from Sravanabelgola and kept in the Prince of Wales Museum, Bombay is a nice example for Chola period Jain Bronzes.

Since the iconography of the above bronzes are almost the same as their counter-parts in other parts of India except some regional influences, iconography description for them is not necessary. But forms of the gods which originally emerged from Tamil Nadu and the bronzes of Alvars and Nayanmars whose

The God Form Bronzes Are a Fusion of Different Arts Into a Dynamic Whole of Eternal Beauty

A Trident with half goddess in Siva Figure.

bronzes can be seen only in Tamilnadu are available in detail.

The skill of ancient Indian Bronze artisan can bear exhibition in any international art gallery by two masterpieces. One is the Saranath or Mathura Buddha of Gupta period and the other is the Nataraja bronze of Chola period. In this bronze different arts fuse together and make us to feel ecstasy through their aesthetic exelences. The lord dances upon a dwarf Muyalagan, personification of evil and ignorance. The matted hair flies like a liberated sprite, but in tune with the dance motions. His head is decorated with flowers such as adukku kondrai, Pulinagak Kondrai and Umattai. Tender vilva leaves and soft egret's feathers adorn. The crescent moon maintains the balanced distribution of these ornaments. The upper right hand sounds the Drum (தமரு மணி) and in the palm of upper left hand is fire. The lower left hand is in assuring pose and the left is kept like elephant trunk, pointing the raised left foot, the place of eternal bliss. Wrist, forearms and legs are decorated by snakes. The elemental force through which the universe is created maintained and destroyed is designed in this bronze.

If dancing Nataraja represents kinetic energy and tireless activity, potential energy and tranquility are very aptly designed in the form of Dakshinamurthy, the Gods of South (தென்னாடுடைய சிவன்). In this form he is depicted as spiritual teacher. He has four hands. The upper right and left hands hold axe and antelope or snake and fire or trident and rosary. The lower left-hand holds palm leaves containing holy scriptures in some bronzes. The right hand is in teaching pose, has index finger touching the thumb, symbolising the union of God and soul. Though we find Dakshinamurthy in stone sculptures in almost all the Siva temples in Tamilnadu, Dakshinamurthy bronzes are very rare. The Dakshinamurthy in the Paris Museum is remarakable. It is O. 11 m in size and is of 16th century A.D. as is fixed by the Museum authorities. It is gilted bronze. Muyalagan is placed under his right foot. The upper left hand holds fire stick.

Bronzes of the twelve Vaishnavite Alwars can be seen in Vishnu temples. Of the twelve alvars, Poikai Alvar Budhadalvar and Perialvar are called as "Mudhal Alvars" as they are predecessors to other Alvars. Bronzes for them are usually

Post -Vijayanagar Period Dakshinamoorthy Bornze at Pudukottai Museum

RURAL BANKS TO OFFER FULL MONEY SUPPORT TO FARMERS

LOW INVESTMENT AND LOW OUTPUT PATTERN TO BE BROKEN

The recent decision of the Government of India to set up a chain of Regional Rural Banks constitutes a significant milestone in our quest for a rural credit structure appropriate to the country's needs. The objectives of rural credit policy in this country are familiar enough. In brief, policy has aimed at widening and deepening the institutional coverage of rural credit needs.

Co-operative Credit Structure :

For several years, State policy in this regard laid emphasis on the development of the co-operative credit structure as the major instrument of building up a wide and viable rural credit system. And with State support, progress has been made. In 1951—52 short and medium term co-operative credit was no more than Rs. 24 crores. By 1971—72 the figure had gone up to Rs. 608 crores. This progress, significant as it is, conceals considerable regional unevenness. Even in areas where the co-operatives have had notable success there is reason to believe that the benefits have not extended to all strata of cultivators. In particular, the small the and marginal farmer does not appear to have received his due share. The very fact the Reserve Bank was compelled not so long ago to suggest that co-operatives should aim at providing atleast 20 per cent of their total credit for this class of farmers shows the relative neglect, if one may use a strong expression, of their needs. The figures also support this view. At the end of June, 1973 though primary co-operative societies were supposed to cover 95 per cent of villages the average membership in the 158,000 societies was no more than 253. Even amongst the membership, the proportion of borrowing members to total members was no more than 40 per cent. The reasons for the inadequate performance of co-operatives have been gone into on several occasions among others, by the Reserve Bank whose study of the overdues in the co-operative system pointed to the weaknesses in the structure emanating from the managerial deficiencies and ineffective post credit supervision and loan recovery. Co-operatives have also not been able to mobilise adequate resources as seen in their continuing and large dependence on the Reserve Bank for re-finance.

Commercial Banks

A development of significance in the rural credit field in recent years has been the increasing participation of commercial banks in providing agricultural credit. This has been largely a post-nationalisation development and from a figure of Rs. 54 crores in June, 1969, commercial bank direct credit to agriculture had risen to Rs. 540 crores in December, 1974. This is, by any reckoning, a significant achievement but it is a chastening thought that this figure still represents no more than 6 per cent of total commercial bank credit. It shows the magnitude of the job yet to be done. The main instrument to bring about an expanding role of commercial bank credit to agriculture has been the branch expansion in the rural areas. In fact, about half of the total number of bank branches opened since 1969 have been in the rural areas. Even as in the case of co-operatives, there are considerable regional disparities in commercial banks' rural credit operations. A large part of the credit has gone only to a few areas. Several parts of the country remain underbanked and underfinanced.

The Big Gap :

Altogether, the share of institutional credit today is estimated at somewhat over a third of total rural credit needs. This indicates the very large gap that remains. The gap has assumed added significance now both in view of the quantitative increase in credit demand, and, perhaps, more importantly, in the light of the profound qualitative change in the character of that demand that has followed the effort at modernisation of agriculture and inducting into it the new technology. Agriculture has now shown its demonstrable capacity to break out of the vicious circle of low output and low investment. The new technology is the key to this process. The modern techniques which are centred around assured water and wider application of fertiliser and increased adoption of high yielding seeds — all call for more financial support. If the State has provided the infrastructural facilities by extending irrigation and power, if adequate fertiliser is available and better seeds are waiting to to be applied, it would be unfortunate if the farmer were unable to take advantage of this because he lacks finance as it is finance which could translate the translate the input technology into additional production. In other words, what is physically possible, technically feasible and economically viable should not falter because finance is not available.

An important aspect of the new technology is that it is, by and large, divisible and this divisibility helps even the small farmer to adopt the new techniques. Yet the small farmer needs to be persuaded to adopt the new methods and financed to do so. In fact, it is only the adoption of the new techniques that could make for viability and efficiency of his operations. It is this class of farmers that is numerically the largest and together with landless labour and the petty artisan constitutes a significant proportion of the rural poor and it is to his needs that special attention needs to be paid.

A legitimate question could be raised as to whether a restructuring or refashioning of the existing credit institutions would not enable us to achieve the objects we have in mind. More specifically, if we are in a position to identify the weaknesses of the co-operative system whether organisational, managerial or financial could we not think in terms of improving them ? Attention certainly has been given to this aspect of the matter. The major problem is to strengthen the co-operative credit system at the base level and to universalise its membership. It is for this purpose that Government have taken the decision that Farmers Service Societies should be set up at the base level of the rural credit structure. This is a process which in its very nature will take time. Meanwhile, there is urgent need for filling the credit gap.

Similarly, the limitations of the commercial banking system in extending its rural credit coverage stem from the high cost of its operations and the attitudinal problems that arise from its basic urban orientation. The high cost of operations, in turn, reflects the salary structure, staffing pattern and high establishment costs. Commercial banks have found, wedded as they are to their present procedures and systems, that servicing rural business is expensive and many rural branches uneconomic. Most of the rural branches of the commercial banks are today what are called deposit centres, in other words, branches whose credit deposit ratios are well below the national average. Consequently, the commercial banking system has effectively, though perhaps not intentionally, become an instrument of transmission of funds from the weaker rural aras to the more affluent urban sectors. This trend must be reversed and it is essential that, given the credit needs in the rural areas, the first step should be to see that the funds mobilised there are also deployed there. The question of reducing banking costs has been considered several times. There have been proposals such as having a separate rural cadre of bank staff and the like but these have not succeeded. The attitudinal aspect is no less important. If commercial banks are to make an effective thrust in rural banking, their systems and procedures, training and orientation have to be adapted to the rural environment. With the institutional set up of banks today, this is not likely to be either a quick or easy process.

Rural Banking

We therefore need an institution which would combine the rural touch and local feel, a familiarity with rural problems and attitudinal identification with the rural economy which the co-operative possess in large degree. with the modern business organisation, commercial discipline, ability to mobilise resources and access to the central money markets which the commercial banks have — in other words an institution which is locally based, rurally oriented and commercially organised. This is the rationale for the regional rural bank.

The role of the new institution as presently envisaged is that it should supplement and not replace the other institutional agencies in the field. Integral to the idea of the rural bank is that it should have a two-way relationship both with the commercial banks on the one hand and a strengthened primary level society such as the Farmers Service Societies on the other. The rural banks would thus be in a position to draw on the sponsoring commercial bank for resources and also at least in the initial stages, for some organisational support while their lending activities would, to the extent possible, be through the Farmers Service Societies.

Coordination :

One of the important aspects, during the actual operation of the bank, would be to bring about coordination between the various credit agencies now in the field. It would clearly be wasteful if the various credit agencies were to cut into each others' operations. Overlapping of functions is a luxury which we cannot afford and mechanisms would need to be devised to ensure proper coordination.

The share capital of the rural bank is to be subscribed by the Government of India, the State Government and a sponsor bank which would be a public sector bank in the ratio of 50 per cent, 15 per cent and 35 per cent respectively. The association of the State Government would ensure continuing coordination with the State agencies concerned with rural developmental activities while the association of the sponsor bank would provide the linkage to the wider commercial banking network.

Operational Cost :

The other aspect of the bank's working is to keep a strict control on their cost of operations. It is now proposed that the salary structure of the employees of the regional banks should be based on the scales prevailing in the relative State Governments. This will, at one stroke, make their salary bill much less than that of commercial banks today. At the same time it would be necessary to keep down other costs as well and to pattern the organisational hierarchy, behaviourial pattern, business procedures and systems of the rural banks not in the image of the commercial banks as they are now organised but on a basis more appropriate to their functioning. In a word the culture of the rural banks has to be distinct and different.

Staff Pattern :

This leads me on to the question of the personnel of the banks. If the banks have to cater to the rural population, understand their problems and have an affinity with the areas they seek to solve, it is essential that they draw their staff from those with a rural background and orientation. The staff will also need to be specially trained and the training programmes, particularly of the executives of the rural banks would need to be devised with a great deal of care and attention so that the object of the exercise is fully reflected in the attitudes of the personnel.

An important question that is under consideration is the location of these banks. It is proposed that the banks should be set up in areas which are comparatively backward and where the coverage at present by the commercial and co-operative banks is relatively poor. They should also be areas which have potential for development and which can effectively absorb productive credit. At the same time, the special features of States in the North-East and States like Jammu and Kashmir will also have to be taken into account.

These are all organisational aspects which currently are under examination and on which decisions may be expected soon. A Steering Committee is at present engaged in this task and it is the endeavour to set up 15 banks by October 2, 1975 and in any event, by the end of the year. Over a phased programme extending upto April, 1977, it is hoped to set up, subject to the constraints of manpower, as many as 50 banks.

—*Courtesy* : A.I.R.

By

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made in sitting pose, in a group of three. Most of the Alvar and Nayanmar bronzes are made, with folded hands, in worshipping pose. Thirumazhisai Alvar is made in sitting pose in worshipping attitude. A bronze of a chera King, Kulasekara Alvar is also made in worshipping pose with royal dresses and crown. Thirumangai Alwar a Chieftain under Chola king is made in standing pose with sword and shield. Bronzes of Tondaradipodi Alvar and perialvar are made in standing, worshipping attitude with flower baskets as they were used to gather flowers for the lord's Pujai. Thiruppanalvar, as a good musician is depicted with musical instruments such as cymbals, pipe or vina, Nammalwar and Mathurakavi Alvar bronzes are made in sitting, worshipping attitudes. Andal is made in in standing pose bronzes. In a nice feminine pose comprising three-bends of her body, she holds a flower in one hand, while the other hangs

Chola Period Kannappa Nayanar
Govt. Museum, Madras.

THE UNIQUE FEATURES OF THE SAINT BRONZES

down. Her hair is beautifully collected and banded on one side of the head. The style in which the hair band is arranged is very famous in Tamil Nadu and is called as Andal Kondai. This Andal Kondai, a long garland that hugs her up to the knee and the hand in the pose of holding flower are special features for Andal bronzes.

Of the sixty three Saivite Nayanmars, Sambandar, Appar, Sundarar, and Manickavasakar are the famous four Nayanmars, Sambandar bronzes are made either in dancing or standing with cymbals. In the dancing pose his right index finger points towards the sky where Siva with Parvati gave appearance to Sivapada Hirudaya Sambandar's father. This and the absence of Srivatsa help us to distinguish Sambandar bronzes from those of dancing Subramanya and Krishna. Appar bronzes are made with broom stick by which he cleaned temple vicinities. Manicka vasakar is shown with palm leaves containing Thiruvasakam in left hand. His right hand is in teaching pose. Sundarar is made in standing pose sometimes with a stick and some others holding a flower in one hand and resting the other hand upon a thandam.

Chandikesvara is made either in sitting or standing pose with axe. Arivattaya Nayanar is made with a sickle by which he cut paddy Sheaths. Kungaliya Nayanar bronzes are made with incense—burner. Nilakanda Yaipana Nayanar is made with sakotayal. He is described in Periya Puranam as the Master of Sakotayai.

Kannappa Nayanar bronzes are made in standing pose with folded hands. They are in hunter dress. His bronzes have bow quiver with arrows, dagger and sword or any two or three of them. Karaikkal Ammayar images are made either in standing or sitting pose with symbals. As she had got devil's appearance at her request, she is made with canine teeth and her skeletons visible. This often mislead scholars who are not conversant with Saiva Thirumuraigal to identify her wrongly as Kali. Like this two more bronzes of Nayanmars will deceive the scholars if they have not studied Thirumuraigal. They are the bronzes of Thirunalaippovar and and Anayanar. Thirunalaippovar bronzes are made with a plough, which is also a symbol for Balarama, one of the ten incarnations of Vishnu. Anayanar bronzes are made exactly like that of Venugopala, as playing flute.

Cheraman perumal, Kocehenkat Chola, Pukai chola, Nedumarar, ladikal Kadavarkon, Kayarsinga Nayanar and Narasinga Munairaiyar were kings who in later life became saints. Their bronzes are made with swords and crowns. And they kept their swords in kingly manner.

Enadi Nayanar, Kotpuli Nayanar and Munai Aduvar were great warriors and their bronzes are made with swords and shields.

Later Chola Period
Thirumangai Alwar.

How to Improve the Quality of Sugarcane

AN INTENSIVE RESEARCH IN TAMIL NADU

Sugarcane in Tamil Nadu is planted in different months.

Accordingly the seasons are broadly divided into main season and special season.

Main season consists of the early season (December-January), mid season (February—March) and late season (April—May).

The special season planting is from July to September.

Whatever the season, there are quite a few improved cane varieties you can choose from.

They are Co. 658 and Co. 62174 for early season, Co. 449 and Co. 6304 for mid season and Co. 419 and Co. 853 for late season. For special season select Co. 658 or Co. 853.

Early season (December — January) planting is found to be more ideal for getting highest yields. Pests and diseases will also be lower in this season. In late season (April —May) plantings, pest attack is at its peak.

Among the varieties released so far, Co. 6304 has appealed to the farmers mainly due to its high yields, thickness and non-lodging habit. It is an average sugared variety. Some of the high sugared varieties with good yield to cater to the needs of farmers as well as sugar industry, such as Co-N 68075 (mid. & late), Co. A 71-1 (mid. & late) and Co. C. 6787 (early) are under final test.

Preparing the Land :

Ploughing the land deep with iron mould board plough 4 to 6 times, breaking the clods with junior hoe and levelling with buck scraper were found to be quite paying.

Opening trenches at 20 cms. depth with Victory plough, giving 80 to 90 cms. spacing, is also recommended.

Seeds and Sowing :

Seed material obtained from a well manured sugarcane nursery (sugarcane short crop aged 6 to 8 months), is more healthy and free from pests and diseases. It also germinates well. A hectare of nursery will supply seed cane for planting about ten hectares. Therefore, using short crop seed material is better than setts from sugarcane tops.

Dipping ends of setts in organo mercuric compounds like Aretan (0.25%) and Agallol (0.05%) promotes good germination and controls pine apple disease.

About 45,000 three-budded setts per hectare are required for getting maximum yields.

Manuring :

The following manurial schedule is recommended for the crop.

Apply 25 tonnes of farmyard manure or compost or press mud per hectare and 75 kg. phosphoric acid as superphosphate as basal dose.

As top dressing apply 250 kg of nitrogen per hectare in two split doses on 45th day and 90th day after planting by placement in the form of urea or ammonium sulphate.

Supplement it with 100 kg. of potash per hectare at 45th and 90th day along with nitrogen in the form of muriate of potash.

Ratoon crops are given an extra dose of 100 kg. nitrogen per hectare.

Irrigation :

Give irrigation 5—7 days after planting followed by irrigation once in 7 to 10 days at germination, tillering and growth phase. Irrigate once in 12—15 days at harvest stage.

Digging and turning the soil with a spade 2 to 3 times every month followed by hand hoeing is effective and economical. But instead of spade digging working bullock drawn Junior hoe is more profitable. Application of herbicide, 2, 4-D sodium salt at 3 kg. (*a.i.*) per hectare as pre-emergence spray and the same chemical repeated on 25th day after planting as post-emergence spray also will control the weeds.

Mulching trash in a thing layer of 6 to 8 cms. in between the cane rows, 2 to 3 days after planting, conserves soil moisture, suppresses weed growth and controls early shoot borer. This way you can get an yield of 5—6 tonnes more per hectare.

Partial earthing up on 90th day after planting on completion of second dose of manure and high level final earthing up between 120th to 150th day prevents the crop from lodging.

Trashing in the 5th month helps clean cultivation and eradicates egg masses of pests. Trash twist propping by single line in the 5th month and by double line in the 7th month supports the canes from lodging. This helps check deterioration of juice quality and reduction of cane yield.

The cane crop attains its peak maturity during February—March in Tamil Nadu, irrespective of varieties and the time of planting during the main season. However, the crop is ready for harvest in the 12th month from the time of planting. Ratoons can be harvested one month earlier.

GRAPE DISEASES IN THE SOUTH

Grape growers in the south faced with quite a few diseases. Some of them are quite damaging reducing the yields and doing permanent damage to the vineyards. Downy mildew, anthracnose, powdery mildew and rust are the Blue most destructive diseases in the south. Anab-e-shahi, Thompson Seedless, Fakdi, Bhokri, Selection-7 and Kali Sahebi are highly susceptible to the first three diseases. Rust is confined to Bangalore commercially grown in the South.

Here are the symptoms of the diseases and their control.

MAJOR DISEASES

Downy Mildew :

This disease appears on leaves, flowers and fruits. In the initial stage, yellow oily spots appear first on the leaves and later on, on the under-surface of the leaves, a downy growth of the fungas appears. The fungus spreads rapidly in cool, moist weather.

With the dry weather, the spots turn brown and the affected leaves shrivel. As a result the leaves drop. In severe cases the vine may even be completely defoliated.

The shoots and tendrils are attacked early in the season and they become stunted. Affected fruits show large, oily blotches with a dark margin. They then wither and fall easily.

Control :

Infection can be reduced if all prunings, fallen leaves and inefcted fruits are burnt or buried well.

Trials conducted at the Indian Institute of Horticultural Research have shown that the disease is effectively controlled by giving about eight prophylactic sprays with any one of the copper fungicides (Bordeaux 1%), Blud Copper (0.5%), Fycol 8E (1.0%), Kocide (0.2%), Blitox (0.5%). Start spraying when the shoots are 15 to 20 cm. long. This gives a good coverage of the fungicide on the foliage. Additional sprays are usually necessary under prolonged moist weather conditions. Avoid spraying when the grapes are in flower and also when the berries ripe.

Anthracnose :

Anthracnose is a serious disease and attacks all young parts of the vine, especially new shoots and fruits. On leaves infection appears first as small and very dark brown spots. Later the spots grow in size. Distortion is common if there are many spots. The most serious symptoms are observed on the shoots. On the stem and young shoots irregular black spots develop.

If fruit stalks are attacked, the fruits usually do not develop. The affected youngberries develop sunken spot known as 'bird's eye spot.'

Control :

Prune diseased canes and burn of bury prunings, fallen leaves and diseased fruits. Complete control of the disease has been achieved at the Indian Institute of Horticultural Research by spraying the crop three to four times with Defoliatian (0.3 per cent).

Powdery Mildew :

The powdery mildew affects the leaves, stems, flowers and fruits and is by far the most destructive.

In severe cases the canes do not mature and fail to give good bunches after pruning for fruits.

rape berries affected by this disease in the initial stage, show a powdery fungal growth which leaves a scar on the berries. In severe cases of attack the berries crack thereby greatly affecting the market value and yield of the crop. The disease occurs more during the drier months when warm sultry conditions prevail. Thorough dusting or spraying the foliage, canes and fruits with sulphur helps in checking the disease. When the fully grown berries are attacked it is necessary to dip the bunches in wettable sulphur (0.2%).

Rust :

Rust appears usually during the colder months (October—February). The fungus produces numerous orange coloured sori on the lower surface of leaves. In severe cases of infection, the entire leaf surface is covered by sori resulting in defoliation.

Control :

Sulphur dusting or spraying keeps the disease under control.

Black rot :

The fruits are usually infected. The symptoms are usually observed when the berries are half ripe as circular spots. The infected berries shrivel and dry. The pathogen is active during hot, moist weather.

Control :

Spray with any one of the copper fungicides suggested against downy mildew.

Fruit rot :

Grey mould or Botryis rot : In the initial stages, small circular, less defined spots appear on the berries. When rubbed, the skin under these spots slips from the berry exposing the pulp. Later, the berries shrivel, crack and rot.

Control :

Fungicidal dips with captan 0.2 per cent or dithane Z-78 (0.2 per cent) are found to be effective in checking the infection. However, fungicidal treatments should be discontinued before harvest.

Brown leaf spot :

The pathogen produces numerous dark brown spots on the leaves and shoots. In severe cases of infection defoliation is common and young shoots dry up.

Control :

Various copper fungicides recommended for the control of the downy mildew disease are also effective against this disease.

Damping off :

The collapse and death of young seedlings is sometimes observed in seed pans. Soil borne fungi have been found to be regularly associated and can cause damping off seedlings. The disease is particularly severe under water-logged conditions.

Control :

Drenching the soil with Bordeaux mixture (1 per cent) or Brassocol (0.2 per cent) 16 is considered useful in reducing the disease incidence. Improved cultural practices go a long way in controlling this disorder.

T. S. SRIDHAR and H. S. SOHI.
Indian Institute of Horticultural Research,
BANGALORE.

Dr. Mu. Varadarajanar

HIS CONTRIBUTION TO EDUCATION AND TAMIL CULTURE

By

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Dr. Mu. Varadarajan is well known to the World as a great writer in Tamil. He has enriched Tamil in every sphere.

He was my revered Guru who had shaped many of us as ardent students of Tamilology. Two decades ago, I had the opportunity of sitting at his feet to learn Tamil, not only Tamil language and literature but also the salient features of Tamil Culture. We the students of Dr. Mu. Va. admired him as a savant of Tamil scholarship and an embodiment of Tamil culture who used to inculcate in us the great ideals of ancient Tamils and who at the same time never failed to infuse new ideas to the traditional scholarship for the realisation of a better new world order !

His was the clarion call for the Renaissance of Tamil Literature in our country. His pleasing manners, polished behaviour and polite attitude have endeared him to many. He was a friend philosopher, and guide not only to his students and friends, but also to his numerous admirers and avid readers.

We, the students of Tamil used to admire him and also have attempted to follow the foot-steps of this revered Professor in all walks of life. There is an old saying about Tiruvalluvar,

> 'He is the Poet !
> He is the Scholar !
> He is the Savant of Tamil!'

Dr. Mu. Va. answered this description more aptly than any one of the innumerable literary luminaries of this century.

We are all well aware of the fact that he had devoted his time and energy to enhance the status of Tamil and the Tamils. Once he quoted a line addressed by a Sangam Poet to his patron as 'என் நெஞ்சம் நிறப்போர் நிற்காண் குவரே' i.e., 'This who can open my heart can see you there !' and with a slight alteration of a single word, our Professor expressed: என் நெஞ்சம் நிறப்போர் தமிழைக் காண்குவரே' i.e. 'Those who can open my heart can find Tamil !' which includes the human factor as well !

Prof. K. D. Thirunavukkarasu
recepient of Sahitya Academy Award for his Thirukkural Studies.

He never claimed himself as a great educationist. But his views on education have given a new form and shape to good old ideals of education. First, we must not forget that he was a traditional scholar in Tamil with radical views. He was never the guardian of conservatism. He was a living refutation of Anna's scathing attack on Tamil Pandits delivered in 1948. Referring to the Pandits of that era Anna had said 'பழமைப் பாசறையின் காவலர் களே தமிழ்ப் பண்டிதர்கள்' i.e. 'Tamil Pandits are but the custodians of conservatism.' Dr.Mu.Va. strived his best to regenerate and rejuvenate the teachers of Tamil to become the torch bearers of traditional wisdom with modern outlook.

Dr. Mu. Va.'s views on education are very simple, dynamic and at the same time pragmatic. He believed that "education should give its benefits either directly or indirectly to humanity." He wanted to implement radical changes to the benefit of student community. He observes that " Education should serve as a means for earning the daily bread of man as well as it must induce him to develop his personality. Every educational institution should always have as its aim that the young man leave it as a harmonious personality. The development of general ability for independent thinking and judgment should always be placed foremost, not the acquisition of special knowledge. It is essential that the student acquire an understanding of and a lively feeling for values."

To achieve these goals, he preferred the medium of mother tongue which would serve as an effective instrument and avoid the colossal waste of time and energy of our people.

As Professor of Tamil language and literature, Dr. Mu. Va. made earnest attempts to propagate the ideas and ideals embedded in ancient Tamil classics among the mass which were actually sealed books to the common man. He gave new orientation to the study of Sangam classics through his writings such as "*Viruntbus* and *Celvam*" He unfolded new vistas for the study of Tamil. He was responsible for the introduction of B.O.L. (Hons) Degree course in Tamil Nadu. When (the then) Madras Public Service Commission declined to recognise the B.O.L. (Hons)

THE EARLIEST PROPONENT OF CONTINUING EDUCATION

HAD A SOFT CORNER FOR PRIVATE STUDY CANDIDATES

Degree holders on par with other Hons. Degree holders, Dr. Mu. Va. spared no pains to take necessary steps to make the concerned authorities to realise the problem and for a quick solution for it. Because of his strenuous efforts, the University of Madras announced that B.O.L. (Hons.) Degree is on par with other Honours Degrees, allowed the B.O.L. (Hons.) Degree Holders to convert that Degree into M.A. and introduced a B.A. (Hons.) Degree Course for Tamil in its curriculumn.

He was the earliest propenent of and encouraged the method of "continuing education" through private study. **He had a soft corner for the candidates who appear privately for the examinations. This sympathy for the private study induced him to introduce correspondence course at Madurai University.** He expressed great delight at the success of his experiments in implementing the correspondence courses. He said that he had received encouragement from all quarters of our country as well as all strata of our society for introducing correspondence course even at the Post-graduate level.

In the sphere of higher education, especially in the field of research he favoured comparative study. When he was the Professor of Tamil at the University of Madras, I had the opportunity to serve under him as a lecturer in Tirukkural research department established at Madras University; he advised me to make a comparative study of Tirukkural with other great didactic works of the Classical languages of the world. I tried my best to fulfil his ambitious plan as best as I could though I could not claim to be a well-equipped scholar for this task. Now that the work has earned for me the Sahitya Akademi prize, the demise of the person who inspired me to undertake the work, some weeks before this announcement, leaves me all the more depressed. Perhaps he would have goaded and guilded me into more such rewarding endeavours. !

Tamil Culture

If I say that Dr. Mu. Va. was the embodiment of Tamil culture, I believe that nobody can dispute this statement. He believed that "cultural development of a nation depends on a balance of body, mind and spirit in its people, measured on a scale only less human than divine. To survive, we must keep this balance. To progress we must improve it." With these basic views on culture, we can trace his contribution to Tamil culture.

ADVOCATED THE GOLDEN MEAN IN PURSUIT OF PLEASURES

He very often excoriated the Tamils that they have no real love either for their language or for their fellow beings, though their social behaviour with aliens is always free and frank.

This clearly brings out that he was anxious to eradicate from the Tamil society these basic evils that hampered their progress in all walks of life. The supreme expression of the Tamilian wordly ideal is the portrait of Canror. (சான்றோர்) This term visualises the 'Perfect Man.' Those who are perfect in learning and moral conduct are known as *Canror*. They are noble in thought, speech and action. This was the cherished ideal fo the ancient Tamils. We can cite a number of references such as,

> "My magnificent duty as Mother
> is to bringforth and to bring up
> To make perfect man (*Canron*) is
> the father's duty"
>
> (Puram: 312)

"The mother who hears her son being called '*Canron*' will rejoice more than she did at his birth." (Tirukkural 69)

He contributed his mite for shaping a new world in which the individuality of each and every man should be safeguarded. He came to the rescue of modern Tamil society with a philosophy of life that is neither otherworldly, nor fatalistic in its approach but practical in the true sense of the term. His philosophy of life laid stress on socialism, but it is universal in its outlook and pragmatic in its approach. He never failed to remind us of the higher values of human life and thus inculcated the ideal of golden mean in the pursuit of pleasures i.e. 'Nothing too much' is the watchword (slogan) of his philosophy of life "எதிலும் நன்மை, தீமை உண்டு. அளவோடு எதையும் பயன்படுத்த வேண்டும். அளவு மீறினால் எதுவும் தீமையே"

Dr. Mu. Va. started his life as an assistant, and a school master, then he gradually rose to the highest level of a Vice-Chancellor. In his writings, one can trace the course of his mental development which reached its acme in the fifties itself.

Poet Bharathi AND October Revolution

Many a literary critic has preferred to name Shelley as "the child of the French Revolution." Like wise, Subramanya Bharathi, the great national poet of Tamilnadu, can also be justifiably called the "child of the Russian Revolution of 1905". Bharathi himself came to the limelight of patriotic poetry and political journalism in those turbulent years of militant Indian nationalism which followed in the wake of the Russian Revolution of 1905. This revolution opened the floodgates of national liberation struggles of the countries of the East, including India.

Poet Bharathi who was in his prime of youth at that time adopted Tilak as his political leader and turned himself into a bard of the awakened nation. He resigned his job as sub-editor in the moderate newspaper SWADESAMITRAN, and started a progressive journal of his own.

Undaunted

Bharathi's political weekly *India* published from Madras under the motto of "Liberty, Equality and Fraternity" began emitting fire and fury against the alien rulers and their exploitation, that brought it soon to the notice of the British government. Bharathi, who got secret information about his impending arrest, decided to move with his associates into Pondicherry which was then under the French rule and to continue publication of his journal from there. Tirumal Acharya, his colleague and publisher of *India* who accompanied him to Pondicherry, went abroad from there, to join the Indian revolutionaries in Europe. It is no wonder that this young man was one among those who founded the Indian Communist Party in Tashkent.

Bharathi was compelled to live as a political emigrant in Pondicherry for nearly a decade. But the iron hand of the British fell upon the journal soon and it was banned in Tamilnadu. Undaunted, Bharathi began to voice his opinions through other journals.

It should be noted here that Bharathi was one among the few in those days who had developed an international and revolutionary outlook and believed that only along with economic and social emancipation, political freedom could become meaningful and complete.

Reverence

As a keen observer of the developments in Russia, Bharati wrote an article soon after February Revolution of 1917 in which he said that the "Russian political revolution is a good omen to the golden age of mankind which is fast approaching." When the October Socialist Revolution succeeded, he was the first Indian poet to hail that Revolution in his magnificant poem "New Russia."

He has called the October Revolution "Yuga Puratchi" meaning "the revolution which had ushered in a new era, had brought about a new historical period of world importance."

In an article on "wealth" written shortly after the October Revolution of 1917, Bharathi begins it with the sentence, "it seems that the socialists in Russia could almost achieve their ends" and goes on to explain what socialism is. "The socialist doctrine, he continued, "is gaining more and more strength. In the Republic of Russia, established under the leadership of 'Sriman Lenin'."

Bharathi held Lenin in high esteem and always mentioned him with the Tamil reverential epithet of "Sriman." All the arable lands and other riches of the country have become the common property of all the people....This doctrine has transcended from Russia into Asia too." He expressed the confidence that "only after this doctrine gains complete victory all over the world and becomes the normal way of life, the mankind will achieve real civilization."

Evidence

When the Civil War broke out in Russia and the young Republic was threatened by the armed intervention of so many foreign powers, Bharathi was much disturbed, and had spent many sleepless nights. In a skit named "The Devils" which tells about the bloody atrocities committed by the counter-revolutionary brigades and the foreign interventionalists in Russia, he wrote: "I wanted to forget all about that and to go to sleep, but I could not sleep. I could not forget that. Then the thought of Lenin came to my mind. A mortar gets hit from only one side. A drum gets beating from both the sides. But ah! Lenin is being attacked from a million sides!"

It can be said that Bharathi had closely followed the events which were happening in Russian after the Revolution and had supported many of the reforms carried out there under the leadership of Lenin. At the same time, he had never failed to repudiate and expose the vile and false propaganda of the Western press, directed against the young Republic and its radical measures. Many of his articles stand evidence to this. For example, one of his articles "on the marriage laws of New Russia" he wrote: "When the Bolsheviks came to power persons, who were throwing mud over them, slandered that the Bolsheviks have even made women a common property. But even a clever liar will stand exposed in a few days! How could anyone go on telling lies for ever about a mighty nation?"

By
T. M. C. Raghunathan

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TAMIL AS PRIMA DONNA

KEY NOTE OF CONVOCATION ADDRESS

It gives me great pride to have this opportunity to convey my greetings and felicitations to a senior University at a point of time when it is preparing to function with the vigour and briskness of youthfulness ; and I am immensely pleased to meet the new Graduates who are the rays of knowledge emanating from this Centre of Learning.

The entire world knows that the Madras University is the place where the priceless treasures that are the thoughts and ideas of intellectual stalwarts took shape and grew up in splendour. There is a history for this University and that history has a greatness. All good hearts are enormously gladdened to view the grandeur of the march of the University, laden with garlands of renown proffered by regions many. Marking a turning point in the page of this history, the Convocation Address today is being delivered in Tamil.

Oh, do see the distress on account of the degree of astonishment in which the annoncement has to be made that the mother-tongue it is which is the language of the Convocation Address ! It is not as if I can read out the Convocation Address only in Tamil. I could read it out in English too, although I might not be able to speak extemporaneously in that language. What is required now, however, is not personal explanation. *The point I am seeking to stress is that if we ourselves hesitate to enthrone Tamil, which is a rich and fertile language native to our soil, then would not our attitude be the equivalent of disregarding and heaping humiliation on one's own mother* ? That is why I pay obeisance to my Tamil and proceed to inaugurate this turning-point festival.

First Place For Tamil

It is said that even more than 2000 or 3000 years ago—in that ancient age when the people in many regions of the globe were conversing with one another only through gestures and wordless howlings—our sweet Tamil was a language that could boast of a highly-evolved Grammar. Any number of examples could be cited in support of this contention. Such is the extent of perfection of our sweet language ; and the yearning of all those who have Tamil at heart is that Tamil should be accorded pride of place everywhere on the Tamil soil. We are striving to fulfil that desire speedily ; and I invite you, the new Graduates, to participate in that exciting endeavour.

Hapless time was when to speak and write in Tamil was considered *infra dig*. In those days it was thought to be an honour only to display proficiency in an alien language. It would not be wrong to interpret that what that Poet of Resurgence, Bharatidasan said :

" The jack-fruit that has ripened
on the root itself
is left in the agony
of callous neglect, alas !,"

was in reference not merely to the misery of young widows but could be taken to apply with equal force to the lot of Tamil too. To argue that Tamil lacks the means to relay and relate the wonders of Science in a world where the frontiers of knowledge are ever-expanding, could only be characterised as a ruse to slip out of the duty to Tamil work for the development of the people and the Tamil language !

REGARD FOR MOTHER

When Subramania Bharati thundered,

" Spread out to the directions eight
and return
with all the treasures of Art !, "

what indeed was the category of treasures he referred to ? Was it solid gold or diamonds or rubies or pearls ? No, what that Poet with the defiant turban had in mind was the effort to import in Tamil the everlasting treasure of the light of knowledge which could put to instant flight all the silver and gold and gems precious !

Only because there happen to be those who climb on the mother's shoulders so as to fetch fruit from the branches of the tree for the sweetheart, the atrocity occurs here, of Tamil being trampled upon for the purpose of reaching up to an alien language. A second language is no doubt necessary as a means or medium to communicate with the outside world ; and there is certainly no harm in English playing that role. For that, however, to forget even thinking in the mother-tongue —is it not a monstrous injustice ?

What should be pondered is that if a Grammar could be evolved more than 3000 years ago, how rich and fertile indeed the language should have become, even prior to that stage in time ? Tamil was born and it grew up during the preceding many centuries ; and is it not from this that we are able to glean the glory of the Tamils ?

The Classics proclaim that the monarchs of the *Sangam* Age did not merely patronise outstanding Educationists and Poets but actually administered the affairs of the State on the sage advice of those intellectuals. The anthology *Puranaanooru* describes how a certain ruler looked after his subjects, just as a tiger would tend its cub. Another King of the same era, Pandya Nedunchezhian, wrote a poem—which is also to be found in *Puranaanooru*—by way of impressing on the minds of his people the importance of acquiring knowledge through Education :

" The good that flows from Learning
is of such merit indeed
that one should extend any aid
or even part with much wealth
and unmindful of the expense,
pursue the path of knowledge.
A mother to whom the children
are equal in all aspects
would herself be charmed more
by the offspring accomplished ;
and even the monarch of the land
would overlook seniority
when he seeks the guidance
of one who is bright and
learned "

This would go to show the devotion which the Tamil community of those times had towards learning.

Are we not amazed when we go through the details in our classics as to how the Government should conduct itself ! The code for Government was drafted, not a mere 200 or 300 years back, but more than 2000 or 3000 years ago, as we could see for ourselves in the literary works belonging to the *Sangam* Age. However powerful a monarch might be, in terms of Armed Forces, his rule was based only on *aram* or dharma. The ruler of those times took care not to show any favouritism ; on the other hand, he was scrupulously impartial, treating even his own relatives on a par with other citizens.

Dr. Anna On Ideals

The moment I mention about ideals what comes to my mind is the Convocation Address delivered by the then Chief Minister Dr. Anna at the Graduation Ceremony of the Madurai University in the year 1967. I am quoting a few lines from that address as they are eminently relevant to the present occasion :

" The ideals before us are those that we could realise through hard work alone. But in the same row are placed attractively made-up and intoxicating speeches, which are also labelled ' objectives '. The position should be analysed and assessed in a clear manner. We want unity in the country—this is an objective, acceptable to all ; and it is the duty of the student-fraternity to strive towards this goal. No-one with intelligence would acquiesce in the theory that, for the sake of the country's unity, he should consent to the destruction of his language and traditions and accept the domination of an alien language. Everyone with self-respect has got to oppose this. To describe such perverse thinking as ideal or plan is calculated to bring discredit to the very structure of the term ' ideal '.

" ' The common wealth of the country should grow ; and we should work for that '—this is an ideal that deserves to be accepted by all. On the contrary to say, ' Let the wealth of the country grow ; and do not bother even if it were to be concentrated in the hands of five or six individuals '—this would not be an ideal but making a mockery of the same.

" ' To come together and live in cooperation would yield innumerable benefits '—this is a sweet and simple ideal. To evolve a scheme for cooperation on the basis that each one would keep what he has to himself, would certainly not come under the tenets of real co-operation.

" We have to tell the seekers after ' unity ' that they should not conduct themselves in the manner of the wolf which devoured the lamb and proceeded to claim, ' The lamb has now merged in me and from now onwards we two shall be as two brothers ! "

If only we have a clear grasp of the precious pronouncement made by Dr. Anna, would there be the slightest room for any confusion in regard to ideals ?

In case those outside come forward to extent appropriate help to the students receiving education and training in College, the anxiety of many of the youths regarding job-opportunity would vanish. Arrangements are in vogue in many countries, under which big Industrial Houses, in proportion to their own requirements, provide for education and training to students and also undertake to bear the expenses of apprenticeship. In our country, however, the Industrial Houses spend very little on this account. Apart from sharing the responsibility for providing to the students technical education and Science education and the training programmes associated with the same, the Industrial Houses should also come forward to bear a part of the expenditure involved. Such a method would afford a definite opportunity for students to go through their period of learning with hope and confidence in the future.

Remodel System

Discarding old methods, the system of Education should not only be remodelled to suit scientific knowledge and the requirements of the human society, but also an environment would have to be brought about in which there is a positive link between that Education and day-to-day life. I would like to point out here what the Kothari Commission has said in regard to the importance of Science :

" Science has radically transformed man's material environment. In the technologically advanced countries the average span of human life has increased by more than a third over the last hundred years. Science *is* universal and so *can* be its benefits. Its material benefits are immense and far-reaching—industrialisation of agriculture and release of nuclear energy, to mention two examples—but even more profound is its contribution to culture. Science is liberating and enriching of the mind and enlarging of the human spirit. Its fundamental characteristic has turned out to be the possibility of unlimited growth Every advance in Science deepens our understanding of Nature. But it also heightens the sense of ignorance. *Nature is inexhaustibly knowable*. Nothing comparable to the scientific revolution in its impact on man's development and outlook has happened since the Neolithic times.

MORE UNIVERSITIES WILL BE OPENED UP TO LESSEN THE ADMINISTRATIVE BURDEN

During recent years, the number of Colleges has gone up, as also the number of students ; and it is necessary that the standard of Education too is rendered appropriate to this quantitative increase. Not only that a perspective Educational plan would have to be drawn up now itself, keeping in view the expanding population. The scheme to confer Autonomy on Colleges with a view to improving the quality of Education has also been accepted in principle. It would help to step up the potentialities of Colleges, if they were to function autonomously under the supervisory control of the Universities. Colleges that have the requisite qualification for this are to receive the benefit of Autonomy in the near future.

For reasons of administrative facility in view of the increase in the number of Colleges and so as to bestow special attention on the Colleges, we are earnestly attempting to establish two more Universities, one in Tiruchirappalli and the other in Madurai, and also to set up in Madras a separate University for Science and Technical Education.

You are seeing how, in the assurance that steady and sustained support of Graduates such as yourselves would be available in ample measure, the Government, the Universities and those in the field of Education are formulating schemes so as to ensure that the students of the present are able to pursue their studies in security and self-confidence and so that their future may be filled with radiance.

Towards The Future

Just as Shivaji's mother Jija Bai made her son a redoubtable warrior, the teaching fraternity should concentrate attention in order to enable students to grow up into citizens of prowess. In tune with the maxim that it is the duty of the father to equip the son to become a man of grace and nobility, the preceptors should take the place of the father and train the students accordingly.

There is countrywide talk of discipline today. That order and discipline are very, very necessary for the younger generation and that duty-consciousness and dignity should be safeguarded from erosion have been continuously emphasised by men of light and leading. Rather than cultivate the feeling that law alone could keep them in check, the youths should, if their own accord, come into a self-discipline which would have as much sanction as the law outside. I am aware that youth is that stage in life which throbs which energy. I would also not deny that it is that stage in life

Selvi Meenakshi Sabanayagam (Daughter of Chief Secretary) receiving her degree at the hands of Governor Thiru K. K. Shah.

when the mind is lured by song and dance. I do not have the slightest intention of stopping all that. But is it not also a sober fact that it is during this stage in life that one should establish—and also initiate plans for the subsequent expansion of—a Knowledge Savings Bank which should contain assets to last a period of 40 to 50 years ? If this stage is let go, then how much of strain and suffering has one to undergo for the purpose of seeking that wealth ? This is something that could be forgotten only at one's peril.

A large volume of concessions is being offered to provide education to, quench the thirst for knowledge of and accord upliftment to those who, for want of the ladder of Education, could not raise themselves in society but remained depressed and thrust behind. The system of communal representation and the policy to provide concessions are purely for the purpose of extending a helping hand to those who are flung in the abyss ; and they are certainly not for enthusing those who seek to nurture controversies on the basis of caste-divisions. Educational institutions should serve to make us men and citizens of this country and they should certainly not be allowed to deteriorate into arenas of caste-warfare.

Let us now listen to the actual lines in Purananooru portraying in robust music the character of the Tamils :

" O Pandya Monarch
towering over
all other kings
of the land !
Your Defence Forces
are composed of
angry elephants
that are trained killers ;

frisking horses
that are fleet of foot ;
chariots myriad
with challenging flags
and fearless warriors
thirsting for action.
And these do speak
of your greatness ;
but the strength of governance
is rectitude first.

Hence,

Your sceptre should not bend
in favour of your kin
nor should it strike down
those other than kin,
in arrogant disregard
of their virtuous qualities..! "

The object of my listing a few instances to illustrate the greatness of the Tamil race in the ancient world is not to place a history-book in your hands but only because I happen to know that you have the capability in you to rewrite the history which the passage of time has dimmed. I am only reminding you of this.

If you learn Tamil, you would be able to understand the ancient history ; and if you learn in Tamil, you would be enabled to write the modern history of competition with the new world.

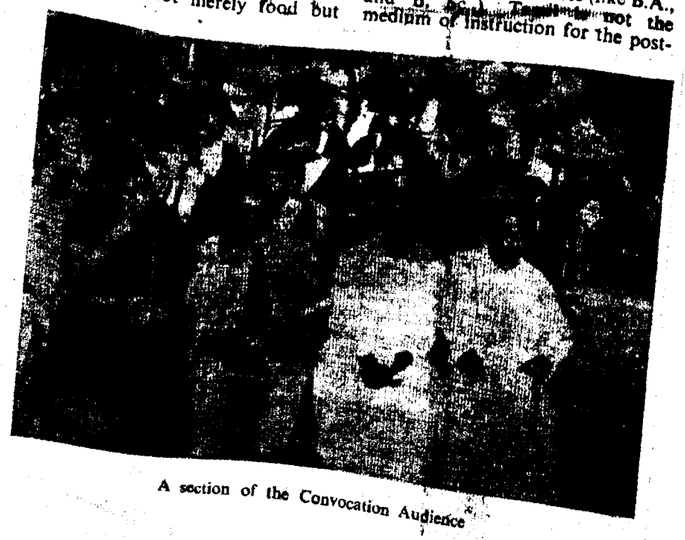
Tamil is Capable

Even ten years back, the determination arose that " Tamil is capable " ; and the effort also blossomed. And seven years back we took the pledge to carry to completion the matter of making Tamil the medium of instruction. But what was the result ? The " language of the stomach " was kindled in order to counter the fervour for the language of instruction.

Would not Tamil provide food ? Would it be sunk in lethargy ? Tamil would bring not merely food but self-respect too, we said and proceeded to marshal evidence for that; but all that went to waste—like water flowing in the direction of weeds, like moonlight squandered on the jungle-top. Because Strike-activities and agitations, worked up by kindling the emotions of students, resulted in drawing a curtain over a peaceful background in which alone could proper explanation have been received, the plan for the medium of instruction paused somewhat. Students who are to create the future and their preceptors should strive to dispel this hesitation totally and to accord first place to thought of the mother-tongue.

I would not accept the general argument that they who are proficient in English would be opposed to the principle of making Tamil the medium of instruction. Have we not seen for ourselves that even vegetarians could cook and serve meat to others ? Therefore I do believe that English-learned intellectuals would accord concrete shape to our feelings in expanding the scope of Tamil as the medium of instruction and taking the scheme to success. And in that faith I would like to make an announcement and may it be the first stage for total success :

In the present system of University curriculum, Tamil is available as the medium of instruction for only the Pre-University Class and the initial Degree Courses (like B.A., and B. Sc.). Tamil is not the medium of instruction for the post-



A section of the Convocation Audience

GOVT. HELP FOR P.G. STUDIES IN TAMIL MEDIUM ASSURED

graduate courses ; and as a result, they who have graduated in the Tamil medium do not have the opportunity to continue their post-graduate studies in the same medium. *Therefore, if the University authorities would evolve and implement a scheme to make Tamil the medium of instruction for post-graduate studies also, then the Government would welcome that with immeasurable pleasure and extend all necessary aid in this regard.*

CUT YOUR LEARNING TEETH ON TOUGH SUBJECTS

So many explanations and ideas have had to be given out for the question itself as to which language should be the medium of instruction. Next, is it not an important question to be answered, as to *what* is to be studied ?

Thiruvalluvar who said, "Learn thoroughly," proceeded to emphasise, " thereafter, may your conduct be worthy of the learning ". A first reading of the emphasis would not yield the correct meaning. One should be clear in one's mind at the outset itself as to what should be learnt. That one should learn thoroughly is in the nature of general advice. Specialised counsel would be to the effect that one should, in the first instance, decide what all is to be learnt and then commence the task of learning. On that basis, it is my view that if those studying Arts subjects alone were to compulsorily learn one of the Science subjects in addition and if, similarly, those studying Science subjects were to compulsorily learn an Arts subject, then it would go to afford fuller and comprehensive capacity. Combined knowledge of Science and Arts is indispensable for the Students and I would like to point out that it would be appropriate to discuss and decide on necessary changes in the present curricula. When a crawling child cuts its teeth, the practice is still prevalent in rural areas to set two plates in front of the baby, one plate laden with dress-materials and baubles and the other containing sweetmeat ; and elders watch eagerly as to which of the two receptacles the child selects first. Such being the case even in regard to children, is it not necessary that a similar choice is made available to the students who are to bring the blue-print of a new era into being.

TO SHINE AS KORKAI PEARLS

If all were to become Professors, from where would come the Engineers to construct the buildings to serve as venues for the conducting of classes ? It would be a happy development no doubt if Historians were to emerge in strength and bestow on us the valuable findings of their research into the past, but on that account, could we afford to brush aside the growth of experts conversant with the wonders taking shape in the realms of Science. Therefore the Student-fraternity should shine as Korkai pearls in all the fields of knowledge. It was for this reason that Thiruvalluvar said : " Select with care what you have to learn ; and thereafter conduct yourselves in a manner worthy of that learning ".

BE THE MESSIAHS OF RATIONALISM TO PUT FATE ITSELF TO FLIGHT

They who graduate from the Centres of Learning should strive to spread the rays of Rationalism and engage themselves in the task of educating the people of our country to walk in step with the advancing world. To give room even now to fasten the chains of the caste-system and to allow superstitions to rule the roast in the name of traditions would mean that we are deliberately out to mar the younger generation too.

In order to help the world of knowledge to come to blossom, new changes would have to be brought about at the level of the Elementary Education itself. Having forgotten the maxim that it is Effort that leads one to success, he who surrenders the responsibility for everything to some super-human agency and counts his days in futile resignation becomes nothing short of a walking corpse—one who neither himself lives nor works for others to live. It is to prevent the tragedy of such a lowly state that you have taken the weapon of knowledge in your hand. This is something you should not forget. An idealist is one who stands firm in his principles, even if troubles were to assault him as a gale. It is my fervent desire that the names of those who obtain their University Degrees today should find a place in that scroll of honour.

I call upon you all obtaining your University-Degress today, to combat the atrocity of caste-divisions and the evil of casteism, to bring about Equality in the social set-up and an economic order free from disparities, to spread the rays of rationalism everywhere and to enable the country to evolve into an abode for warriors and a home for intellectuals and thereby help to pave the way for unprecedented prosperity. And as I take leave after felicitating you on the honour being conferred on you here, what more could I say than that you alone could establish the truth of the maxim of Thiruvalluvar that they who set their hearts on effort, without fear and without fainting, would be able to put even Fate to flight ?

Chief Minister

Dr. M. Karunanidhi

has delivered 118th

Convocation address

at Madras University,

held on 20—9—1975.

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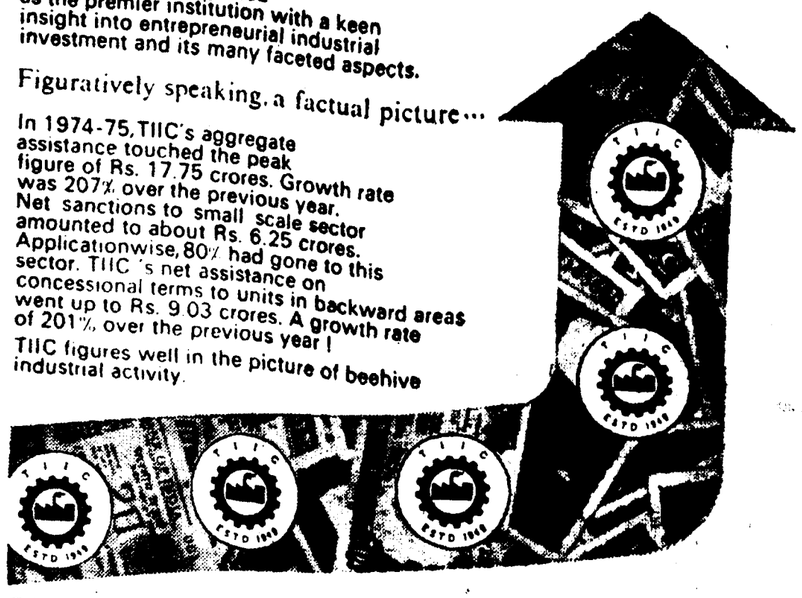

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Service In Prosperity Brigades

—:o:—

Will Count For Preference & Age Computing In Government Service

The prosperity Brigade Scheme was formulated in 1967 with the avowed objective of creating a new social awakening among the masses in order to arouse the spirit of Public Service by utilising Voluntary spare time services of able bodied men and women who are imbued with the spirit of social service and self denial. The Brigade will execute the locally needed works to provide basic amenities through voluntary efforts of the people. It has been, therefore, suggested that the concessions granted to the volunteers of Youth Service Corps may be extended to the volunteers of the Prosperity Brigade. The question of giving preference to these volunteers for recruitment to posts in Public Service has now been examined in consultation with the Tamil Nadu Public Service Commission.

The Tamil Nadu Public Service Commission, which was consulted, has agreed to the proposal to extend the concessions granted to the volunteers in the Youth Service Corps to volunteers of Prosperity Brigade also.

The Government have accordingly directed that the work for one year or more in the Prosperity Brigade may be prescribed as a preferential qualification for recruitment to posts in State and Subordinate Services. The persons who may have worked in the Prosperity Brigade may be given preference provided other qualifications being satisfied.

The Government have also directed that the actual period of work put in as a volunteer in the Prosperity Brigade (Whether Continuous or non-continuous), subject to a maximum of two years, be excluded while computing the upper age limit for appointment to posts in the State and the Subordinate Services.

The volunteers, who may have worked in the Prosperity Brigade should produce evidence of the fact that they had actually worked in the Prosperity Brigade for such and such period when they apply for a post.

The Special Officer (Prosperity Brigade) and Ex-Officio Assistant Secretary to Government, R.D. & L.A. Department is authorised to issue such certificates in respect of the Prosperity Brigade volunteers in Madras City, and in respect of other places the Panchayat Union Commissioners are authorised to issue the certificates.

The Government have further directed that there should be no reservation of vacancies for candidates who have worked in the Prosperity Brigade. These candidates can only be shown preference, provided other qualifications being satisfied in the matter of recruitment to the Government Service. **

Houses for Harijans in Tamil Nadu are solid structurers given free. The Government of Tamil Nadu is committed to giving 30 000 such houses to Harijans by the end of Oct., 75. Above the Kattuputhur, Trichy Dist.. scheme is being distributed to allottees by C. M. on 29-9-1975.

BOOK ON NON-FORMAL EDUCATION FOR WOMEN

Picture above shows Dr. V.R. Nedunchezhian Minister for Education and Tourism releasing on 24—9—75 a book on Non-formal Education for Women. The recepient of the first copy is Dr. Malcolm Adiseshiah, Vice Chancellor, University of Madras.

In this context it will be appropriate to recall that in Tamil Nadu, a comprehensive survey on all non-formal education activities had been completed by the Tamil Nadu Board of Continuing Education. There are 134 schemes of general and occupational education and training covering over 6 lakh persons. Among the programmes, the most effective are industrial training programmes run under the Apprenticeship Act and by the Polytechnics and Engineering colleges. Agricultural education is also good but is quantitatively reaching only a small number of farmers. The Tamil Nadu Agricultural University trains 140 farmers in 12 blocks in the Coimbatore district in improving farming practices. An evaluation of this educational effort shows that while difference in age, education, economic status, media participation and castle did not significantly influence variation of their farming technology and knowledge, there was a relation between knowledge, the extent of land holdings and the social status of the farmers. Another important finding was that only by transforming agricultural research results into non-formal education curriculum can extra yield be produced.

ABOLITION OF HORSE RACING

Had Gandhiji Been Alive—He would have been All Praise for Tamil Nadu.

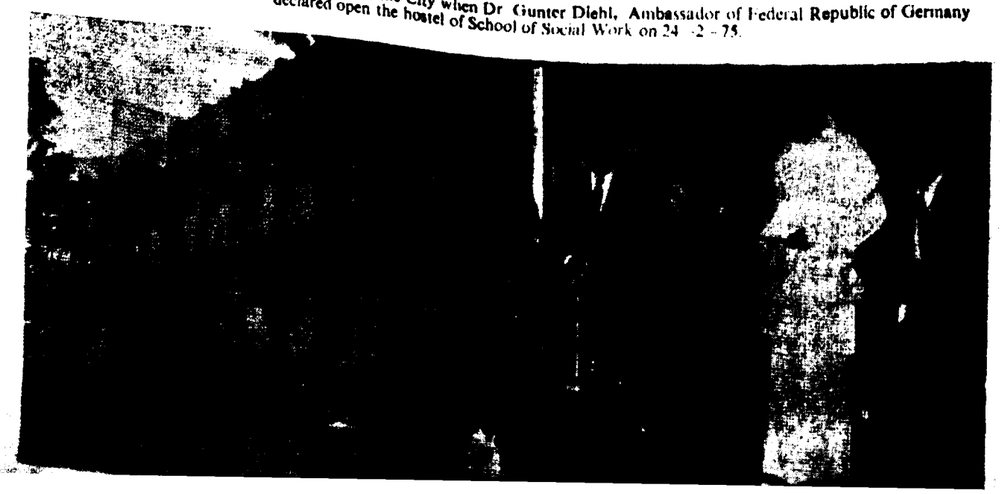
" Of all the states in India, with the exception of Gujarat, Tamil Nadu is the only State which has firmly implemented the Prohibition Policy. In this State which is governed by the D.M.K. Party, a move in the right direction was made some time ago by imposing a ban on horse racing. The Government have now not only stopped their own lotteries, but have also prohibited in the State, dealings in lotteries of other States. Would that, the other Indian States follow in the footsteps of this State, in the matter of prohibiting intoxicants and gambling !

Had Gandhiji been alive today he would have showned high praise for these commendable actions of this State."

The above is a translation of an extract of a publication in the Urdu weekly published from Lucknow—Sidqe-Jadeed—edited by the renouwned scholar Abdul Majid Daryabadi, who is considered the greatest jurist of Islam in India today. Incidently the editor and the Late Dr. Zakir Hussain Sahib were great friends.

Janab Abdul Majid Sahib has written a commentary on the Holy Quran which has received great appreciation. The Sidique-Jadeed reaches a sophisticated and intellectual readership.

One more hostel for girl students come up in the City when Dr Gunter Diehl, Ambassador of Federal Republic of Germany declared open the hostel of School of Social Work on 24-2-75.



LAND REFORM IMPLEMENTATION

23

47

TAMIL NADU IS AHEAD OF ALL OTHER STATES IN INDIA

BOMBAY WEEKLY'S PRAISE FOR DMK GOVERNMENT

The Prestigious Bombay Weekly " Commerce ", after an exhaustive and thorough-going inquisition into the implementation of land reform measures in the 12 States and 4 Union Territories of India, has made out that Tamil Nadu is ahead of other States in the implementation of land reforms. It is worthy of note that this weekly made it a point to verify the difference between legislation and implementation of land tenure reforms. The report published in " Commerce " dt : 13-9-'75 as far as it relates to Tamil Nadu is as follows :—

Tamil Nadu is ahead of other States in the implementation of the land reforms and the DMK Government has taken many measures towards attaining the objective of tillers owning the land. A recent measure adopted by the Government confers on the tenants the right to purchase the lands which they had been cultivating for several years by paying the value of the lands in easy annual instalments. The Act, has, however, ensured that the poorer and the small landowners were not affected adversely. The setting up of tenants financing corporation to assist poor tenants to purchase the lands from owners is under contemplation. The ceiling of land holdings is now 15 standard acres, although the definition of the standard acres varies from district to district, depending on the irrigation facilities, soil fertility, etc. The DMK Government has undoubtedly been quite vigorous in implementing the land reform measures as can be seen from the fact that the built of a land distribution took place only after the Government took office in 1967. The total area of surplus lands notified is 98,653 acres, of which 74,459 acres were notified after 1967. Before 1967, no land was assigned to any landless person, whereas after 1967 about 54,769 acres were assigned benefiting 29,542 persons. The State Government got a law passed in 1971 conferring ownership rights on agricultural labourers occupying Kudiyiruppus (homesteads) as on June 19, 1971 either as tenant or as leasee. The Act extends to all the districts, except Madras and a few pockets of some districts and municipal areas but does not extend to plantations. A law was passed in 1969 for preparing records of tenancy rights. The total number of tenancies registered so far is 399,350 covering 603,898 acres. From 1972 on a scheme has been in operation for the supply of patta pass book to each ryot. These books contain authenticated particulars of their holdings. The DMK Government has assigned 7.05 lakh acres of land to four lakh landless people.

The Tamil Nadu Government promulgated an ordinance in January this year granting a moratorium for one year on the recovery of debts incurred by agriculturists of the drought-affected areas. **

MANUNEEDHI THITTAM OF STATE ELECTRICITY BOARD

METHODS ADOPTED

The Tamil Nadu Electricity Board has introduced " Manu Needhi Thittam " (-as Contact Programme) on 15—9—75 by which the Electricity Board officials will go to the consumers and people and dutifully listen to their complaints and grievances and make all efforts to redress them on the spot where possible and where it is not possible to have it done with least delay.

To start with the " Manu Needhi Thittam " will be introduced at the Panchayat Union level and the Officers of the Board not below the rank of an Assistant Engineer will convene a meeting at the Panchayat Union Headquarters on the day on which the Panchayat Union meets with a view to take advantage of the presence of the Panchayat Union Chairman and Council Members along with the public. The local M.L.A's and M.P.s will be invited specifically. Advance publicity for the meeting will be given so as to enable the people in the area to know the date of the meeting.

A special Register of public grievances will be opened by the Assistant Engineer for each Panchayat Union and the register will be open to inspection to Superior Officers of the Board at all times. All written petitions and complaints will be received and given an acknowledgement slip before the meeting is over. The Assistant Engineer will indicate the action proposed to be taken in the acknowledgement slip and indicate the time limit also. If the grievance or complaint is not remedied within the time limit, the party may approach the Assistant Engineer or higher authority for further action.

In addition, the Divisional Engineers and Superintending Engineers will make themselves available at their Headquarters on any particular day notified by them during each month for receiving grievance day petitions from the public. All these petitions will be entered in a Register and follow up action taken till a state of finality is reached.

The public are requested to extend their full co-operation for successful implementation of " Manu Neethi Thittam " introduced by the Tamil Nadu Electricity Board.

By

Thiru. C. THANGARAJU,

Secretary,

Tamil Nadu Electricity Board.

THE TRULY GANDHIAN APPROACH TO PROHIBITION

ORTHANADU EXAMPLE CITED BY GOVERNOR

"The people's committees formed in Orathanad taluk, Thanjavur District, to keep a watch on illicit liquor trade is worthy of emulation. The people in the taluk have formed village committees consisting of able bodied youngmen and former prohibition offenders. These committees detect illicit distillation, watch the activities of suspects and carry on sustained propaganda against the evils of drink. I feel that the Orathanad example is bound to be a pace-setter for the people's participation in welfare schemes in Gandhian way."

So said the Governor of Tamil Nadu in praise of the special missionary fervour for enforcing wholehearted prohibition action in a small Town Orathanad, a taluk head quarters in West Tanjore of Tamil nadu. Orathanad stands as a striking example for people all over India to uphold and perpetuate the prime Gandhian doctrine of complete imposition of total prohibition with people's participation.

What did they do?

What did the people of Orathanad do to give such a reality to a cherished Gandhian dream ? The question deserves to be posed everywhere due to its well nigh impracticability! "Nothing but a self determination," said the Vice-President of Taluk Prohibition Committee, Thiru R. Durairajan, "and a rededication to a principle of great common good. At first a Taluk Prohibition Committee was set up free from caste, colour, creed, by enlisting all the individuals, who were sentenced mainly under prohibition offences, besides village people's voluntary enrolment in the Committee."

Further, he explained with a tinge of sadness that illegal distillation of country arrack was misconstrued by so many villagers as a perennial source of income in that area and so it had developed into a cottage industry of permanent footing in a situation, conducive to village atmosphere. He said that the reimposition of prohibition in Tamilnadu meant no difference to the poor as nobody realised and relished its social importance and so people thought that there could be no solace to this area, unless the importance of prohibition was brought home to them with serious consideration, and vigour born out of voluntary social endeavour from within. This can never be enforced from outside.

A crusade won

"Indeed, Orathanad registered the highest incidence of the offences of prohibition cases in Tamilnadu," said the Inspector of Police Thiru N. Ramasamy, "so we tried to bring out a consensus between local people and police, purely on ethical grounds. Because, the police force sometimes became strengthless in arresting drunkards as there was nobody available to be a witness in supporting the prosecution. On some occassions, people will come in battallions to revolt against the police, demanding the immediate release of even habitual drunkards. So we determined to inculcate the need of a common arrangement and understanding of local inhabitants and Police in eradicating this social stigma. I hope, we have won in our crusade."

Truth to tell, the pre-prohibition period of this peculiar area was full of embittered relations. For example, in Orathanad area, no decent man was allowed to be free from the verbal insults and physical attacks of drunkards. Alas! The drunkards dominated and out-numbered local people in all village festivals, carnivals including auspicious marriage and social gatherings. Unescorted fair sex felt the poignant need of protection even for an easy stroll even in her once familiar streets. Every day police had to register at least 20 cases of intense cruelty due to heavy drunknenness.

What use is An Intimidated Police ?

The problem was looked at in various dimensions and at last it was concluded that unless the Police were vouchsafed support of the people, enforcement of prohibition and thus to punish the law-breakers was well nigh impossible. An intimidated Police is of no value to the community! It was in this perspective that a prohibition committee was formed with a view to educate and advise the drunkards to become responsive to the tenets of prohibition and respect the law of the land. This committee comprises youngsters imbued with the cause of social uplift, village munsifs, and Karnams, Presidents and members of Panchayats, Village Credit Bank Presidents, hereditary local chiefs and students. This Committee hauls up the drunkards red handed and hands them over to the Police for further legal actions. The action committee also enjoys the sole privilage of bailing out the drunkards on his bahalf of his crime is bailable in nature and then teaches such persons to accept the offence in the Court and face the consequences unflinchingly. Above all, the committee both unearth and destroy instantly the hidden fermented and undistilled arrack, its production apparatus, stocked arrack pots and bottles in the spot with due intimation publicly through an annoucement by tom-tom.

Having a ceaseless and constant vigil over the drunkards, the committee also envisage and prevent all possible opportunities which will entangle the drunkard to go on a spree or a bout. If a drunkard under influence of alcohol is trapped for the first time, the committee exercises generosity to fine him Rs. 25/- and his second or subsequent misconduct will miserably end in severe Police custody with no kith and kin to bail him out in that area due to the non-availability property certificate from Karnam or Munsif as all who can bail him out is a member of the enforcement committee. The amount collected by the Committee in fining the drunkard will be spent only for village welfare. An individual who gives correct clue to the committee about the drunkard is entitled to get a reward of one third of fine collected from the offender with future protection from the menace of drunken vengence.

High Drama in Family Circles :

A son handed over his drunken father while a desperate wife handed over her useless drunkard husband to the committee. An youngster by name Manickam in a village Echankkottai was made to rejoin his wife Dhanam, only after he had for sworn his appetite for drinks and had proved his capacity to resist the bucolic temptation for a number of months!

Orathanad taluk has a population of 1,50,744 and 110 village prohibition committees have been constituted among them for administrative feasibility. These Committees have enrolled 5,171 members and with their help prohibition has become absolute and strictly enforced in all the 203 villages which includes 83 major villages and 120 hamlets of the taluk. The incidence of prohibition offences was reduced to 128 upto January, 1975 and none was registered after that. In Thiruvonam Committee, as sizeable number of 56 female members have fervently joined the Enforcement Committee.

"We have been maintaining a strict prohibition order in our village and till date no addict was found arrested here for drunkenness," says Thiru Chitravelu, the Panchayat President of a small village Urandarayan Kudikkadu, situated in Orathanad Taluk, enroute to Pattukkottai, "because we 900 inhabitants have exercised restraint on consumption of liquor in any form and none is addicted as a result of our self-restraint."

This is how Orathanad is bringing reality to a Gandhian dream.

By

PINNAI A. PANNEERSELVAM, M.A.

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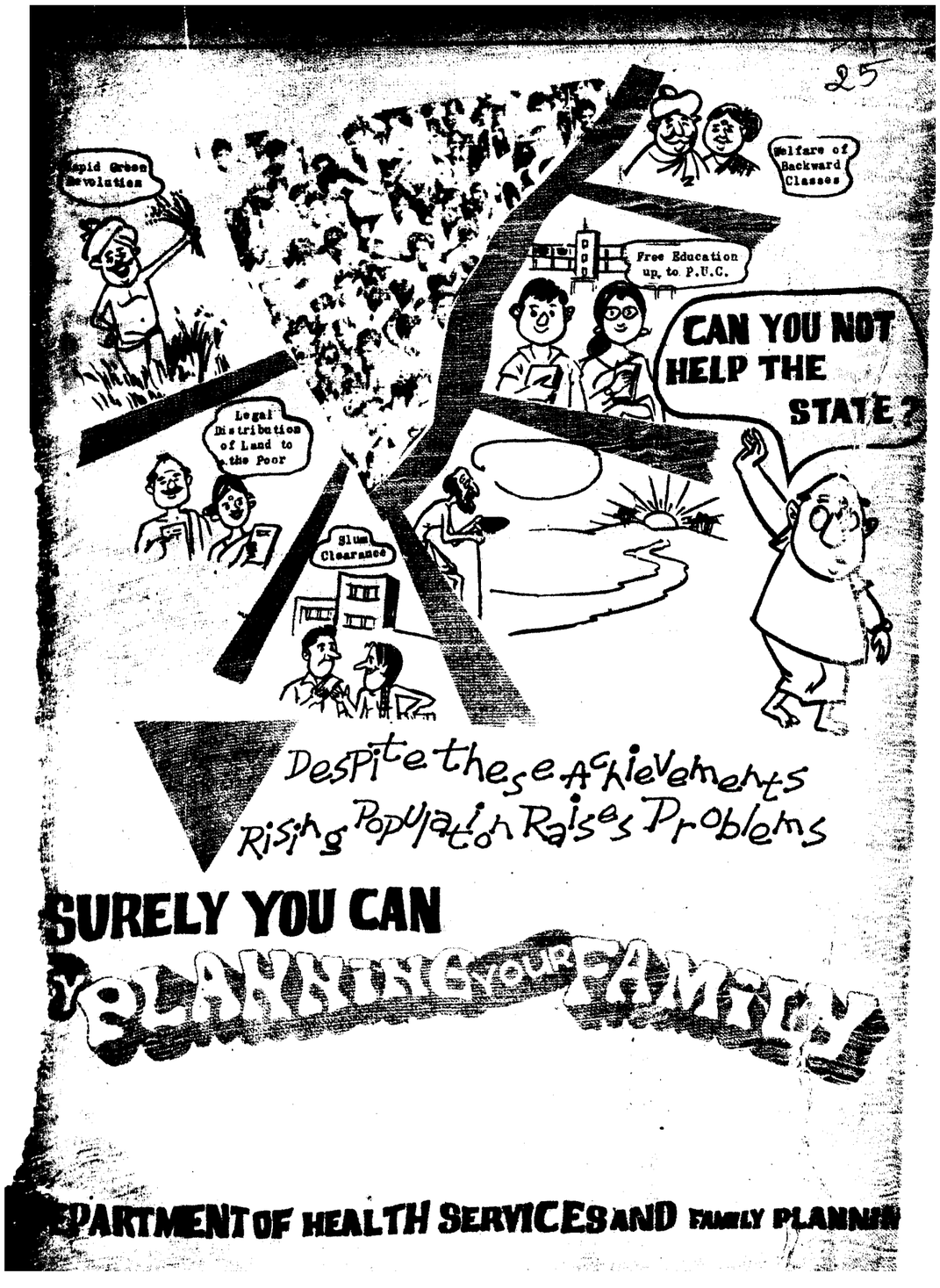
REALLOCATION OF PORTFOLIOS

Since Thiru A. P. Dharmalingam has been relieved from his Ministership, the subjects held by him and Thiruvalargal K. Anbazhagan, S. Madhavan, Mannai P. Narayanasami, M. Kannappan, K. Rajaram and S. Ramachandran have been reshuffled in the following manner.

1. Thiru K. Anbazhagan, Minister for Health M (H)	Minister in charge of Public Health, Medicine, Town Planning and Water Board.
2. Thiru S. Madhavan, Minister for Revenue M (R)	Minister in charge of Revenue, Food, Board of Revenue, District Revenue Establishment, Deputy Collectors, Bhoodhan and Gramdhan, Textiles, Yarn, Handlooms, Law, Courts and Prisons, Registration and Land Reforms.
3. Thiru Mannai P. Narayanasami, Minister for Co-operation M (C)	Minister in charge of Co-operation, Agricultural Refinance, Housing including Slum Clearance Board and Accommodation Control.
4. Thiru K. Rajaram Minister for Labour & Transport M (L & T)	Minister in charge of Labour, Transport, Nationalised Transport, Motor Vehicles Tax, Legislation and Weights and Measures, Statistics, Employment and Training and Ex-Servicemen.
5. Thiru S. Ramachandran, Minister for Local Administration M (L.A.)	Minister in charge of Municipal Administration, Community Development, Panchayats, Panchayat Unions, Stationery and Printing and Government Press.
6. Thiru M. Kannappan, Minister for Religious Endowment M (R.E.)	Minister in charge of Religious Endowment, Khadi & Village Industries, Rural Industries Project, Milk, Operation Flood Project, Tamil Nadu Dairy Development Corporation, Information & Public Relations and Film Technology, Youth Service Corps and Prosperity Brigade.

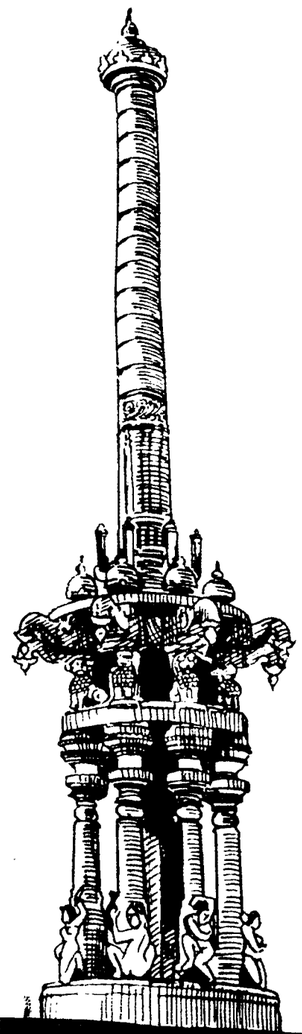

Rapid Green Revolution
Welfare of Backward Classes
Free Education up to P.U.C.
CAN YOU NOT HELP THE STATE?
Legal Distribution of Land to the Poor
Slum Clearance
Despite these achievements
Rising Population Raises Problems
SURELY YOU CAN
PLANNING YOUR FAMILY
PARTMENT OF HEALTH SERVICES AND FAMILY PLANNIN

Regd. No. M. 8676-A

VISIT

THE ART GALLERY AT

POOMPUHAR



- Where the stones tell a tale and recapture scenes from *Silappathikaram*, the ancient Tamil classic;
- Where a city sunk beneath the wave comes glowingly alive!
- A feast for the eyes — and food as well for thought — that's what you get at Poompuhar.
- The *piece de resistance* is the exquisitely carved statue of Madhavi, the temple courtesan.

COME...SAVOUR THE SCULPTURAL DELIGHTS OF THE POOMPUHAR ART GALLERY

Poompuhar is 21 kilometres from Sirkali and 29 kilometres from Mayavaram

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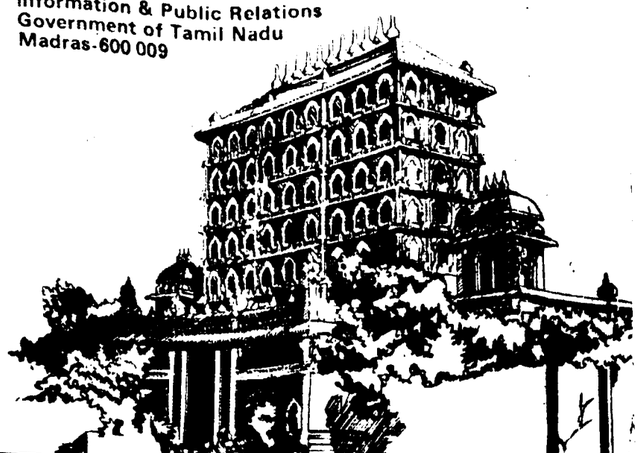

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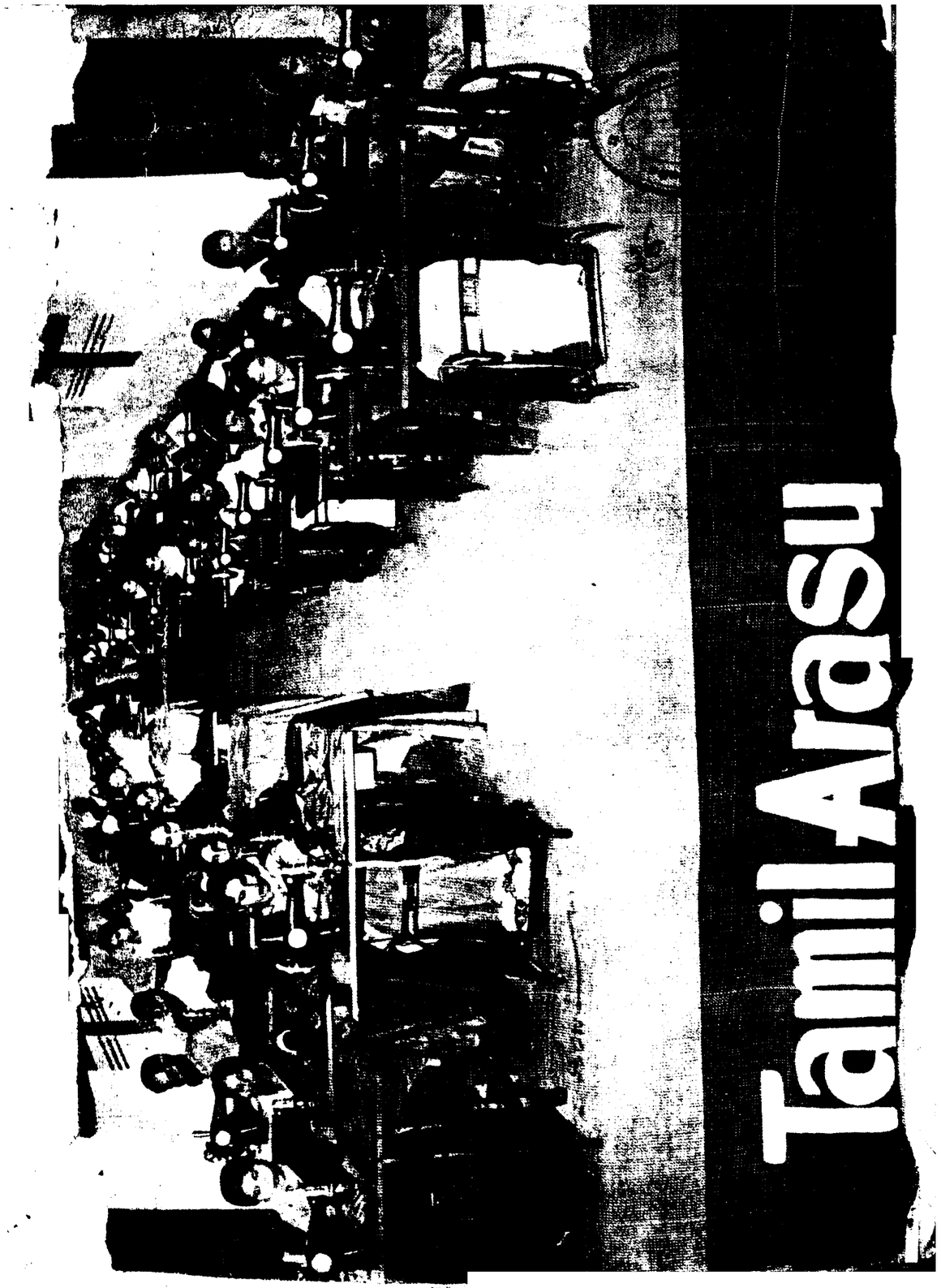

Tamil Arasu

A tribute to the Memory of Pandit Nehru on Page 4

Tamil Arasu

VOL. LVI NOVEMBER, 1975 ISSUE: 5

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THE GOVERNOR IS '68

Thiru K. K. Shah Governor of Tamil Nadu being felicitated on his Birthday by Chief Minister at Raj Bhavan, on 27—10—75. The Governor's Birthday was marked by the publication of a Commemoration Volume of tributes by a variety of persons from all walks of life.

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PANDIT NEHRU'S VISION OF INDIA

THE HUMAN GOAL OF SOCIAL AND ECONOMIC EQUALITY

TAMIL NADU GOVERNOR THIRU K. K. SHAH'S CALL FOR RELENTLESS CRUSADE FOR CLASSLESS SOCIETY AS OUR NEHRU MEMORIAL

Jawaharlal Nehru was bubbling with optimism whenever he talked of India. He had immense faith in the people of India. He hated cynicism and destructive approach to national problems. Every step he took and every measure he contemplated for the progress of India caused minimum inconvenience to a few and brought maximum benefit to the vast population of India. His concept of mixed economy was based on this principle. He was aware of the danger of the weaking irreparable damage. He was therefore cautious, and prevented extremists from allowing progress being sacrificed.

A cynic is apt to ask—" Whither India ?". Jawaharlal's clearcut answer is—" Surely to the great human goal of social and economic equality, to the ending of all exploitation of nation by nation and class by class, to national freedom within the framework of an international co-operative socialist world federation. This is not an empty idealist dream as some people imagine. It is within the range of the practical politics of today and the near future.'

If self-reliance was his motto, continued progress was his constant anxiety. No nation can depend upon external assistance for all time and yet no developing nation can catch up with the developed nations without external assistance. To match both is difficult and sometimes agonising. The larger the options, the greater the skill required to make correct choice. In the midst of clashing ideologies, throttling compulsions of game of balance of power by major powers and cut-throat competition, his approch was sound, sagacious and wise. These are his memorable words—" Unarmed and peaceful, we faced a proud empire, not looking for aid to any other country, and relying only on ourselves. This gave us the strength that sustained us during the struggle for independence. If we had faith and self-confidence when, to outward seeming, we were powerless, then surely we are much better off today when we are a free people with the strength of a great country behind us. Why then should our faith and our confidence in ourselves weaken ? We must learn to depend on ourselves and not look to others for help every time we are in trouble. Certainly we want to make friends with the rest of the world. We also seek the goodwill and co-operation of all those who reside in this country, whatever their race or nationlity. We welcome help and co-operation from every quarter, but we must depend primarily on our own resources. We should not forget that those who lean too much on others tend to become weak and helpless themselves." These words are still ringing in our ears. It is heartening that her illustrious daughter reinforces his wise concept with adroitness and unmatched wisdom.

What greater proof of Jawaharlal's uncanny capacity to handle this dangerous concept of mixed economy to the greatest advantage of India can be provided than the fact that between 1969 and 1972, India had developed resilience to spend more than ten thousand crores for defence alone, to spend about 5000 crores to face droughts, to find 6000 crores to face three wars and to continue to meet the capital costs of Five Year Plans. Thanks to the vision and versatile wisdom of Jawaharlal, India continues to progress in spite of crushing burden of galloping population.

Meaning of Social Justice

Let us therefore resolve to carry on his relentless crusade for a classless society and self-reliance. Let us not be swayed by momentary compulsions. Let us remember that when we have to face stiff resistance on all sides, we cannot do so unless our collective wisdom and united strength are put to maximum advantage. Social justice will remain an empty slogan unless we build up economic might to meet compulsions of social justice. If organised labour does not become an instrument of hope to starving millions who are unorganised, the unemployed would be obliged to organise. That means class war which Jawaharlal deftly avoided. We want to struggle for poorer sections without inviting class war. That can be accomplished only if we tread the path chalked out by Jawaharlal. Let us resolve to do so and thereby perpetuate his memory.

Associating T.N.E.B. Employees in Operational Activities

SERIES OF MEASURES FOR IMPROVEMENT OF LABOUR RELATIONS IN T.N.E.B.

A tripartite meeting attended by the Electricity Board Chairmen, Worker's representatives and the Union Ministers for Energy and Labour at New Delhi in August, 1975 has formulated a 10 point guidelines for associating workers' representatives with the Operational activities of the Power Systems in the country. The guidelines are under consideration of the Board.

All the employees of the taken-over Electric Licensees have become employees of Board but they are continued to be governed by the same terms and conditions of service of the Ex-licensees. The question of bringing these employees under the Boards service conditions by absorbing them in suitable posts under Board's cadre is under examination.

The Tamil Nadu Electricity Board Leave Regulations and the Standing Orders for workmen were modified providing maximum accumulation of leave of 180 days in all cases and also for grant of the entire leave on medical certificate admissible, throughout service, on full pay instead of on half pay as previously existing.

Under a scheme approved by the Board, the heirs of employees who die while in service, leaving their families in indigent circumstances are considered for employment under the Tamil Nadu Electricity Board in accordance with their qualifications and suitability.

Direct recruitment to posts of Junior Assistants and Cashiers have been deferred for the present so as to absorb qualified workmen who are already in service under the Board.

A family benefit scheme which enables the family of an employee to receive a lumpsum payment of Rs. 10,000 on premature death of the employee while in service has also been introduced for all the regular staff in the Electricity Board.

The TamilNadu Electricity Board has a phased programme for absorption of Temporary casual labour. The third stage of absorption of T.C.L. workmen who have put in 4 years of service as on 31st Ddecember 1974 in regular employment has been taken up and it is expected to benefit about 31,000 workmen. After this absorption only 15,000 would remain as T.C.L. and they would also be absorbed in 1976.

The previous settlement covering the wage revision expired on 30th November 1974 and negotiations have been initiated with the Unions of workmen concerned for arriving at fresh settlement.

With a view to have contented labour with job satisfaction, dialogues were also held with labour representatives and Engineering Associations for three days recently. Their various representations and grievances are receiving due consideration. Their demands will be met to the extent possible by the Board.

Board has sanctioned a sum of Rs. 40,000 for conducting inter-system Tournaments and participation of Tamil Nadu Electricity Board Teams in the All India Electricity Board Tournaments.

Also recurring and non-recurring grants are sanctioned to the various sports and recreation clubs under the Board according to their needs.

During February 1975 Tamil Nadu Electricity Board Sports Control Board conducted the second All India Electricity Board Basket Ball Tournament. In the First All India Electricity Board Athletic Meet held at Patiala the Tamil Nadu Electricity Board Athletic Team also participated.

INTER-CONNECTION OF TAMIL NADU ELECTRICITY GRID, WITH SRILANKA GRID MOOTED

Tamil Nadu has also taken up with the Government of India the need for inter-connection of grids with Sri Lanka and to pursue the matter vigorously. Tamil Nadu's geographical and cultural closeness to Sri Lanka is another factor to be taken advantage of in this respect and Tamil Nadu could be associated with the technical deliberations of interlinking of the grids. T.N.E.B. has participated in the first round of tripartite discussions with Sri Lanka Power Delegation both in Delhi and at Madras during August, 1975.

The Tamil Nadu Electricity Board has proposed Tuticorin Thermal Project for foreign assistance under Kuwait's Petro dollar scheme. This is receiving attention of the Government of India along with Kalinadhi scheme of Karnataka and Srisailam of Andhra Pradesh.

With the formation of Poompuhar Shipping Corporation under the State sector, Tamil Nadu's reliance on foreign chartered vessels for movement of coal has come down. The Tamil Nadu Electricity Board has entered into an agreement with Poompuhar Shipping Corporation in September 1974 for transport of coal from Kidderpore Docks to Madras. The Poompuhar Shipping Corporation is at present operating two vessels "TAMIL PERIYAR E.V.R." and "TAMIL ANNA" from December 1974 for transportation of coal from Bengal-Bihar collieries.

The Central subsidy for movement of Coal by sea is not adequate.

A scheme should therefore be devised by the Centre to fully compensate the additional burden incident on the State Electricity Board in transportation of coal by sea, in the interests of power generation.

SCIENCE REIGNS SUPREME

A State level Science Exhibition was held in Madras on 4—11—75. The Governor and Minister for Education evince keen interest in the exhibits.

ON THE THRESHOLD OF A NEW LIFE

The Chief Minister is presenting a 7 year Small Savings Scheme Certificate of Rs. 5,000 to a young widow who re-married on 22—10—75, at Periyar Thidal. This is one of the social rehabilitation programmes announced by Chief Minister on the occasion of his Birthday last June.

OUT OF RS. 65 CRORES SPENT ON DROUGHT RELIEF BY STATE, CENTRE GAVE ONLY RS. 7.5 CRORES MOSTLY AS LOAN!

Speech of Hon'ble Thiru M. Karunanidhi, Chief Minister, of Tamil Nadu presenting the First Supplementary Estimates for the year 1975-76 to the Tamil Nadu Legislature on 25th October, 1975.

The Supplementary Demands placed before the House are, in all, for a sum of Rs. 46.08 crores. Of this, a sum of Rs. 21.97 crores is in the Revenue Account, a sum of Rs. 14.11 crores is in the Capital and Loan Accounts and a sum of Rs. 10 crores is the appropriation for the enhancement of the corpus of the Tamil Nadu Contingency Fund. Out of the total demand, a sum of Rs. 45.55 crores is under voted items and a sum of Rs. 0.53 crore is under charged items. I shall touch upon the important schemes and programmes which find place in these demands for grants.

We have successfully faced the worst drought in a century with firmness and determination. We had spent Rs 8.8 crores on special drought relief works outside the Plan in 1974-75. In the current year, we have allocated Rs 15.8 crores for such special drought relief works, out of which an actual expenditure of Rs 15.3 crores has been incurred so far. In addition, an amount of Rs 3 crores has been sanctioned for distribution as taccavi loans to agriculturists for the deepening of irrigation wells. As a drought relief measure, a subsidy of Rs. 1,000 per diesel pumpset was given under a special scheme. The total expenditure incurred on this account is Rs 1.21 crores. I might mention that nearly 60,000 drought relief works were sanctioned out of which 57,600 works have already been completed. Drought relief works were widely spread throughout the State. In addition expenditure from normal Plan provisions have been accelerated in the drought affected areas. We estimate that out of the normal Plan provisions, Rs 30 crores have been spent in the drought affected areas in 1974-75 and 1975-76. Altogether, therefore, a total expenditure of nearly Rs 59 crores has been incurred on drought relief. In addition, a provision of Rs. 6 crores has been included in the Supplementary Estimates being the compensation to Panchayats and Panchayat Unions to enable them to bridge their deficit arising from the waiver of the collection of local cess and local cess surcharge due to the drought.

I would like to draw the particular attention of the Honourable Members to the fact that we have received special assistance for drought relief from the Centre only to the extent of Rs 7.5 crores in 1974-75. I would also like to remind the House that 70 per cent of this assistance is in the form of a loan and only 30 per cent is in the form of a grant. The main burden of tackling this extraordinary and unprecedented natural calamity has been borne by the State Government from its own resources.

The drought had also cast its shadow on drinking water supply in urban areas, particularly in the City of Madras. Government have sanctioned a total assistance of Rs 176.18 lakhs to the Corporation of Madras. This has enabled the Corporation to sink 5,000 tube-wells, 400 open wells and to purchase 40 water lorries, 625 steel tanks, 28 oil engine pumpsets and other equipment to maintain a minimum level of water supply to the residents of the City. The massive programme launched by the Corporation was specially directed to meet the requirements of residents in the slum areas and other poorer sections of the City who did not have the benefit of sufficient tap connections. We had also undertaken special works to improve the water supply from the Poondi Reservoir. The Tiruvanmiyur Water Supply Scheme was completed in record time at an expenditure of Rs 50 lakhs. A provision of Rs 19.39 lakhs has also been included in the Supplementary Estimates for the artificial rain making experiments which were carried out in the catchment areas of our hydel reservoirs and in the Red Hills area. This experiment which was boldly undertaken by our Government was quite successful. It is a matter of great satisfaction to all of us that the South-West monsoon has been normal.

We have also made provision in the Supplementary Estimates for an assistance of Rs 24 lakhs to the Madurai Corporation for water supply purposes and a provision of Rs 4.78 lakhs to 19 municipalities to tide over their drinking water scarcity.

Even in a very difficult year, our Government has continued to provide adequate funds for various schemes for the benefit of Harijans and Backward Classes and for other weaker sections of society. The Harijan Housing and Development Corporation will complete the construction of 30,000 houses for Harijans as a first phase by the end of December 1975. The total cost

.. this programme will be of the order of Rs 13.5 crores. We have so far sanctioned Rs 4.25 crores in the current year to the Corporation. A further provision of Rs 9.25 crores has been included in the present Supplementary Estimates to complete the first phase. The construction of these houses is now being supervised by the Collectors with special drive under the overall guidance of the H. H. Corporation.

We have also sanctioned the construction of 5,000 houses for fishermen at an estimated cost of Rs 2 crores. An initial provision of Rs 80 lakhs has been included in the Supplementary Estimates for this purpose. Five hundred houses for fishermen at a cost of Rs 35.09 lakhs have been put up at Poompuhar and 400 houses at a total cost of Rs 28.45 lakhs are being constructed at Vanagiri. I would like to announce that Government have decided to give up the collection of instalments already fixed for these houses and to give them free of cost to the fishermen. With this, 900 houses under this free housing scheme for fishermen will be completed shortly.

The Supplementary Estimates also include provisions for several special welfare schemes such as the provision of wheel chairs and tricycles to a total of 2,000 physically handicapped persons— Rs 8 lakhs; additional funds for the training-*cum*-production factory at Muttukadu which was inaugurated in May 1975—Rs 3.1 lakhs; grants to voluntary institutions engaged in the welfare of destitute children— Rs 4.56 lakhs; provision of 1,000 sewing machines free of cost to destitute widows—Rs 7 lakhs; provision of financial assistance in the form of National Savings Certificates for Rs 5,000 to widows who remarry; and the extension of the Old Age Pension scheme to cover destitute widows aged 45 years and above at a cost of Rs 24 lakhs.

Government have decided to extend all the concessions now being granted to scheduled castes to Harijans already converted to Christianity as well. In respect of admissions to educational institutions and reservation in public services, Harijan converts to Christianity will be treated on par with members of backward classes. At present the descendants of Harijan converts to Christianity are not eligible for these concessions. Government have decided to do away with this restriction and to extend these concessions to Harijan converts to Christianity so as to be on par with the members of Backward classes. The amount required for these concessions will be provided separately as an additional amount in the Harijan Welfare grant. Government have also sanctioned an increase in the boarding charges for students in Government hostels for Harijans, backward classes and denotified tribes. The additional cost on account of this increase will be Rs 18.63 lakhs in the current year.

Government have sanctioned the establishment of a Homeopathy Medical College with an attached hospital in Madras at a cost of Rs. 3.1 lakhs. Additional hospital buildings have also been snctioned at Nagapattinam (Rs. 10 lakhs), Nagercoil (Rs 8 lakhs) and Kulithalai (Rs 5 lakhs).

Government have taken a major decision that the entire assistance so far provided to the Tamil Nadu Slum Clearance Board should be treated as a hundred per cent grant converting earlier loans also into grants having regard to the fact that this sheme benefits the poorer sections of society. In view of the fact that the expected assistance from the Housing and Urban Development Corporation is not likely to be forthcoming for our slum clearance schemes an additional provision of Rs 1.75 crores over and above the budget provision has been included in the Supplementary Estimates for the Tamil Nadu Slum Clearance Board. These items find place in Grant 33.

The establishment of sugar factories is one of our major programmes in the industrial sector. The Co-operative sugar factories being set up at Vellore and Tirupattur are making progress. In addition we have decided to set up a new sugar factory at Thanjavur. The Arignar Anna Sugar Factory at Thanjavur will be the first factory in the public sector under our policy that all new sugar factories should be under public ownership. Work on this project has already commenced and a sum of Rs 15 lakhs as initial share capital for this project has been included in the Supplementary Estimates.

The Supplementary Estimates also include a provision of Rs 1.5 crores for the handloom sector and Rs 86.75 lakhs to Co-operative Spinning Mills. Government have decided to provide an additional amount up to Rs 1 crore towards the rebate on the sale of handloom cloth. These items are included in Grant 56.

In Grant 54, provision has been made for an investment of Rs 1 crore as share capital in the Tamil Nadu Transport Development Finance Corporation which is expected to play a major role in the development of bus transport in the public sector.

The Centre has come forward to assist in an integrated development programme in the Nilgiris district at a total cost of Rs 7 crores during the Fifth Plan period. A number of schemes under various sectors have been sanctioned under this programme. It is anticipated that an expenditure of Rs 1 crore will be incurred under this programme in the current year. Schemes for raising tea plantations in the Nilgiris and clove plantations in the Kanyakumari district have also been taken up at a total cost of Rs 21.46 lakhs under the Western Ghats Development Programme sponsored by the Central Government. The provisions for these schemes are included in Grants 45 and 55.

We have been alive to the need for promoting art, culture, sports and national unity even in this difficult year. The Supplementary Estimates contain a provision of Rs 9.08 lakhs for the construction of 229 houses for the descendants of Veerapandya Kattabomman at Panchalamkurichi. A provision of Rs 2.82 lakhs for the purchase of a microfilming unit for the Saraswathi Mahal Library at Thanjavur and for training candidates in the Modi script will also be found in the Supplementary Estimates. We have also sanctioned an assistance of Rs one lakh to the Kamala Nehru Memorial Trust to put up a block to be named after Arignar Anna in the Institute of Science and Technology which they are establishing at Sultanpur in Uttar Pradesh. This item is included in Grant 17.

I have touched upon the salient features of the various items of expenditure included in the Supplementary Estimates. The detailed note placed before the House contains further details on these and other items. With these words, Sir, I commend the first Supplementary Estimates for 1975-76 for the acceptance of the House.

VOLUNTEERS IN THE SERVICE OF POOR AND BECOME RICH

.... IN EXPERIENCE

N.S.C. volunteers help doctors and patients in the eye camps.

The goal of National Service Corporations is education through community service. The purpose of the scheme is to enrich the students personality and deepen his or her understanding of the social environment in which he lives. It is expected that the scheme shall help students to develop awareness and gain knowledge of social reality to have a concern for the well being of the community, to undertake appropriate activities designed to tackle social problems and to promote socialwelfare of the community.

National Service Corporations was launched in 1969 by the Ministry of Education and Social Welfare, Government of India. The State Governments are actively involved in promoting the programmes. This scheme is implemented through universities.

The responsibility for evolving, implementing and evaluating programme projects is administered at four levels namely National, State, University and College Committees have been formed for the purpese and national and state stand as advisory bodies.

The work of N.S.C. is commendable since its inception in the universities. More and more students come forward voluntarily to enrol their names in the N.S.C. Like N.C.C. proposal is also there to make the N. S. C. compulsory for college students. Three universities in Tamil Nadu evincing keen interest in boosting up the scheme and they enrol large number of students viz Madras, Madurai and Annamalai Universities. There are about 8,000 volunteers working throughout Tamil Nadu taking into account 4,000 volunteers working in Madras University, 3,800 in Madurai University and 200 in Annamalai University. A Scheme is also there to extend N.S.C. to all colleges because every day universities are receiving letters from various colleges to include their names in the N.S.C. unit. Apart from men volunteers women volunteers are also evincing immence interest in the N.S.C. work. In reward for their services volunteers are paid a testimonail from the university in appreciation of the work they render through this scheme.

Very nominal amount only is being spent by the universities to cover transport costs of the volunteers. They are also provided food during out camps.

National Service Corps units are headed by a programme organiser viz. teacher in charge of N.S.C. unit. With the able guidance of the principals of the Colleges the programme organisers and various committees formed by the student volunteers successfully carry out programmes on educational social well fare, Community Development health and hygiene and other matters. All these programmes are carried out with the able asistance of concerned departments. Programmes of health and sanitation is laid out mainly for the weaker sections of the communities in urban and rural areas.

Under educational programmes the N.S.C. has been launching fight against illiteracy among masses for which Adult Literacy Programmes have been the prime activity. Besides volunteers coaching children in schools they conduct night classes for school dropouts and send children to school yard. About 12,138 illiterates were made literates by the end of September 1975 and about 8,415 children were enrolled in the schools for the same period.

The health programmes of the N.S.C. is concentrating on immunisation programmes, organising health check ups, free medical and helping in eye camps organised by the Government of Tamil Nadu, helping the handicapped, blood donation, running dispensaries and helping the out patients through hospital visits. Health education and Nutrition education in addition to Women Welfare Programmes have also been the important activities of N.S.C.

The N.S.C.'s work on developmental activities are splendid. It

N.S.C. women volunteers are teaching health and hygienic methods for school children

includes slums and rural areas— organising youth clubs. Women's group i.e. Magalir Manram, Health Committee, conducting educational exhibition, Construction of school buildings, Public reading rooms, playgrounds etc according to the needs of the community. The N.S.C. Youth volunteers enforce Small Savings drive in rural areas. In the year 1974-75 about 11,620 people were enrolled under Small Savings Scheme.

Apart from the developmental activities they also conduct Manual Labour Camps in rural areas, creating tangible assets for the benefit of the community. Road laying, construction of balwadis, public utility shed for organising meeting are the laudable work rendered by the N.S.C. volunteers. More over volunteers participate in Flood Relief operations and refugees relief camps conducted in inter district and in All India level. In the year 1973 during summer vacation the volunteeers belonging to various city colleges engaged themselves in Youth Against Famine Camps. In the year 1974 the youths have conducted campaign against dirt and diseases. The camps were held during May, June, September and December 1974 holidays, with the participation of more than 1,500 campers in various places. Recently the Jamal Mohamed College unit undertook the Youth Against Drought Camp from 21st June 1975 to 30th June 1975 at Mohanur Panchayat Union area. About 68 students participated and made the campaign a very successful one.

Finance :—The Government of India and the Government of Tamil Nadu have been financing the N.S.C. in the ratio of 7:5 and this allocated funds are put under the disposal of university and they meet out all expenses incured during the N.S.C. operation.

Mostly, Madras University consults Madras School of Social Service, Madras which is one of the designated schools of social work, in implementing the scheme. Four orientation courses have been conducted so far for the teachers in charge of the N.S.C. units and this is done by M.S.S.W. on behalf of the Madras University.

To put it plainly, the work of N.S.C. is really admirable and the report shows that youngsters are deeply interested to spend their time and energy for the social cause to enrich the lives of millions of poor masses. Definitely there is going to be a reformation in the lives of rural folk.

S. S.

THE GREAT IMMORTALISER
PAPER

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SLUM CLEARANCE MUST PAVE WAY FOR "CLEARANCE OF SLUM MENTALITY"

MASSIVE PROGRAMME OF "SOCIAL ENGINEERING" BEGINS IN THE MIDST OF NEW SLUM TENEMENTS

Slum dwellers have not generally seen or known a way of life other than that which they are now encountering in the slums. It is imperative, therefore, that the problems of 'slum clearance' should really begin with the clearance of 'slum mentality' with the help of a squad of extension workers capable of 'educating' the dwellers in the art of living a more healthy and fruitful life.

In this task, we must carry the slum dwellers with us. Concrete services like nutrition education, health services, recreational facilities, child care, adult education and gainful occupational outlets should be the vehicle through which ignorance and all its manifold efforts can be counteracted.

Slum clearance is not a problem merely of 'public health engineering'; it involves — and should involve — 'social engineering' as well.

With the staunch support of the Slum Clearance Board, the State's Department of Social Welfare, and the New Residents Welfare Trust CARE has made a good beginning. A better future for the many thousands of our tenement dwellers are unfolding as a result.

With the view of eradicating the slums of Madras city within a period of 7 years, the Government of Tamil Nadu established the semi-autonomous Slum Clearance Board in 1970.

The Board was given the following mandate :

1. To clear all the 1,202-and-odd slums in Madras city within the targetted period (*i.e.*, 7 years) ;
2. To prevent further growth of slums in Madras city ;
3. To give protection to the slum dwellers from eviction and to re-house them in modern tenements ;
4. To provide basic amenities such as drinking water supply, electricity, storm water drainage, etc., to certain slum areas, until they are eradicated.

The carpet area of a slum clearance tenement ranges from 197 to 232 sq. ft. It consists of one living-cum-bedroom, a kitchen, a small room which can be used for dining and sleeping, plus a bath water closet attached to the tenement ; provision is made for electric lighting. The estimated rent works out to Rs. 40/- but the slum clearance dweller (*i.e.*, 'new resident') pays a subsidised rent of only Rs. 15/-.

There is an overhead water tank in each area, the source of water supply for which is either (*a*) the Municipal Corporation or (*b*) a specially constructed feeder well. Separate sheds have been provided in each block of tenements to house cattle.

In the site layout for each area, provision is made for a day care centre, an elementary school, a community hall, playground, clinic, park and a marketing place.

Occupations :

They are largely daily-wage earners of varied occupations, *e.g.*, milk vendors, domestic servants, fishermen, launderers, carpenters, masons, rickshaw pullers, cart pullers and other manual labourers. Some are employed in Government service as last grade servants, policemen, ward boys in hospitals, drivers and conductors of the State Transport Department, sweepers in the Municipal Corporation.

Family Size :

Figures pertaining to family size indicate an increase in the average family size from 4.21 in 1961 to 4.50 persons per family in 1971. The average household in the slum clearance areas selected for the project was 5.3 persons per family. Of the slum clearance dwellers in the age group of 25—59 years, only 0.54% have undergone family planning treatment.

Literacy Rate :

The percentage of adult literacy is 33.8% for the slum clearance areas studied as against 59.14% for all urban areas. Working children constitute 4.5% of the work force, as against 1.4% for the non-slum clearance urban areas.

There is a large unsatisfied demand for admission to pre-schools. One day-care-cum-pre-school has been provided in each slum clearance area. Provision is made for admitting 20 children aged 6 months to 2 years and 40 children from 3—5 years. Infants alone account for 12.86% of the total population of the project area. Among the school going children in the age group 5—14 years, 37.30% are not attending school.

The New Residents Welfare Trust is Born:

The New Residents Welfare Trust was started in January, 1972, with the aim 'to render expert social service and advice to families rehoused in Tamil Nadu Slum Clearance Board Housing projects.' Sponsored jointly by the Madras Christian Council of Social Service, the 77 Society and The Slum Clearance Board, it employs 14 trained Resident Welfare Officers (with a Master's degree in Social Work) at the Slum Clerance level, plus one Chief Executive Officer, to actively promote and consolidate all the efforts in the various project areas. The Executive Officer is assisted by 2 Assistant Executive Officers, each of whom is responsible for 6 areas. Of the manifold activities undertaken by the Trust in the project areas, the following feature prominently : formation of Mothers' Clubs, training in 'happier homes' for mothers, provision of additional income opportunities through tailoring, leather batik, patchwork, etc., provision of a medical umbrella through regular clinical services, immunization and deworming programmes, organization of Youth Clubs, sports and leisure-time pursuits for youth, and cleanliness campaigns initiated primarily by the Youth Clubs.

Nutritious Food for The New Generation

TACKLING THE NUTRITION PROBLEM IN NEW SLUM TENEMENTS

The Government of Tamil Nadu launched a Government of India sponsored Special Nutrition Programme in 1970 to combat malnutrition among the vulnerable sections of the population in urban slums. Under this program, pregnant women, lactating mothers and preschool children, belonging to the low income groups in these slum clearance areas, were given a nutritious free food supplement for 300 days yearly. 140,000 beneficiaries were covered in Madras.

Need for a Multi-dimensional Nutrition Project :

While the Special Nutrition Program, undoubtedly helped to improve the nutritional status of inscribed beneficiaries, it also revealed that supplementary feeding alone was inadequate to effectively combat malnutrition.

It became evident that nutrition education of the mothers was essential to consolidate the gains of the Special Nutrition Programme and make it a more meaningful effort.

A Project is Launched :

The Slum Clearance Nutrition Project, sponsored by the State Government of Tamil Nadu, Social Welfare Department and CARE, with close support from the New Residents Welfare Trust, was commenced in January 1974 ; the project's duration was calculated at one year. Twelve slum clearance areas were selected ; they contained some 6,323 families with a total population of 32,558. A programme designed to reach mothers, housewives, heads of households, influentials, teachers and preschool children, was carried out in three phases :

The education messages of the project were :

(a) Nutrition :

1. A pregnant mother needs to eat for two, and should include green leafy vegetables in her daily diet.
2. An infant's diet should include solid food from the age of 6 months onwards.
3. The school lunch is a supplement and not a substitute ; a preschooler should be helped to eat a little more of what he normally eats, more frequently.

b. Health :

1. A pregnant mother should have regular medical check-ups, avail fully of the existing health care services.
2. Have the children immunised ; avail of existing facilities for deworming.
3. Do not starve a child during diarrhoea or fever ; take the child to a doctor for regular advice and treatment.

c. Sanitation :

1. Keep home, surroundings and person clean.
2. Keep food and drinking water covered.
3. Wash hands before feeding the child.
4. Do not let a child defecate in all places.

Delivering Nutritional messages at low cost :

Extension education formed the core of the project, amply supported and sustained by the use of effective mass media. The following constituted media inputs :

An audiovisual van, complete with a 16 mm projector, film strip-cum-slide projector and public address system.

Films :

A film programme normally consisted of two entertainment reels and three nutrition education reels, which were pre-selected to form a complete meaningful unit ; each film presentation was programmed for a minimum of an hour and a half. CARE had two CARE-produced nutrition education films. Films were borrowed from the State Health and Education Bureau and The Directorate of Information and Publicity, and screened initially to small groups of slum clearance dwellers for purposes of selecting understandable, impact films for general presentation.

ALL THE MEDIA EMPLOYED TO STRIKE AT ROOTS OF MALNUTRITION

Theatre :

Theatre is a very popular medium in the areas. Hence with a portable stage and cyclorama unit, local talent was recruited, nutrition/health educational shows were staged. A staged song-dance on a nutrition theme, performed as a prelude to a film program, proved very popular.

Posters :

9 designs were developed and displayed on specially provided bulletin boards at the Clinics, day care centres, libraries and other vantage points in the tenement areas. Further, the extension education team made use of the posters as aids during home visits and demonstration sessions.

Booklets and Pamphlets :

Simple booklets, calendars and pamphlets were produced. A major effort was made to ensure that the messages highlighted by the mass media input (films, theatre, posters, etc.) was reinforced during house visits/demonstrations held in the project areas.

Extension educators :

Fifty girls with high school education, residents of the project areas, were interviewed by a Project Selection Committee, composed of representatives from Social Welfare Department, New Residents Welfare Trust and CARE. From this group, some 32 girls in the age group of 20—25 years were selected for 2 weeks' training in the basics of nutrition practices and recipe demonstration by the Mobile Extension Unit of the Government of India. For an additional 2 weeks, the girls were given in-service training by being assigned general enumeration of target population, as part of a bench mark survey.

Once a final selection of 16 girls for appointment as Extension educators was made, a two-month intensive training program was conducted in child health and nutrition extension techniques, at the Avinashilingam Home—Science College, The Institute of Child Health's Mothers' Clinics and ultimately at the respective Day care Centres in the project areas.

The work of the extension educators was supervised by a qualified Project Nutritionist, selected by the committee, who holds a Master's degree in Food and Nutrition, and who was paid a salary of Rs. 400/- per month. The Nutrionist met the Extension educators every week and arranged for guest lectures and refresher training from time to time.

Widespread contacts were made by the Extension educators with the target population comprising pregnant / lactating women, mothers of preschoolers, influential women in the community.

The Extension educators, the project nutritionist, and the Resident Welfare Officers filed regular reports on the work done by them (by way of house visits, demonstrationlessons, media programmes, cleanliness campaigns, etc.) to the Department of Social Welfare and CARE.

PROJECT MODIFICATIONS IN MID-STREAM

At the onset of the programme in January, 1974, the focal point of the project was nutrition education, and all efforts were mobilised towards dissemination of the designed messages to the designated families at moderate cost.

It was quickly realised that, as a corollary to nutrition education, an enhancement of the health services offered to the target population would directly result in greater receptivity to nutrition education and would bind nutrition, health and sanitation together, making a more effective program. Hence, the following supplementary activities were grafted onto the original project tree, adding a new horizon to the slum nutrition education project.

Immunizations :

The Government sanctioned Rs. 8,500/- towards an intense seven-month immunization campaign in the selected 12 project areas. This dynamic scheme has achieved complete immunisation of 6,853 children with DPT and Polio vaccines. The scheme employed 10 auxiliary immunization helpers (selected from the slum clearance areas), to stimulate/bring the children for immunizations on the prescribed dates. The New Residents Welfare Trust provided doctors and community health nurses.

Prevention is better than cure

How nutritious can the food be?

In recognition of the immensity of the problem of intenstinal parasites and the effects of their infestation among the new residents, a deworming project was sponsored by CARE in 1974—75, in close cooperation with the New Residents Welfare Trust, at Cementery Road, one of the initially selected 12 project areas. This area has a protected water supply and lavatory facilities.

The deworming activities involved a stool examination of every resident in the area, for diagnosis of the parasitic infestation, and treatment of the infested with suitable drugs. CARE covered the cost of drugs for the vulnerable groups comprised of pregnant/lactating women/preschoolers, while the New Residents Welfare Trust met the cost for the remaining population. Environmental sanitation and health education were concurrently attended to.

The project supervisory staff included a medical officer, the respective Resident Welfare Officer and a visiting nurse (all paid by the New Residents Welfare Trust), plus CARE's Project Officer.

The population of the above mentioned area (Cemetery Road) was blanketed in 6 months ; this project was then shifted to another project area, Nochikuppam/Nochinagar where it is currently being implemented. Nearly 3,000 members of the target population have till date been dewormed. Subsequent follow-up tests for parasites revealed that the program was over 90% effective. Both of these areas *i.e.*, Cemetery Road and Nochikuppam, have been, programwise, blanketed within the budgetary estimate of Rs. 10,866/-.

Food Mix Unit :

From its modest beginning in early 1974, the Food Mix Unit has grown into a hihgly productive unit turning out, on an average, 10 Kg. of food mix per day. This food, composed of the following ingredients : cambu, greengram dhal and jaggery, is sold through clinics, small shops, and on a door-to-door basis, to the vulnerable groups. The cost, presently 35 paise per 100 gms., is calculated on a no-profit, no-loss basis. While proving to be an effective vehicle for provision of employment opportunities for local women, it is also developing into a full fledged unit for supply of a low-cost infant weaning food, which in turn adds substance to one of the basic project educational messages, *viz.*, "An infant's diet should include solid food from the age of 6 months onwards."

Day Care Centres :

Recognising the significance of the early formative years in the life of an individual, day care centres were started in all the project areas. to provide children aged 6 months to 5 years with opportunities for all-round growth and development. Each day care centre accommodated 20 children aged 6 months to 2 years and 40 preschoolers aged 2—5 years. Hence, a total of 720 children were covered. Special emphasis was placed on children of working mothers. Trained Balasevikas were appointed to run all the centres, each Balasevika was assisted by 2 ayahs. The Balasevikas also conducted demonstration classes once a week for the mothers of the day care centre children.

PROJECT BUDGET 1974—75

The Slum Clearance Nutrition Project was jointly funded by the Government of Tamil Nadu and Care. For the initially selected 12 areas, CARE's contribution was approximately Rs. 68,000/- ; the Department of Social Welfare's contribution was Rs. 1,30,000/-. In total Social Welfare Department New Resident Welfare Trust and CARE together was spent about Rs. 4,95,378 for 1974—75 project.

PRESENT AND FUTURE PROJECT SCOPE - 1975—76

The success of the Slum Clearance Nutrition Project in the initial 12 project areas during programme year 1974—75 has inspired the co-operating sponsors (Government Department of Social Welfare, New Residents Welfare Trust and Care) to extend project activities to cover an additional 12 areas. The project will now encompass :

(*a*) 6,500 families in 12 newly selected Slum Clearance areas and ;

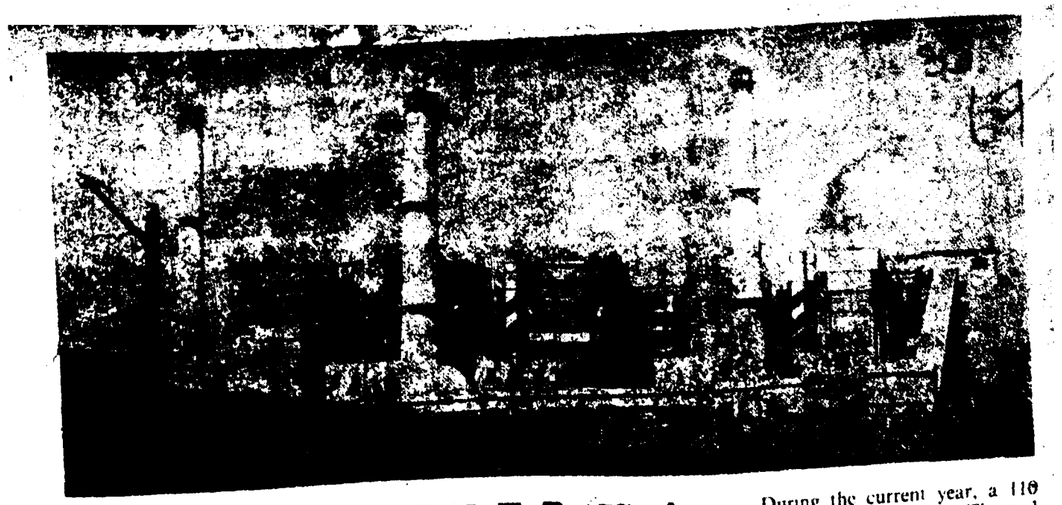
(*b*) approximately the same number of families in the extent 12 slum clearance areas.

While cognisant of our inveterate aim to establish an awareness and a degree of habit change in concepts related to nutrition, health and sanitation among the vulnerable groups of the slum clearance population, the following constitute equally primordial objectives of current/future efforts :

(*a*) To produce and promote the widespread use of low-cost, locally made infant weaning food.

(*b*) To extend mass deworming and immunizations to the entire target population.

All the right ingedients in



T. N. E. B. IS A PIONEER POWER ORGANISATION

ONE MORE THEFMAL UNIT OF ENNORE, NADUVATTAM and KUTTIYAR SCHEMES TO BE COMMISSIONED THIS YEAR

The Tamil Nadu Electricity Board is the biggest public sector undertaking in the State, with about one lakh employees on roll. It has been a pioneer organisation in the field of power and power development over the years. The progress of the State to a large extent is dependant on the growth and performance of the Electricity Board.

In Tamil Nadu the demand for power has generally been out-stripping the availability. Thanks to the spurt in industrial activity and energisation of agriculture pumpsets the load growth has been phenomenal. Today Tamil Nadu has an installed capacity of 2254 M.W. This accounts for 12 per cent of the installed capacity in all India. Similarly the energy generation in this State accounts for more than 10 per cent of that in the whole country. The State continues to give top priority to agricultural production. The energy consumption in this sector is well over 25 per cent of the total consumption, the highest in the country.

The annual increase in power demand in recent years upto 1971-72 has been around 10 per cent. This has however come down during the last three years, due to power shortage and consequent inability to meet the demand in full.

The power development in this State has been sustained over the years. The pace of progress over the last decade has been such that there has been nearly a two fold increase in installed capacity peak demand and energy generation, with nearly three times increase in number of villages electrified and pumpsets connected.

The pattern of consumption sector-wise is as follows :--

		Per cent.
1. Domestic	..	5.9
2. Commercial	..	6.4
3. Public lighting	..	1.2
4. Industrial	..	42.6
5. Agricultural	..	29.1
6. Others (Traction, bulk supply to Licensees, Departmental works/projects and sales to other States, etc.,)	..	14.8
Total	..	100

During the current year, a 110 M.W. unit at Ennore Thermal Station would be commissioned. Vigorous efforts are being taken to expedite and advance the works. Also the Naduvattam diversion scheme with 69 million units and Kuttiyar pumping scheme with 40 million units potential would be completed during the year 1975-76.

The Peculiarity of our Power grid.

The Tamil Nadu Grid is a complex and peculiar one. Of the 17 Hydro stations totalling 1,224 M.W. 9 stations with a capacity of 633 M.W. are irrigation tied. The power houses get closed one after another and are not available for generation beyond December but the grid peak continuously rises during summer months, because of the predominant agricultural load. This has always posed a technical problem and the Board has been hard put in managing the situation particularly during the non-irrigation season i.e., the months of February to June.

The power position during the last year was not satisfactory. A power cut ranging from 40 per cent to 75 per cent had to be imposed during the year. Due to sharp decline in Neyveli generation and slippage in Ennore generation, non-continuous industries were requested not to draw power from the grid but to take up overhaul and maintenance of equipments to keep off the grid for a few weeks in April 1975. With the improvement of thermal generation at Neyveli and Ennore restrictions in the case of small

POWER SCHEMES IN PROGRESS AND PENDING CENTRAL CLEARANCE

Machineries for Suruliar Power House will be manufactured at Austrian works and will be supplied by them by about January, 1977, and will be commissioned in 1979.

2. The civil works for Tuticorin Thermal Scheme have been taken up. One unit of 210 M.W. capacity for this scheme is expected to be commissioned in 1978-79.

3. The Kadamparai pumped storage scheme envisages installation of 4 units of 100 M.W. each. We have however, now decided to execute the scheme with 2 units only.

4. As far as Pandiar Punnapuzha H.E.S. is concerned, it has been decided to go ahead with the original scheme. Works will be resumed.

5. Under Servalar H.E. Scheme, civil works like excavation for dam foundation, inter-connecting tunnel, etc., are under progress. The scheme is expected to be commissioned in VI Plan period.

6. For Nellithorai H.E.S., preliminary civil works have been taken up.

Ennore Power Complex has turned the corner. The generation during 1974-75 has been 17 per cent over and above that during the previous year. During 1975-76 further improvements are anticipated.

The problems at Ennore were reviewed comprehensively and a special project "Operation Ennore 340" has been launched. Messrs. BHEL has been asked to closely collaborate in this project. The modifications are actually carried out by Messrs. BHEL themselves for satisfactory operation of the plant after modifications. Capital maintenance and overhaul on the first two units have been completed. Overhaul of the third unit is in progress. On completion, the fourth unit will be taken up. With this, complete revamping of all the units is expected to be done by December 1975/January 1976, so that full ouput from the Station will be available to the grid in the next summer season.

Most of the recommendations of the Mahalingam Committee in respect of Ennore have been implemented. The recommendations among others on operatinol requirements have been implemented by engaging Messrs. Tata Consulting Engineers for studying all operational problems at Ennore.

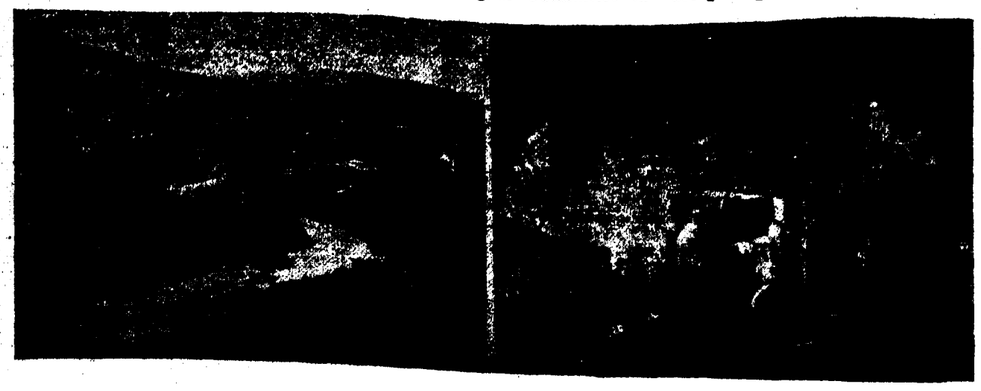
Also in order to give undivided attention to the Ennore Thermal Station a separate Chief Engineer has been posted along with two separate Superintending Engineers.

In an attempt to improve matters and also to have technical advice, the services of Thiru V.P. Appadurai, a previous Chairman of the Electricity Board have been requisitioned. He is the Special Adviser to the Board now. His suggestions to improve utilisation of the existing plants both at Ennore and at Basin Bridge in particular and also other Hydro generation Stations in general are getting due consideration.

POWER SCHEMES PENDING CENTRAL CLEARANCE

Serial number and name of the Scheme.	*District.*	*Installed Capacity M.W.*	*Energy benefits m.u.*	*Estimated cost Rs in Lakhs*
Akkamalai H.E.S..	Coimbatore ..	25	91	898
2. Cholathipuzha	Nilgiris ..	60	225	739
3. Lower Mettur	Salem ..	160	643	3,414
4. Manimuthar ..	Tirunelveli ..	65	277	1,884
5. Paralayar H.E.S.	Kanyakumari..	35	100	563
6. Shanmuganadhi	Madurai ..	30	125	1,250
7. Upper Amaravathy	Do	20	69	728
8. Upper Thambraparani	Tirunelveli ..	165	557	4,965
9. Mettur Thermal Scheme	Salem ..	330	2,024	6,553
	Total ..	890	4,111	20,994

IMPROVED PLANT UTILISATION



Channel and Tunnel of Naduvattam H. E. S.

TAMIL NADU INDUSTRIAL INVESTMENT CORPORATION DISPLAYS NEW DYNAMISM

INDUSTRIES IN BACKWARD AREAS COMING UP FAST

* * *

PACE-SETTING ASSISTANCE OF Rs. 675 LAKHS TO 370 SMALL SCALE UNITS IN 1974—75.

The Tamilnadu Industrial Investment Corporation Ltd., the oldest State-level Development Bank of the country, which celebrated its Silver Jubilee during the last year, has recorded spectacular progress in its operations during 1974/75.

The total assistance sanctioned during the year in respect of 462 applications had amounted to Rs. 17.75 crores, as against only Rs. 5.77 crores sanctioned in the previous year, in respect of 142 applications, registering a high growth rate of 207%. The assistance sanctioned during the year formed 27% of the total sanctions during the entire previous period of 25 years. Likewise, disbursements during the year were also of the high order of Rs. 8.25 crores, as against only Rs. 4.03 crores, showing a growth rate of 105%. The assistance sanctioned was spread over all the Districts of the States of Tamil Nadu as also Pondicherry. The out-standing assistance stood at Rs. 37.67 crores, as against Rs. 31.41 crores as at 31st March 1974.

TIIC's assistance on concessional terms to units in the industrially less developed areas had also shown a remarkable increase during the year, in that it had amounted to Rs 9.03 crores in respect of 180 applications, as against only Rs 3.00 crores in respect of 64 applications in the previous year and Rs 5.71 crores in respect of 118 applications for the entire previous period. The amount of assistance to backward areas had amounted to 51% of the total sanctions during the year.

In respect of assistance to small-scale sector also, TIIC's record is exemplary. Assistance sanctioned during the year amounted to Rs 6.25 crores in respect of 370 applications, which compared to only Rs 2.21 crores in respect of 108 applications in the previous year and Rs 7.87 crores in respect of 397 applications for the entire previous period. Application-wise, 80% had gone to the small-scale sector during the year.

TIIC's assistance under a Foreign Exchange Line of Credit, extended by the International Development Association, had amounted to Rs 296 lakhs during the year, making an aggregate of Rs 397 lakhs, comprising of rupee assistance of Rs 226 lakhs and foreign exchange assistance of Rs 161 lakhs.

Out of the 462 units assisted during the year, as many as 319 units were new undertakings, of which 129 were to be managed by qualified technocrats and another 146 by technocrats well experienced in the industry though not formally qualified. Again, 44 units were to be started by persons from trade & commerce.

During the year, TIIC had assisted a number of units which were to take up manufacture of products for the first time in the State, viz., Polystyrene thin films for packaging etc., metal reflectors for cine projectors etc., mechanised manufacture of mirrors, mechanised coir carpet weaving, industrial boilers, miniature automobile lamps, reed switches and metal glass film resistors for telecommunication, electronic lockers, ceramic microphones, etc. etc.

The Corporation's operations during the year had resulted in a net profit of Rs 42 lakhs, as against Rs 32 lakhs in the previous year.

It was also explained that the total cost of the projects assisted during the year had amounted to as much as Rs 43.33 crores. TIIC's assistance, therefore, had amounted to 41% thereof. The projects assisted would provide direct employment to about 11,000 people and when in full production, they would produce goods and services valued about Rs 118 crores in the near future.

The progress made during the year has thus set up many records and the Silver Jubilee Year has really turned out to be a milestone in the history of the Corporation. This speaks eloquently not only of the dynamic role the Corporation is playing, but also of the robust optimism of the entrepreneurs in the future of the industries in the State, in spite of the many temporary constraints that were obtaining.

Qualified Technocrats to the fore

Dealing with the current operations of the Corporation, it was mentioned that for the period ended 31st August, 1975, the total sanctions had amounted to about Rs 7.50 crores in respect of 257 applications. Disbursements during the period were to the tune of Rs. 4.80 crores. Sanctions under the IDA Line of Credit for the said period had amounted to Rs 2.15 crores, making a total of Rs 6.02 crores comprising of rupee loan of Rs. 3.23 crores and foreign currency loans equivalent to Rs. 2.79 crores.

Pending applications as on 31st August, 1975 numbered over 500 for a total assistance of about 17 crores. The resources position of the Corporation continues to be satisfactory.

were relaxed in steps. With the onset of south-west monsoon during the third week of June 1975 the State Government decided to lift the power cut completely from 25th June 1975. All restrictions on Agricultural services were also withdrawn from 15th September 1975. New power connections are being permitted and loads connected prior to 1st December 1974 are allowed day supply also.

A close watch on generation of power from Hydro and Thermal stations is being kept up to ensure judicious management without any wastage and banking of surplus power with neighbouring State wherever possible.

The South-west monsoon has been generous and the inflow has been copious and good. The storage equivalent as on 20th October 1975 was about 2061 mu as against 1,751 mu in 1974 and 1,594 mu in 1973 on the corresponding days. It is hoped that this comfortable hydel position will lend good support in our managing the overall power position this year.

Central Power Schemes dragging

It is not as though Tamil Nadu has landed in a power crisis all of a sudden. The first unit of 235 MW in the Kalpakkam Atomic Power Project should have come to service by 1973-74 as per original targets. Similarly the improvement in the existing mine at Neyveli to increase the rate of lignite cut from 3.5 million tonnes to 6.5 million tonnes per annum should have fructified already. But as members are aware there have been serious slippages on both these counts. There is no firm indication as to the early commissioning of the units at Madras Atomic Power Project. The expansion programme at Neyveli has only just commenced.

The Tamil Nadu Electricity Board has been managing its power needs with substantial imports from outside. Not less than 20 per cent of its requirements have to necessarily come from external sources. It is therefore apparent that this State has to take into account this important factor in planning for its power requirements and no firm assumptions could naturally be made in making any forecasts in this regard.

Admittedly, the Board's finances continue to be in difficult position. It could not, in recent years provide for depreciation, payment of interest etc., and meet its commitments fully, as it should. The Board thus finds itself in an unenviable position.

The balance sheets of the Electricity Board have been showing a deteriorating trend. Rising costs of inputs including fuel and higher wage bills together with inadequate power tariffs and low utilisation of capacity are mainly responsible for this situation.

Steps have been initiated to remedy the situation by way of tariff revision, economy in operation and maintenance costs, maximisation of generation, improvements in overall operational efficiency, line loss reduction measures, better management, rationalisation of work loads, etc.

Rise in Cost of purchased Power

During the past five years there has been steady increase in the rate for purchase of power both from neighbouring States and from Neyveli Lignite Corporation. The rate for Kerala power has increased from 8 paise per unit to 9.5 paise per unit and the rate for Neyveli power from lignite has increased from 8.48 to 9.36 paise per unit from 1-4-1975. The Tamil Nadu Electricity Board has agreed to bear the additional cost arising out of the increase in wages given to the employees of the N.L.C. Besides, there has been steep increase in price of coal freight charges and also in movement of coal by sea. Cost of rail borne coal has increased from Rs. 102 per tonne to Rs. 132 per tonne during the last one year. Similarly cost of sea-borne coal has gone up from Rs. 186 to 263 per tonne during the same period. Tamil Nadu Electricity Board's requirements of coal is 1.44 million tonnes this year and will be of the order of 1.58 million tonnes from next year onwards till the first unit in Tuticorin Thermal Scheme is commissioned in 1978-79. In addition, cost of conversion to oil firing at Neyveli has also increased the cost of power. The cost of power from the oil fired unit from Neyveli is of the order of 30 paise per unit.

For the year 1975-76, the cost of power purchases is likely to go up to Rs. 37.02 crores, as against Rs. 25.68 crores in 1974-75. The quantum of power purchased has been 2208 m.u. in 1974-75. The same is anticipated to be about 2350 m.u. in the current year.

As already indicated in the last year's budget speech a review of the tariff rates was made and the tariff rates were revised in October 1974. The surcharge was also increased from 30 per cent to 50 per cent from January 1975 onwards. Special rates for cement, chemicals and aluminium industrial units were also revised in March 1975. The agricultural tariff was raised to 16 paise per unit with effect from 30th August 1975. Yet, the additional revenue anticipated in 1975-76 falls short of the requirements to meet in full the depreciation and other interest obligations during 1975-76.

The Budget Estimate for 1975-76 of Tamil Nadu Electricity Board for capital works is Rs. 39 crores and another Rs. 14 is required for repayment of loans etc., for which the known resources, viz., from open market, Life Insurance Corporation, Rural Electrification Corporation and deposits, etc., come to only Rs. 40.62 crores. In short the total efforts will be taken to bridge the gap of Rs. 12.38 crores in resources for the Capital Programme.

Expenditure on Plan Projects in IV plan has been of the order of Rs. 216 crores. Approved outlay for V Plan is only Rs. 326 crores. It is therefore necessary that the approved outlay for power should be in the range of Rs. 70 to 80 crores per annum during V Plan if not more to ensure timely completion of projects. The outlay approved for the first two years by the Central Planning Commission is hardly 50 per cent of requirements.

Discussions on Tuticorin Thermal Scheme which is the largest energy intensive Scheme under execution during 5th plan were held in August 1975 at New Delhi, and the Centre has been pressed for additional outlay to the extent of Rs. 19 crores against the outlay of Rs. 10 crores for 1975-76. An additional outlay of Rs. 1 crore only has been agreed to, subject to certain conditions. This is woefully inadequate and not equitable when compared with the total requirements.

The Centre should come in a big way to the rescue of the State Electricity Board both by adequate and timely financial support and by implementing independently power projects under Central sector to supplement the efforts of the State.

T. N. E. B. EFFORTS FOR RAPPORT WITH CONSUMERS

The Tamil Nadu Electricity Board has set for itself a motto of consumers' satisfaction by way of prompt service, as the overall satisfaction of the ultimate consumers will be the criterion in judging the performance of the Board. With a view to translate the motto into purposeful action, the Board after careful consideration has decided to introduce "Manuneedhi Thittam" which would also establish rapport with the public. A Vigilance Cell has also been instituted in the Board to weed out corruption.

With a view to regionalise the top functional level management, the headquarters of Chief Engineer/Distribution (South) has since been shifted to Madurai during October 1975. Eight distribution systems namely, Kanyakumari, Tirunelveli, Ramanathapuram, Madurai, Tiruchirappalli, Pykara, Udumalpet and Erode and one General Construction Circle at Tiruchirappalli come under his control.

The headquarters of Chief Engineer (Operation) who is in charge of Hydro Generation has also been shifted to Erode for reasons of better and closer control of Hydro Power Stations in the grid.

Two new circles have been formed one at Udumalpet and another at Tiruvannamalai in tune with the needs of the consumers of those areas as the existing systems of Pykara and Vellore have been found to be unwieldy. It is hoped that with the formation of the new systems the consumers in these areas will get better attention.

The Research and Development Directorate which was formed last year has been conducting diverse studies in the field of Generation, Transmission and Distribution. During the year results have been achieved on problems relating to Relay Protection and corrosion of Penstock pipes. Studies are continuing in respect of eleven projects.

The Central Power Research Institute proposes to associate the Research and Development Organisation of Tamil Nadu Electricity Board in respect of Research work in the field of exploitation of Solar Energy.

**

NO POWER FAMINE BUT USE IT SPARINGLY

I want to allay the fears if any in the minds of prospective consumers. The intermittent power shortage experienced by us is only a passing phase. There need be no apprehensions on the part of the enterprising entrepreneurs as to the availability of adequate power for farms and factories. This Government and Board is taking all steps possible in this regard to improve the power position.

With the versatile uses of Electricity and the subtle changes that have taken place over the years with the introduction and adoption of this effective tool, we have generally tended to a more liberal and carefree usage of energy. The time has come now to have a second look at our own attitudes and revise them. The concept of conservation of Energy is gaining public support all over the World and it will be in the fitness of things that this new concept is socially accepted and backed by all concerned.

—Thiru S. J. Sadiq Pasha.

MASTER PLAN FOR NEW TRANSMISSION SYSTEM

The Tamil Nadu Electricity Board among others has evolved a master plan for Transmission and Distribution at an estimated cost of Rs. 101 crores. Rs. 7 crores has been spent so far. More than 400 Kms. length of EHT and HT lines, 27 Nos. Sub-Stations have been erected against nearly 4,300 Kms. length of lines and 154 Nos. Sub-Stations planned. Further progress will be possible depending upon availability of funds. Improvement proposals costing Rs. 138 lakhs have been sanctioned by Rural Electrification Corporation.

Provision of L.T. shunt capacitors in new L.T. industries, and agricultural loads is being insisted upon by amending Board's Tariff conditions. Attempts are being made by the Board to procure and supply L.T. shunt capacitors to consumers. 36,000 Nos. L.T. capacitors have been ordered. Meters are being installed in selected distributions to measure the energy receipts and sales to the consumers so as to assess the extent of losses. A techno economic pilot study undertaken in this respect by Indian Institute of Science indicates a requirement of Rs. 15 crores for Chingleput System alone.

There have been frequent complaints of poor maintenance of street lights by the Board. Individual metering of street lights has been taken up and is in progress. Better attention is being given to proper street lighting, replacement of bulbs, etc. We hope that there will be no room for such complaints in future.

The State Electricity Board owns a huge network of transmission and distribution system comprising 69,775 Kms. of EHT and HT lines and 202, 245 Kms. LT lines as on 31st March 1975. Out of this 1,038 Kms. of EHT and HT lines and 5,628 Kms. of LT lines were added during 1974-75. There are 279 numbers of EHT and HT sub-stations in the grid at the end of 1974-75. Yet, the line loss is much less than in any other State.

FOR YOU TO SEE TIIC IN FACTS & FIGURES!

THE MOVEMENT FOR IMPROVEMENT IN INDUSTRIAL INVESTMENT•

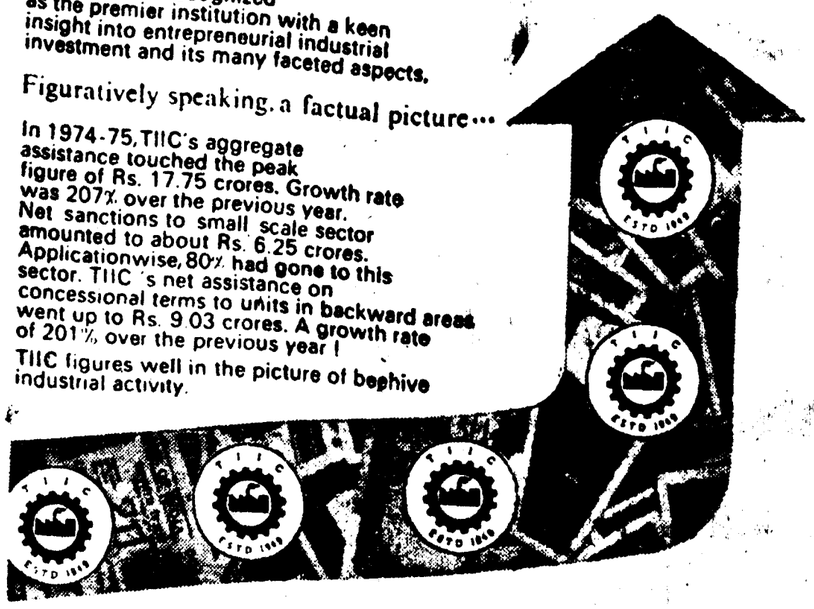
At the moment...

TIIC has been recognized as the premier institution with a keen insight into entrepreneurial industrial investment and its many faceted aspects.

Figuratively speaking, a factual picture...

In 1974-75, TIIC's aggregate assistance touched the peak figure of Rs. 17.75 crores. Growth rate was 207% over the previous year. Net sanctions to small scale sector amounted to about Rs. 6.25 crores. Applicationwise, 80% had gone to this sector. TIIC's net assistance on concessional terms to units in backward areas went up to Rs. 9.03 crores. A growth rate of 201% over the previous year!

TIIC figures well in the picture of beehive industrial activity.



THE TAMILNADU INDUSTRIAL INVESTMENT CORPORATION LIMITED
ARULMANAI
26, Whites Road, Madras-600 014.

Managing Director: S. N. PAI.

Branches at: Coimbatore, Madurai, Salem, Thanjavur, Tirunelveli and Vellore.

TIIC
THE FINANCIAL INSTITUTION WITH A HEART

Out of the 462 units assisted, 319 were new undertakings accounting for Rs 11.55 crores sanctioned. Again, out of those 319 units, 129 units are managed by qualified technocrats and 146 units by persons not formally qualified but with long experience in industry. The remaining 44 units are put up by persons with experience in trade who are entering the industrial field for the first time.

Management counselling Service to help Small Units Planned

Another aspect which deserves mention is the assistance to small-scale units. As could be observed, there has been a distinct shift in your Corporation's approach to development banking, and in the recent past, the greatest emphasis has been laid on assistance to small-scale industries. Our State has been a pace-setter in the development of small units. TIIC can be proud in claiming credit for having played a key-role in this sphere. Even here, 1974-75 has proved to be a record year when the T.I.I. Corporation sanctioned assistance totalling Rs 625 lakhs to 370-small-scale units. This should be compared with the performance of the Corporation for the entire period of 25 years since its inception up to March 1974, where the total sanctions were only Rs 787 lakhs to 397 units. As a proportion of the overall performance during 1974-75, assistance to small-scale industries formed 44% of the total amount and 80% applicationwise.

Viewed from yet another angle, the Corporation has played a significant role in the development of backward areas. Analysing on a geographical basis, Rs 903 lakhs—i.e more than one half of the total sanctions during 1974-75—were in respect of 180 units located in the backward areas in the State. In this effort to help development of backward areas in the State, your Corporation has been working in close liaison with other State institutions like SIPCOT, SIDCO etc., who have been helpful in developing infrastructural facilities in the less developed areas like the districts of Ramanathapuram, North Arcot, South Arcot, Madurai, Thanjavur etc. Each of these districts has had a fair share of the assistance offered by your Corporation.

Sanctions of foreign exchange assistance under the IDA Line of Credit also gained momentum during 1974-75 as will be apparent from the accounts and the Directors' Report.

The T.I.I.C. Directors have been keenly conscious of the need to further step up our activities and to extend the sphere of operations in such a manner as to render complete service to the entrepreneurial class. One of the gaps that has been observed is the problem of managerial assistance for certain industries, particularly in the small-scale sector. Instances have come to light where small-scale industries become sick units due to the lack of timely expert assistance for management decisions. With a view to assist our constituents the Corporation has been actively considering setting up of a Management Counselling Service, which would provide a continuous monitoring the performance of constituent units and assist them with timely expert help, particularly to the entrepreneurs in the small-scale sector.

By the same token, in order to expeditiously deal with a large inflow of applications, the organisational set-up of the Corporation has been increased and strengthened. During the year 75 new officers and staff members including Chartered Accountants, Cost Accountants and Engineers from various disciplines have been recruited. Great importance has been laid on training and a large number of our staff have undergone training in various institutions in different disciplines.

Looking back over the year which has concluded, the Chairman, Thiru R.V. Raman said he cannot but help feel that contrary to the popular view, the tempo of industrial advancement of the State has not slowed down. On the other hand, if we were to take the rate of inflow of applications as an index of industrial activity, one can only conclude that industrial development is on the increase rather than otherwise. Your Corporation can, therefore, rightly feel proud of having contributed its efforts to the industrialisation of the State."

NEW GEOLOGICAL RESOURCES GIVE COUNTRY TREMENDOUS BOOST FOR GROWTH

The substantial opportunities that our country has for generation of economic growth on an unprecedented scale are to be found in the many surveys that have been carried out on the natural resources this includes studies in depth of mineral and geological resources, land and water use, transportation and communication, water power and industrial products.

For example, a survey of Indian agriculture reveals 'Given better seeds, more fertilisers, and improved farming methods, India possesses sufficient land and water not only to feed the present population but also a population twice its size.

Rich strands of valuable timber, oil and petroleum, mining and mineral industry furnish an equally impressive evidence of undisclosed assets. Reserves of coal in India are estimated to exceed 50 billion tonnes and secondary coal 80 billion tonnes only a small portion has been exploited so far.

Our iron ores are estimated at 21,000 million tonnes, more than one-fourth of the total estimated reserves in the word—the largest deposit for any country. What is more, it is of the richest kind, more than 55% iron.

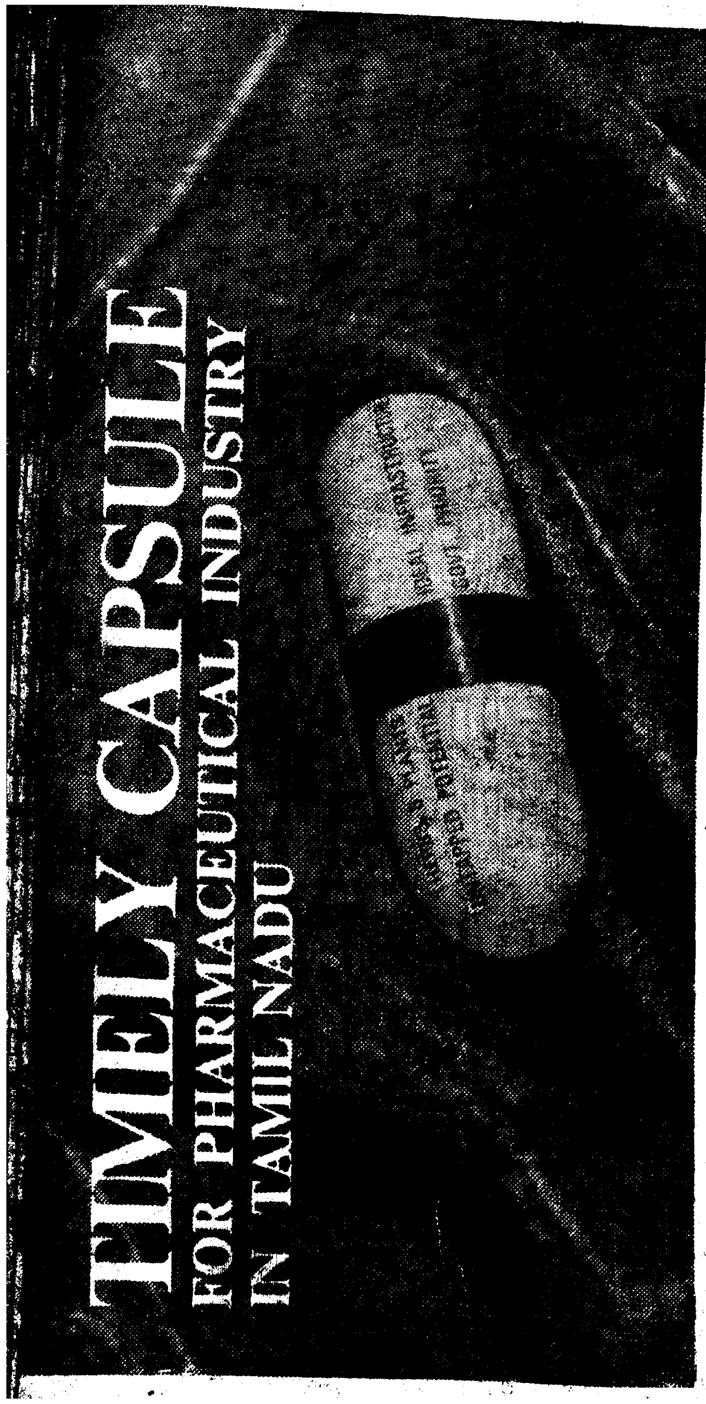
India ranks third in the world for manganese deposits more than 500 million tonnes.

India has more than 350 million tonnes of titanium; 70% to 80% of total world's mica output; and a high grade of bauxite.

More than 75% of our natural resources are either undiscovered or partially utilised. Hardly 5% of our water resources are developed and utilised. Nearly 66% of our total capital resources are estimated to be unproductive. We utilise less than a third of the hydro-electric energy. The list can be never ending. It is, therefore, quite clear—there are tremendous and relatively untouched opportunities for development of physical and natural resources and if properly harnessed, it can bring about social betterment, in creating consuming power, raising the standards of living and banishing poverty.

(From a talk over AIR, MADRAS by Thiru. M. K. RAJU, Chairman, H.P.F.)

TIMELY CAPSULE
FOR PHARMACEUTICAL INDUSTRY
IN TAMIL NADU



The total demand on drugs and pharmaceuticals in Tamil Nadu is about Rs. 15-20 crores per annum. The State's share in production is hardly 5%. Precisely why SIPCOT's today's emphasis is on the rapid development of pharmaceutical industry within the State.

For this specific purpose, a timely capsule! Down to earth assistance and incentives to pharmaceutical industry. With a package of facilities, SIPCOT invites entrepreneurs to come and set up pharmaceutical industrial units in Tamil Nadu to produce basic and intermediate pharmaceuticals.

SIPCOT
STATE INDUSTRIES PROMOTION CORPORATION OF TAMIL NADU LTD.,
11-A/1, Anna Salai, Madras-600 002.

ADYAR THEOSOPHICAL SOCIETY

ABODE OF UNIVERSAL BROTHERHOOD

The world-wide Theosophical Society is celebrating this year the centenary of its foundation. These celebrations are being held in sixty countries of the world where the Society works, and leaders of all communities, sections and faiths are participating in them. They commenced on November 17, 1974, with a meeting at the World Headquarters of the Society in Adyar, Madras, in which the Governor of Tamil Nadu, Thiru K.K. Shah, participated.

From November 14th to 20th, 1975, the Centenary World Congress will be held at New York, where the Society was established one hundred years ago by Madame H.P. Blavatsky, the famous Russian occultist and spiritual teacher, and her American colleague, Col. H.S. Olcott. Following this England will hold its celebrations, November 23-30, 1975. From December 20 to 30th, the Centenary World Convention of the Society will meet at Adyar.

Meanwhile, and through the year, the 1220 branches of the Society at the national, regional and local levels all over the world will be commemorating the Centenary with their own programmes, all of which have the object of bringing Theosophy, the Divine Wisdom, closer to the people.

IN INDIA

Adyar, in South Madras, at the confluence of the river of that name with the Bay of Bengal, a place of great beauty and great peace, has been World Headquarters of the Society since 1882. Of the sixty national sections of the Society, the Indian Section has the largest membership. There are over 500 branches of the Society in India at the city and town levels, and they are organised in 15 regional federations. The Madras Theosophical Federation Coordinates the work of 13 branches of the Society (called Lodges) in the City. The Tamil Theosophical Federation is similarly concerned with the work of 79 Lodges in Tamil Nadu, Karnataka, with 67 Lodges, has the highest number of Theosophists among the States of India. There are 23 branches in Kerala and 93 in Andhrapradesh.

OBJECTS OF THE SOCIETY

The three Objects of the Society are :

1. To form a nucleus of the Universal Brotherhood of Humanity, without distinction of race, creed, sex, caste or color.

2. To encourage the study of comparative religion, philosophy and science ; and

3. To investigate unexplained laws of Nature and the powers latent in man.

The Society has drawn the nations and peoples of the world closer to each other by its work for these three objects, and has been a strong factor for unity and harmony among mankind. Its members come from all religions—Hinduism, Zoroastrianism, Jainism, Hebraism, Buddhism, Christianity, Islam, Sikhism and other Faiths—and also include persons who may profess no religion but the service of mankind and of all life. Their bonds of union are their approval of the Society's three objects ; their wish to remove religious antagonism and to draw together men of goodwill, whatever their religious opinions ; and their desire to study religious truths and share the results of their studies with others.

FUNDAMENTAL TEACHINGS

Theosophy, the ancient wisdom, the divine wisdom, God—Wisdom, the Brahma Vidya of India, the Sophia of Greece, has been described as the common basis of all religions ; as a way to the direct knowledge of God ; as the wisdom arising from the study of the evolution of life and form ; as the art of Godcraft ; and in many other terms. Its three fundamental propositions were set out by Madame Blavatsky as follows in her monumental work, **The Secret Doctrine**, first published in 1888 and still the source book of modern Theosophy :

1. An Omnipresent, Eternal and Immortal Principle, on which all speculation is impossible, since it transcends the power of human conception and can only be dwarfed by any human expression or similitude ;

2. The Eternity of the Universe *in toto* as a boundless plane ; periodically "the playground of numberless Universes incessantly manifesting and disappearing."

3. The fundamental identity of all Souls with the Universal Over-Soul, the latter being itself an aspect of the Unknown Root ; and the obligatory pilgrimage of every Soul —a spark of the former—through the Cycle of Incarnation, or Necessity in accordance with Cyclic and Karmic Law, during the whole term.

View of the wide spread hundred years old banyan tree in Adayar.

The truths of Theosophy have also been set forth in the simplest language in the following three tenets :

1. The soul of man is immortal, and its future is the future of a thing whose growth and splendour has no limit.

2. The principle which gives life dwells in us and without us, is undying and eternally beneficient, is not heard, or seen, or smelt, but is perceived by the man who desires perception.

3. Each man is his own absolute law-giver, the dispenser of glory or gloom to himself : the decreer of his life, his reward, his punishment.

DEDICATED LEADERSHIP

The Theosophical Society has been blessed with a distinguished and dedicated lineage of leaders— H.P. Blavatsky, who made the initial presentation of the Wisdom in her books *Isis Unveiled* and THE SECRET DOCTRINE ; H.S. Olcott Co-Founder of the Society with Madame Blavatsky, gifted organiser and first International President of the Society, 1875/1907 ; Annie Besant, utterly dedicated servant of humanity, occultist, philosopher and one of the greatest orators of her times, second International President, 1907/1933 ; with her, her close colleague, the great/clairvoyant and occultist C.W. Leadbeater (1847/1934), whose researches in the inner worlds have revealed to humanity something of the fields of experience normally beyond the vision of most ; George S. Arundale, whose dynamic leadership enthused the membership during the difficult years of the second world war, third International President, 1934/1945 ; C. Jinarajadasa, who, in a lifetime completely devoted to the propagation of Theosophy, brought the light of the Wisdom to thousands of seekers, fourth International President, 1945/1953 ; N. Sri Ram, of deep wisdom and saintliness, matched by his humility, fifth International President, 1953/1973 ; and now John B.S. Coats, dynamic, devoted sixth International President 68 years young.

Mr. Coats is a great traveller who has visited practically all the sixty countries of the Theosophical World in his international lecturing tours, many of them a number of time, and has initimate knowledge of the Society and its membership.

He believes that "the great purpose of the Society, as it moves into the second century of its work, is still what it always has been— to work for the spreading of the philosophy of wholeness throughout the world, of which universal brotherhood is the univitable expression in daily life."

WORK FOR INDIA

It has been said that the Theosophical Society's circumference is world-wide, but its centre is in India, the home of the Maharishis, the land from which the wisdom of the spirit flows out to the world.

The Founders of the Society, Madame Blavatsky and Col. Olcott, were advised to move the Headquarters from New York to India by their Teachers, two members of the Brotherhood of Adepts (Perfected Men) who, Theosophy says, have completed Their human evolution but remain with humanity to help it in its onward progress. These are the Maharishis, the Masters, the great sages and Saints of all the religions, and Theosophy teaches that the way to Them is open even today to earnest seekers. The life to be lived and the discipline to be followed by such seekers is given in the book AT THE FEET OF THE MASTER, embodying teachings given by one of the Adepts to his disciple, and in other Theosophical books.

Theosophical leaders have helped India greatly in her cultural, educational, social and political renaissance. Madame Blavatsky and Col. Olcott contributed much to this renaissance by propagating the great value of Eastern teachings, by organising educational institutions such as the Olcott Memorial Schools, by awakening Indians to a sense of their great heritage. Col. Olcott organised the first Swadeshi exhibition to be held in India, in 1879. The Olcott Memorial Schools were probably the first educational institutions to be started in the country for the education of Harijan children. Between 1894 and 1906 five such institutions were established by Col. Olcott in the Madras region. Dr. Besant similarly worked for the Indian renaissance through the Central Hindu College.... Dr. Besant worked for it through the Central Hindu College and High School she founded and ran at Varanasi, through the many similar educational institutions she established or inspired, through her social reform work, and through her leadership of the Indian Home Rule Movement. She was President of the Indian National Congress at its 1918 Sessions, and her work was continued by her successors. An estimate of the contribution made by Theosophy to the restoration of a sense of Indian self respect after 200 years of British rule is made in the following words by Mr. Percival Spear in his book INDIA : A MODERN HISTORY :—

> The importance of Theosophy to India was that it was a movement led by Westerners which put things Indian on a level with things Western. It thus helped to bring the modern Indian into equal relations with the West, neither regarding himself as exclusive and superior to others, as did the old orthodox Brahmin, or inferior or behind the times, as the ordinary Westerner implied. The movement encouraged both self-respect and mutual respect,

INDIA AND THE THEOSOPHICAL SOCIETY

Indian Intelligentia made to realise its ego

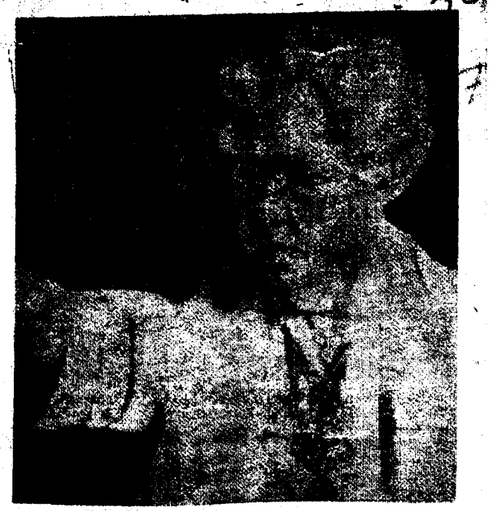
* * *

Mrs. BESANT A FORE-RUNNER OF GANDHI AND NEHRU

By

THIRU SRIPRAKASA

(Former Governor of Tamil Nadu)



Three Facets of Annie Besant's work in India

In 1893, when Mrs. Besant came to India to start her work here for theosophy and the Theosophical Society, having been drawn to such work by Madame Blavatsky and later Col. Olcott, the founders of the Theosophical Society, we witnessed in India a strange and serious conflict. The country as a whole had come under the political domination of the British who were fast organising an elaborate and efficient system of administration, and were helping in the consolidation of the whole land as one large political unit. Western influences were also naturally fast coming into the country in their wake. English was being widely learnt : schools and colleges, dispensaries and hospitals were being opened at various places ; and the discoveries of science were being utilised for the starting of many institutions for the general well-being. Still, the main purpose of the rulers was the establishment of what may be called a "police State" where the maintenance of law and order was the primary consideration, and where the well-being of the people came only as a very distant second.

The consolidation of British power in India having been immediately by a period of great internal disturbance and of general insecurity of life and property when empires and kingdoms rose and fell, it would not be untrue to say that the strong rule of the British was eagerly welcomed, despite its being foreign, by the generality of the people of the land.

Many persons came seriously to think that nothing but a complete metamorphosis of India, making her as near a copy as possible of the Western world, could save us. At the same time, great numbers of other folk who continued to live their own lives — glad only that they were reasonably secure — and uninfluenced by foreign teaching, felt strangely disturbed at the phenomenon that was taking away what appeared to be best in the land, to diverse lines of thought and activity that went counter to their own age-old notions of right and wrong ; and these people were inclined therefore to withdraw themselves into a shell in order to keep themselves at least unpolluted. As the British Government did not interfere with their lives in any way, they felt in duty bound to preserve their faith and custom in their own persons as best they could. **Mrs. Besant with her unparalleled powers of speech and with her new found idealisms given to her by theosophy, came like a storm on the Indian scene in the closing years of the nineteenth century, to stand, so to say, as a bridge between these two elements or Indian society that were getting more and more separated one from the other.**

Thus towards the close of the 19th century, when Mrs. Besant came to us, we find people taking great pains to study the English language with the utmost care, and make themselves familiar with all that goes with the word English.

So we have to look at the Indian scene of the time of Mrs. Besant's coming in its three main facets : the political dominance of British : the imitation by some classes of people, of what they regarded as western ways of life and thought, and which, they honestly felt, would not only be materially helpful to themselves, but also be conducive to the welfare of the country and the people at large ; and, finally, the feeling in other classes that there was nothing left in the world that was worth having, that they must withdraw themselves into a shell, adhere as best they could to the old ways, and live in the expectation of the day when the high Gods will come to Earth to put things right once again. **Mrs. Besant seems to have realised the gravity of the problems and to have set herself in her own way, to try to solve them at this crisis of our country's history in the midst of all the clashes and the conflicts of the time.**

There was, first of all, the political situation. Here she took full advantage of her white skin ; and being herself British -- and so in a way above suspicion — she went all out to show that there was no difference between the Indian and the English, and that they could and should live as brothers and fellow-workers in the land. Some Christian missionaries particularly

of the Salvation Army, had also done that ; but Mrs. Besant had additional advantage that she had come to learn and not to teach ; that she was not here to ask the people of the land to accept another faith, but to know their own better. She was also anxious that there should be better relations between the Indian and the English, so that all mutual bitterness might disappear, and mutual understanding may lead to mutual esteem, and perpetuate the relationship between the two countries as equal partners in a Commonwealth for the good of all mankind. While preaching, therefore, strict loyalty to the British Throne which stood as the dignified symbol of a common endeavour in all the lands owing allegiance to it, she gave no special place to the English people themselves, as members of the conquering race, or as persons in administrative authority over the people. **She vigorously fought for this equality inclucating friendliness and modesty among those who ruled, and dignity and self-respect among those who were ruled.**

Then she had to deal with persons who were going away entirelyfrom the old moorings under the influence of the new forces and ideologies that came in the land from the West. Here came into play her matchless eloquence. There was her deep, sincere, burning love for the people; and her gigantic brain enabled her to learn up all too quickly the ancient lore of the land — its philosophy, its religion, the basic ideals of its culture. She also quickly familiarised herself with the manners and customs of the people, so that she may be no stranger anywhere she went. Under the auspices of the Theosophical Society, she undertook continual tours in the land, travelling over and over again throughout the length and breadth of the country; delivering literally thousands of lectures depicting in vivid and beautiful language, the glory and the greatness of our ancient thought and those who propagated them. Her purpose was, it seems to me, to wean all those who, may be, due to their ignorance of the past, and unable to withstand the blinding light of the present, were most unwisely thinking that there was nothing good in themselves or other ancients ; and that they must imitate and imbibe all that was foreign in order to come into their own and save their land from further degradation.

When Mrs. Besant told them that India was the homeland of the invisible powers that rule the destinies of men and nations, that their ancient scriptures made them the teachers of the world — naturally persons who were drawn away from their old moorings, were induced to stop and to think, for these words came from a British person, well-known and highly respected in her own country, who had obviously no axe of her own to grind — in fact, everything to lose and nothing to gain — and who was there only to serve and help them and their country, and who was giving her all without asking for or even expecting anything in return. **She thus became a very great force at that time in crying halt to the process that was taking away the educated and therefore the most influential and powerful — classes of the people not only from the outward forms of ancient days, but actually making them disdainful of these and eagerly attracted by foreign ways which gave them no social position among the rulers, and cut them away from their own people.** This work she did with great success by her perfervid eloquence. Her lectures drew large audiences who went back the better for their listening to her unrivalled oratory accompanied by great knowledge and sympathetic understanding. **All this was part of her work for Theosophy in the service of which she had really come out to India. She was its greatest exponent in her time, and helped to organise and consolidate the Theosophical Society after its great founders, Madame Blavatsky and Colonel Olcott, had passed away.**

Then she had also to tackle that orthodox group which by withdrawing itself in disgust and despair, was helping to perpetuate many of the narrownesses that had overtaken India's thought and created many evils due to the struggles of many forces during the intervening centuries. These excrescences had to be removed ; but removed in a manner that should not cause any offence or hurt any feelings. Whatever was to be done, should be done in a way so as to give it the appearance of voluntary action and natural evolution. Any violence was bound to arouse opposition and only make matters worse. This very important and necessary work, Mrs. Besant did through the network of her schools and colleges that she founded at various places in the land, the most important being the Central Hindu College at Banares. Here her students were taught the literatures of the east and the west alike ; and while modern science was a part of their educational syllabus, the teaching of ancient religion, philosophy and ethics also formed an integral part thereof. She being a woman in whom the ideal and the real were equitably blended, who was alike a practical worker and a visionary, she introduced in her educational institutions various items of active social reform as well.

Her lectures on ancient Indian thought and philosophy on the one hand, and her schools and colleges which popularised education and social reform, on the other, to my mind, formed the bridge between the two sections of India's society that were drifting apart, one becoming what was dubbed as Anglicised and the other that was undoubtedly reactionary. She also formed a [illegible] practical bond between the English and Indian peoples by her European friends making common cause with the Indian people, and mixing most freely, in her educational and theosophical institutions, with their students and their colleagues, bringing out the good in both, and putting all on an equal basis of their common humanity.

Precursor of Gandhi :

I have ventured to say in the course of the above narrative, that in a way Mrs. Besant had taken up most of the items that were later elaborated — and no doubt independently thought of — by Mahatma Gandhi. The two personalities were so strong that it was really not possible for them to work together ; and each had to have the whole field to himself or herself if he or she were to do anything worthwhile. The parting therefore between Mahatma Gandhi and Mrs. Besant came fairly early.

The gulf between Gandhi and Mrs. Besant was wide. Mrs. Besant had made a careful study of the sacred books of the Hindus, and was always quoting chapter and verse as she delivered her great orations. Her personal life was by no means so simple as that of the Mahatma, and therefore could be better followed by those who came in contact with her. In a way she was more human,

for she made allowances for the weaknesses of human nature and the failings of the flesh in others which Mahatmaji found it difficult to do. She also brought the minds of those who heard her, back to the scriptures as such, which Mahatmaji's teachings did not. Thus those who came in contact with the Mahatma, tried to be simple in their personal lives as best they could, and tried certainly to be moral in accordance with his teachings but they were not told — and so did not know — of the glories and achievements of our ancient heroes and preceptors. Curiously enough, Mahatmaji's heroes were of the western world, and he quoted Count Tolstoy, Cardinal Newman, and Jesus Christ oftener than the figures of the history and legend of his own land. No wonder, the Christian missionary was far more attracted by him than the Hindu pandit. The modern minded men and women of India came to him for comfort and guidance : and the masses of Indian peasants followed him because he looked so much like them despite his [illegible] and promised them freedom [illegible] want if they helped him in getting them freedom from foreign domination. **In the social and intellectual aspects of life, therefore, Mrs. Besant's influence was entirely different from that of Mahatma Gandhi. Moreover, Mrs. Besant's appeal was more to the middle class educated folk, while the Mahatma's was to the vast masses of the country: hers was to the head, while his was to the heart. That may account both for the differing methods adopted and the results that ensued.**

She helped in the continuation of the work that Col. Olcott, the President-Founder of the Theosophical Society, had started in Madras by establishing and helping in the establishment of what were then known as Panchama Schools, schools for the fifth caste, really the outcaste, she made no violent efforts to abolish caste. In this matter Mahatmaji's method was positively different. He had practically no personal contact at all with persons who represented the ancient lore such as Mrs. Besant had to some extent directly and to a great extent indirectly through her colleagues of the Theosophical Society and the Central Hindu College.

It may therefore be said that while the effect of Mrs. Besant's work was slow, indirect and evolutionary in its nature, the effect of Mahatmaji's activity was swift, direct and revolutionary. Both helped the same cause and worked for the same results which are before us to-day, and on which each of us is entitled to pass his own opinion in accordance with his own ideal and temperament.

Mrs. Besant has, in her Autobiography, described in vivid language her own coming into The Theosophical Society after her firstmeeting with Madame Blavatsky. Readers of that book will remember that she was given Madame Blavatsky's "Secret Doctrine" to review by the famous W. T. Stead. The study of the book changed her mind ; and believer ; and joined The Theosophical Society. That was in 1889.

Dr. Radhakrishnan

On Contribution of the Theosopical Movement to Indian Renaissance

Dr. S. Radhakrishnan, world famous philosopher and former President of India, has paid the following tribute to the Theosophical contribution to the Indian renaissance :

When, with all kinds of political failures and economic breakdowns we were suspecting the values and vitality of our culture, when everything round about us and secular educatiou happened to discredit the value of Indian culture, the Theosophical Movement rendered great service by vindicating those values and ideas. The influence of the Theosophical movement on general Indian society is incalculable.

THE 20 - POINT PROGRAMME IN TAMIL NADU

The Tamil Arasu gives in this free supplement, excerpts from the speech of Chief Minister Dr. M. Karunanidhi, in the Tamil Nadu Legislative Assembly on 30—10—75 while defending his Government against the censure motion brought forward for failure to implement the 20 - Point Programme propounded by the Prime Minister. The Censure Motion was defeated.

— EDITOR

More than twenty Members have expressed their opinion on the Censure Motion brought before this House by our good friend Mr. A. R. Marimuthu and seconded by the leader of the Communist Party of India, Mr. K.T.K. Thangamani. Mr. Marimuthu who tabled the Motion delivered his speech with great nobility, although it is a moot point whether the views he gave out could be acceptable to us or not. Mr. K. T. K. Thangamani too set out his views in a steadfast manner, whether they related to charges against this Government or whether they pertained to certain aspects of the attitude of the Central Government which he could not approve of.

The speeches of the Leader of the Organisation Congress, Mr. R. Ponnappa Nadar and the Leader of the Legislature Swatantra Party Mr. B. Venkataswami were touching and at the same time helped to underline facts, for they admitted that they had stood up only to swell the numerical requirement to enable tabling such a Motion ; expressing views contrary to the Motion, they explained they were adopting a neutral stand in the matter.

The Deputy Leader of the Anna D.M.K., Mr. G. R. Edmund utilised the intricacies of Law for the advantage of his arguments and his speech in support of the Motion was essentially that of a Lawyer.

On behalf of the Muslim League, the Forward Bloc and the Tamil Nadu Communist Party, which are in alliance with the ruling Party, the Leaders and Members who spoke here have explained in detail how the present Censure Motion is unnecessary.

HANTINIKETAN OF THE SOUTH

By

K. S. S. SESHAN
LECTURER IN HISTORY

ven before this College was d however Madanapalle saw a School, established by the Board Authority in 1887. very next year a "Congress School" was started by Con- workers to joyously commem- te the success of the Indian nal Congress whose meeting eld in Madras that year. But napalle turned out to be too a town to contain two high ls which indulged in unhealthy etition, and so in 1891 Mr. Atkinson the sub-collector, gamated the two schools into Town Congress High School". gain in 1892 the school under- a second change of name and me the "Madanapalle High ol" with the further addition e Mission High School which been started the previous year Christian Missionaries.

t about this time the Jignasa ge a branch of the Theosophical ety was started in town with O.L. Sharma, Manager of the School at its president. The dmaster Mr. R. Giri Rao who himself an ardent Theosophist awarded a certificate of merit he Viceroy in recognition of his k as an educationist.

n 1910 Dr. Annie Besant herself a visit to Madanapalle since was the birthplace of Jiddu hnamurthy and during her stay ed the school and exclaimed her reciation of the good work being e there-it was a school where ng other things, caning students a punishment had been banned e 1896. At a public meeting d at the time Dr. Besant was ed to take over the school admi- in 1913, it was taken over by the Theosophical Education Trust which was founded with Dr. Besant as its president. It was upgraded into a college and affiliated to the University of Madras in 1915 when on July 19, the Governor of Madras, Lord Pentland, formally opened it. It was the first ever college to be started in the Rayalaseema area. The College was fortunate in having a series of great educationlists of international repute such as Messrs. C.S. Trilokikar, M.U. Moorne, G. Pearce, B.R. Kumar Dr. J.H. Cousins and Dr. D. Gurumurthy and so on as its Principals.

The College became such an active centre during the freedom struggle that it was even disaffiliated from the Madras University as a punitive measure for the resistance carried out by Dr. Besant and the college students. She started the Home Rule movement in 96 and the students and the staff of the College exhibited intense patriotic fervour when news of Dr. Besant's imprisonment in June 16, 1917 reached them. Undaunted by the disaffiliation, however Dr. Besant named the College "Wood National College" and got it affiliated to the National University which was then organised by the Society for the Promotion of National Education of which Rabindranath Tagore was the Chancellor. Its other constituent colleges were the National Women's College at Benaras, the National College at Hyderabad (Sind) and the College of Agriculture and Commerce at Madras.

Obstacles:

In its six decades of existence the College has undergone several vicissitudes. The strength of the College dwindled so much that in 1921 it was shifted to Madras where it was merged with the National College at Adyar. But with Dr. Besant and personalities like Sir. C.P. Ramaswamy Iyer working so hard for its revival the College was shifted back to Madanapalle two years later. A girls' hostel was made ready in 1928 and by then with the introduction at B.A. degree course, it had been raised to the first grade level.

The very basis of the Censure Motion is the charge that the D.M.K. has not implemented in Tamil Nadu the Twenty Point Programme announced by the Prime Minister in the wake of the proclamation of the Emergency. Before proceeding to list the 20 points of the Programme and before taking up for analysis whether or not this Government had commenced to implement those measures, I would like to give expression to certain views as a sort of preliminary exercise.

FIFTH PLAN HAS VANISHED!

The Fourth Five Year Plan for the Indian sub-continent was announced on behalf of the Central Government, the total outlay of the same being Rs. 25,000 crores. On the conclusion of the Fourth Five Year Plan, the draft of the Fifth Five Year Plan was prepared and the outlay for the same was announced after a session of the National Development Council in which the Chief Ministers of all the States in India participated. As I stated, the outlay of the Fourth Five Year Plan was Rs. 25,000 crores. As far as our State, Tamil Nadu, was concerned, the extent of Central Assistance in the course of the Five Years of the Fourth Plan was Rs. 200 crores.

Out of this Rs. 200 crores, we have to repay 70 per cent which is in the nature of Loan. The mode of repayment is that, when they make the allotment for the next year as Rs. 40 crores or Rs. 50 crores, they would deduct from that the instalment to be repaid and sanction only the balance. The amount given by the Central Government during the Five Years of the Fourth Five Year Plan — 70 per cent of which was Loan and 30 per cent was Grant — has been Rs. 200 crores approximately.

The Fifth Five Year Plan was styled as the biggest Plan of all and a gigantic Plan even ; and when it was announced that the outlay would be Rs. 53,000 crores, we were indeed overjoyed. The reason for our elation was that the investment was more than two-fold and so we felt that it would be possible to fulfil in entirety the needs of the State. The draft of this Rs. 53,000 crore Plan was discussed at a session of the National Development Council for two days.

Two years have elapsed since. But even after these two years, no one is able to say what exactly has become of that Fifth Five Year Plan!

The Five Year Plan has shrunk to mere One Year Plans and that is the manner in which allotment is being made to each of the States. What we have to consider is whether,

at this rate, we could at all achieve the target of Rs. 53,000 crores. The allotment under this Five Year Plan is only of the same proportion as was made annually to our State during the Fourth Plan. For example, the allotment for the year 1974-75 was Rs. 41 crores ; and for the year 1975-76, it is again Rs. 41 crores. If they make allotment for the remaining three years too on the same scale, the total receipts during the five-year-period would be only Rs. 200 crores. Thus the Fifth Five Year Plan is just like the Fourth Plan, and what they had announced has not actually materialised.

And so, what indeed has become of the Fifth Plan ? Even as **this scene is in progress, the curtain falls, much in the manner to present the road-scene in stage-plays ! The announcement is made of a Twenty Point Programme. That is, the scene of the Fifth Five Year Plan vanishes and the Twenty Point Programme takes its place.**

THE TWENTY POINTS

At a time when the State had been visualising that they would receive substantial allotment under the proposed Fifth Five Year Plan and thereby they could implement their own Plans for State development, this Twenty Point Programme has been announced after flinging to some remote corner a big Plan discussed in detail over two years back, and without providing any answer to the question as to what became of the Fifth Plan.

Earlier, in May 1967, they had proclaimed a Ten Point Programme at the All India Congress Committee. Our friend Mr. K. Suppu pointed out yesterday in the course of his speech here that only the contents of the Directive Principles of the Constitution are now taking shape as 20 Point Programme. What were the Ten Points of the 1967 Programme? They were : (1) Nationalisation of Banks ; (2) Nationalisation of Insurance ; (3) Abolition of Privy Purses to Princes ; (4) Rural Programme, Land Reform ; (5) Ceiling on Urban Property ; (6) Fulfilling the basic needs of the people ; (7) Restriction of Monopoly ; (8) Expansion of the Co-operative Sector ; (9) State take-over of the Foodgrains Trade ; and (10) Commodity-wise improvement in Exports and Imports. This was the Ten Point Programme.

Which of these Ten Points were fulfilled and which were embarked upon but given up afterwards?— this is something we should not forget. They had announced that Banks would be nationalised. But only 14 Banks were actually nationalised and not a step has been taken

urther. Insurance was nationalised and Privy Purses were abolished. The Rural Programme (Land Reform) is among the 20 Points announced now, as also the Ceiling on Urban Property. As for the next Point, namely, fulfilling of the basic needs of the people, this was stated in vague and general terms without specifying the needs referred to. The next item was the Restriction of Monopoly, but, for some reason, it does not find a place in the Twenty Point Programme. As regards the expansion of the Co-operative Sector, no-one can deny that in Tamil Nadu the Co-operative Sector had been expanded even before the time of announcement of the Ten Points and it has been still further expanded since. What they have done in the present Twenty Point Programme is to leave out the Co-operative Sector and add a new item in its place.

The ninth Point of the Ten Point Programme of 1967 was the State take-over of the Foodgrains Trade and accordingly, the Government took over the wheat trade. But within a few days, the Point was given up, as it was not found feasible. Next, the commodity-wise improvement in Exports and Imports —even this does not appear to have been done properly. Such has been the Ten Point Programme ; and now the Twenty Point Programme has been announced . When the erroneous charge is being set out that we are not implementing the Twenty Point Programme or that we are opposing it, any volume of evidence could be adduced to the effect that the D.M.K. had accorded its approval to the Ten Point Programme.

WHAT ARE THE 20 POINTS?

" What exactly are the Twenty Points ? Hon'ble Members who spoke here emphasised some five or six Points. What the Prime Minister announced over the All India Radio was that in the first place, the Government would undertake a series of steps to stimulate production, speed up procurement and streamline the distribution of essential commodities. Has the Government of Tamil Nadu paid attention to this or not ?

POINT--ONE

The Government has undertaken vigorous measures to step up production on the food front, in fulfilment of 20-Point Programme. In Tamil Nadu New rice varieties, ADT 31 and PUSA 33 were released this year, the former covering an area of 1.30 lakh acres and the latter, an area of 56,000 acres.

During the months of July, August and September '75, a quantity of 25,123 'N' tonnes of pool fertiliser was distributed against the normal supply of 20,520 'N' tonnes. Further distribution would be made for the Sambha and other crops ; and thus there is no scarcity of fertiliser. We are certainly keen on maximising production.

During the months of drought, this Government announced a subsidy to the extent of Rs. 1,000 for each oil-engine pumpset ; and under this special programme, as many as 12,200 pumpsets were supplied to the the farmers. So that the benefit of this scheme may reach out to 15,000 persons, we had set apart a sum of Rs. 1,50,00,000. The agriculturists are aware how this was a veritable boon to them at a time when they were severely afflicted by drought.

During the summer months of 1975, about 500 tonnes of hybrid cholam and maize seeds were supplied in the districts of Coimbatore, Tirunelveli, Madurai and a part of Salem. Consequent on these vigorous measures, the production of foodgrains is estimated to be as shown in the table below and this assessment is of course subject to Nature not letting us down as it did during the last year.

	1974-75	1975-76
	(*In lakh tonnes*)	(*Anticipated*)
Rice	41.66	61.00
Cholam, Cumbu, Maize etc ..	7.74	17.00
Cotton	2.20 (lakh bales)	4.03

PUBLIC DISTRIBUTION SYSTEM

Speaker Sir, even when severe drought conditions prevailed in the State, we undertook efforts to provide some rice, although it could not be adequate, to 52 lakhs of families out of a total of 98 lakh families. We made arrangements for the supply of rice to these families through an extensive public distribution system comprising 9,926 retail points run by the Tamil Nadu Civil Supplies Corporation and the Co-operative and the Local Bodies. In urban areas, particularly in places such as Madras and Coimbatore, assured supply of rice to card-holders having income of Rs. 500 and above has been raised from 10 kilos to 20 kilos per month. Further, this scheme has been extended to Tiruchirappalli and Salem too. What all I have said so far is with reference to the first point of the Twenty Point Programme.

POINT—TWO

The second point of the Twenty Point Programme is this : 'The vast majority of our people live in the rural areas. We must implement Ceiling Laws and distribute surplus lands among the landless with redoubled zeal. We want the help of the local people in completing land records." Let us see now to what extent we have distributed surplus lands.

They have brought out a booklet titled "A HUNDRED NEW GAINS." This issue however is found to have been recorded in an incorrect manner therein. In regard to Tamil Nadu they have stated that 10 lakh acres of land have been distributed. No such distribution has taken place nor is it possible. When has this distribution taken place, according to them ? After the proclamation of the Emergency ! Is this a Maya Bazaar for such miracles to occur ? They have written that after the proclamation of the Emergency, all the States have intensified the Land Redistribution programme ; and that in Kerala, an extent of 1,30,000 hectares has been distributed. Even this could not be correct, as we could ascertain from the Government of Kerala.

Mr. P. Srinivasan : —The zero might have been printed by mistake.

Chief Minister : —If only numerals had been used in the text we might suspect that a zero has erroneously appeared in excess. What they have recorded actually in this booklet is the figure '10' (in numerals) followed by the word 'lakh'!

Mrs. T. N. Ananthanayaki :— It is only the Government of Tamil Nadu that has given this wrong information.

Chief Minister : —If we had supplied that wrong information, we might have capitalised on that error and boasted that we have distributed 10 lakh acres ! Thus, since that booklet titled "A HUNDRED NEW GAINS" contains certain items of incorrect information, I would not prefer to cite from that publication.

The Land Ceiling Act had been passed on 6th April 1960. From that date up to the year 1967, the extent of land notified as surplus in the State (during the seven years) was 24,194 acres. Out of the 24,194 acres declared surplus, the extent of land taken possession of was 16,330 acres. But no assignment was at all made to anyone. And since no assignment was made, not one person had derived benefit under the Act !

Since the year 1967, however, the total extent of land notified as surplus so far is 1,08,065 acres. Out of this the extent of land taken possession of is 88,146 acres and the extent assigned is 62,682 acres. The number of persons benefited by this is 38,504. Our own Land Ceiling Legislation reducing the Land Ceiling to 15 standard acres was brought on 15th February, 1970. **The All India Congress Committee (Ruling) has itself given a testimonial in this regard that it is Tamil Nadu and Tamil Nadu alone that is foremost in India in the matter of implementing Land Ceiling and Land Reform.**

Mr. K.T.K. Thangamani said that we have not yet lifted the exemptions granted to orchards and the like. If we take the total area of the orchards in Tamil Nadu, it is only 18,169 acres. In case we bring the orchards too under the Ceiling, it would affect production and exports to other States and other countries even. And it is for this reason that we have left out the orchards.

Indeed, how many are the exemptions annulled by us ? Exemptions were there for sugarcane lands and we repealed them. Similarly, exemptions were there for grazing lands and dairy-farming lands. We annulled those exemptions also. We stipulated a Ceiling for Public Trusts. This does not obtain in Kerala or in Andhra Pradesh. In those States no limit has been placed on the Public Trusts ; only the income therefrom should be spent for those very Trusts. But here we have laid down the extent of that Public Trusts land could keep and prescribed further that the income should be spent only for the same. Even this would apply only to those Trusts that were in existence on 1st March '72. We have made it very clear that new Trusts should not be brought into being for the purpose of getting round that Legislation. Under this Law, Public Trusts should not hold more than 40 standard acres for Colleges. High Schools should not have more than 20 standard acres, Elementary Schools not more than 10 standard acres, Students' Hostels not more than 25 standard acres, Technical Schools not more than 25 standard acres, and Agricultural Schools and Orphanages not more than 25 standard acres. The Ceiling fixed for other Trusts is 5 standard acres.

LAND RECORDS

Next, the Prime Minister has stated that records should be there and registrations made in respect of tenant cultivators and the like. This has also been carried out by us. Not after the date of the Prime Minister's announcement, but well

before that ! In the year 1969 itself this Government enacted the Tamil Nadu Agricultural Land Record of Tenancy Rights Act so that tenancy-rights may be recorded at village-level. So far 3,99,350 tenancies have been registered involving an extent of 6,03,899 acres.

Apart from this, a unique scheme intended to assist the landholders by giving them full particulars of their holding was introduced in 1972 itself (long before the Twenty Point Programme) by issue of patta pass-book. So far 1.04 crores of patta passbooks have been issued at a cost of Rs. one crore.

Among the 20 Points announced by the Prime Minister is one relating to the assigning of cultivable lands to the landless poor. 'From the year of Independence up to 1967, an extent of 2,88,000 acres had been assigned to 1,15,000 persons. But during the eight years after 1967, we have assigned 7,19,000 acres to 3,69,000 persons.

Mr. Marimuthu mentioned that benami transactions are taking place under the Land Ceiling. One or two took place of course but quite a few instances had occurred in those times. Even a relative of a very prominent Minister of that era (I do not desire to mention his name) possessed 282 ordinary acres, equivalent to 141 standard acres, on 6th April, 1960. But before 2nd October 1962 he sold off 135 standard acres out of the 141 standard acres and thereby he escaped from the Land Ceiling Law. Although the stipulation was there that no-one should cheat the Ceiling Law and effect any sale during that period of two years from 6th April 1960 to 2nd October 1962, this relative of the prominent Minister went ahead with the transaction, since he was of the view, " Money comes, Appa, why leave it ?" and since he was apprehensive of the Ceiling to come. He should have been proceeded against for this before 1967 itself, but nothing of that sort was done. Only after Anna came to power in 1967 -- after the D.M.K. took over the Government in 1967 -- was action initiated for that wrong-doing.

POINT—THREE

Chief Minister : We come to the Third Point now. " The programme of providing house-sites in rural areas will be vastly expanded. Laws will be introduced to confer ownership-rights on landless labourers, who have been in occupation of house-sites of the landlords over a certain period"—This is the announcement of the Prime Minister.

A recent survey prepared by the Government of India shows that, at the time of the announcement of the Twenty Point Programme, the Law concerning conferring ownership rights to agriculturists for their house-sites was satisfactory only in the States of Bihar, Gujarat, Jammu and Kashmir, Orissa and Tamil Nadu. Even in this, Tamil Nadu was the one and only State where the agriculturists and the agricultural labourers acquired ownership-rights on house-sites free of any charge, whereas in the other States the beneficiary had to pay for the cost of the house-site before obtaining full title.

We had enacted the Tamil Nadu Occupants of Kudiyiruppu (Conferment of Ownership) Act in the year 1971 itself. Not in 1975, after the announcement of the Twenty Point Programme over the All India Radio but in 1971 itself ! The total number of pattas granted under this Act is 1,75,000. Out of these, 1,02,404 persons belong to the Depressed Classes, 40,550 to the Backward Classes and 32,123 to other Classes. The expenditure incurred by the Government on this account is nearly Rs. 21,00,000.

Under the scheme to assign house-sites from Government lands, 63,770 persons had been given house site pattas in the course of the 20 years up to 1967, by the previous regime. During the past 8 years the beneficiaries under the scheme are 5,03,697 in number.

FREE HOUSES FOR HARIJANS AND FISHERMEN

Under the programme of the Government of Tamil Nadu for the acquisition of house-sites for Harijans, 2,36,000 Harijan families have benefited so far and the expenditure incurred on this account is Rs. 4.25 crores. Apart from this, as a Point not to be found in the Prime Minister's Programme, pucca houses are to be provided to 30,000 Harijans before the close of December this year, the cost per house being Rs. 4,000. This programme is nearing completion, the expenditure in this connection being Rs. 13.30 crores.

Likewise, a sum of Rs. 2 crores has been allotted for building 5,000 houses for the fisherfolk in the first stage and work in this regard is proceeding apace. This again, does, not find a place in the Prime Minister's Twenty Point Programme.

The Slum Clearance Programme was initiated here, in 1970-71 itself. On behalf of the State Housing Board 3,220 tenements were constructed for the rehabilitation of slum-dwellers and on behalf of the Slum Clearance Board, as many as 17,019 tenements have since been completed. The number of tenements in the process

drinking water, especially in dought-prone areas"—these are important Schemes indeed and we welcome them whole-heartedly. The ground-water potential in Tamil Nadu is only 11.5 million acre feet, which is a mere 5 per cent of the All-India potential of 213.6 million acre feet. Even so, the number of energised irrigation wells in Tamil Nadu is 7,15,000 which is 30 per cent of the 24,35,000 energised irrigation wells in the whole of India.

Apart from this, on the subject of surveys of underground water resources referred to by the Prime Minister, water atlases are being prepared for each district in Tamil Nadu. So far, a sum of Rs. 7.5 crores has been spent on ground-water investigation. No assistance has been received from the Central Government for this effort.

Mention has been made of drinking water facilities. Since the year 1967, an expenditure of Rs. 14.15 crores has been incurred through Panchayat Unions for the purpose of supplying protected drinking water. 33,000 dug-wells and 4,444 overhead tanks have been constructed under this programme.

Under the Tamil Nadu Water and Drainage Board — (nowhere else in India is there such an organisation ; only in Tamil Nadu was it created in the year 1971 itself)— 7,736 schemes have been implemented since 1971, at a total expenditure of about Rs. 12 crores.

In the recent drought relief operations, the expenditure on drinking water supply alone outside the Plan was Rs. 3.52 crores. During 1975—76, the allotment for drinking water supply in drought-affected areas amounted to Rs. 7.10 crores in addition to normal Plan provisions.

Thus it would be seen that these schemes too were being implemented steadily by our Tamil Nadu Government, even before the announcement of the Twenty Point Programme.

POINT—EIGHT

The eighth Point in the Prime Minister's Programme is as follows : "Action is being taken to generate further 2,600 megawatts. Adequate funds are being provided to implement power-projects. For long-term needs, superthermal power stations under the Central Government are being planned. State Electricity Boards are being streamlined." This is a very important Point in the Prime Minister's announcement.

As far as Tamil Nadu is concerned, this Point is fraught with

problems. The total outlay for our Tuticorin Thermal Plant is Rs. 120 crores. We have spent Rs. 5 crores in 1974—75 ; and the estimate for 1975—76 is Rs. 18.67 crores. An allotment of Rs. 10 crores has already been made in the State Plan and we have applied to the Centre for the balance of Rs. 8.67 crores. Only if an expenditure of Rs. 18.67 crores in 1975—76, Rs. 53 crores in 1976—77, Rs. 30.5 crores in 1977-78, Rs. 17.5 crores in 1978—79 and Rs. 4.5 crores in 1979—80 is incurred, would this scheme be in a position to be completed in 1979—80.

Out of the large sum of Rs. 250 crores announced by the Centre for power-generation, they have allotted a mere Rs. 1 crore to us after the release of the Twenty Point Programme and this meagre allotment too has been made only after repeated requests from us.

For how long indeed has the 2nd mine cut of Neyveli been doing penance ? Even when Mr. Kamaraj and Mr. Bhaktavatsalam were in power here, the demand had been raised for a second mine-cut. Had they started the work then itself, it would have been completed only now, for the task is of seven or eight years' duration. But the work has not even been commenced.

POINT—NINE

"The policy of reservation for handlooms is being rationalised to give greater protection to weavers." This problem, relating to handloom-weavers has been discussed on many occasions here in this august Assembly. When yarn-prices ruled very high in 1974, the Tamil Nadu Government organised supply of yarn valued at about Rs. 16.5 crores through the Co-optex and the Tamil Nadu Handloom Finance Corporation to the weavers, utilising the production from the 12 Cooperative Spinning Mills. Thereby the Tamil Nadu Government rendered what aid it could to the handloom weavers.

The Prime Minister has announced that certain varieties of cloth should be reserved for the handloom. This is not a new scheme by any means ; and the Prime Minister herself has acknowledged this with graciousness when she said : "Some of them are new ; others were set forth earlier but require to be pursued with greater vigour and determination." We have no difference on this point of view.

Even when Rajaji was in power here, our State pleaded for the reservation of certain varieties of cloth such as dhotis, saris and lungies for exclusive production in the handloom sector. After the

of construction is 3,312. Thus at a cost of Rs. 17 crores more than 20,000 tenements have been constructed. This too is outside the Twenty Point Programme announced by the Prime Minister. You could chide us for initiating and implementing this when it is not found in the Prime Minister's 20 point Programme!

POINT—FOUR

The Prime Minister has announced : " We propose to take action by stages to liquidate rural indebtedness. While new schemes will be drawn up to devise alternative agencies to provide institutional credit to landless labourers, rural artisans and small and marginal farmers who own less than two hectares, there will be a moratorium on suits and execution of decrees for recovery of debts from subgroups. Debts from Co-operatives, Commercial Banks and Governments will be excluded from this Scheme."

We enacted the Tamil Nadu Debt Relief Act, 1972 in order to liquidate not only rural indebtedness but the indebtedness of those residing in the urban areas also. In the context of the recent drought, the Tamil Nadu Indebted Persons (Temporary Relief) Ordinance, 1975 was promulgated in January 1975. Under this measure, there is a moratorium for one year for the execution of suits and other legal proceedings for the recovery of debts. Although debt payments to Co-operative Societies and on Government loans do not come within the purview of this, Hon'ble Members should not forget that the same was sought on behalf of this Government and the facility was obtained for those in the rural areas that these debt payments too stand postponed for one year.

Under the Tamil Nadu Indebted Persons (Temporary Relief) Ordinance, 1975 promulgated in July 1975, Relief is provided to indebted persons who are non-agriculturists ; and no interest shall accrue in respect of debts for a period up to 15th January 1976. Thus it can be shown we had been implementing this in advance!

POINT—FIVE

" A review of the existing Legislation on minimum wages for Agricultural labourers will be undertaken and action will be initiated for suitable enhancement of minimum wages, wherever necessary." This is the Programme announced by the Prime Minister. In the year 1969, a Commission was set up under the Chairmanship of Mr. V. Karthikeyan, Member, Board of Revenue, to go into the question of minimum

wages for labour employed in Agriculture and ancillary occupations in Thanjavur District ; and we have implemented the Recommendations of that Commission. We convened a Tripartite Conference in which the Agriculturists and the Agricultural labour, the Unions and the Government participated and we arrived at a happy decision.

Now once again — after the proclamation of the Emergency and the announcement of the Prime Minister's Twenty Point Programme —we have set up another Committee under the Chairmanship of Mr. Srinivasan and this Committee is conducting its investigation. The Committee would study the position in the several districts.

In the meanwhile, it has been announced by the Central Government that equal wages should be paid to men and women. On that basis too the Committee would go into the matter and arrive at appropriate decisions in the near future for the fixation of wages for specific items of work, rather than for men-workers and women-workers as such. The Report of the Committee would be examined by the Government and the needful done.

POINT—SIX

The sixth announcement of the Prime Minister runs as follows : " Water and power hold the key to higher agricultural and industrial output. Steps are being taken to bring under irrigation at least another five million hectares of land."

Up to the year 1947— that is through the reign of the Chera, the Chola and the Pandya monarchs and later, the Britishers — the extent of land brought under irrigation in Tamil Nadu was about 44 lakh acres. In the course of the next 20 years — that is, after those ancient monarchs and the Ferringhees, right up to the close of the revered Mr. Bhaktavatsalam's reign —an additional eight lakhs of acres received irrigation facilities. During the subsequent eight years of the D.M.K. rule, a further 15 lakh acres have been brought under cultivation.

Not only that. The amount spent by the Government for new irrigation-projects after the year 1967 is Rs. 148 crores. At present, projects involving an outlay of Rs. 49 crores are under implementation. More than Rs. 62 crores worth of irrigation-schemes are pending clearance by the Government of India.

POINT—SEVEN

" Harnessing of present underground water-resources and undertaking of further surveys for irrigation and for the provision of

Thus it would be clear that we had inaugurated this scheme in March 1973 itself.

POINT—THIRTEEN

"In order to help students from poor families, essential commodities will be supplied at controlled prices to all hostels and approved lodging houses"—this is the thirteenth Point in the Prime Minister's Programme.

There are 570 hostels for Harijans and the Scheduled Tribes, with a strength of 35,782. And there are 231 hostels for students of the Backward Classes with a strength of 16,332. Essential commodities are already being supplied to these hostels at controlled prices by the Civil Supplies Corporation. We have been doing this all the while and so it is not a Point that we would oppose!

POINT—FOURTEEN

The fourteenth Point of the Prime Minister's Programme is that textbooks and stationery should be available at reasonable prices to all School, College and University students. Price would be strictly controlled and Book Banks established.

Members on the other side should consider whether, even before the announcement of the Twenty Point Programme, the Tamil Nadu Government had not evolved arrangements for setting up the Tamil Nadu Textbook Society so that textbooks to all school-classes may be printed, published and supplied solely through the Government Sector and not through the Private Sector.

Such an organisation had already been set up; and that is why we asserted boldly that we had completed the implementation of that scheme.

Every year, we are giving textbooks free of cost to 18 lakhs of children in Standards I to III and the amount spent so far under this scheme is Rs. 85 lakhs.

The publication of textbooks has been nationalised in several States in India. Scanning the statistics, we find that the sale-price per page in Rajasthan is 1.08 Paise; in Gujarat it is 2 Paise and in Himachal Pradesh 4 Paise. In Tamil Nadu, however, it is only one Paise!

Let me point out that, in the whole of India, it is only in Tamil Nadu that textbooks are sold at the lowest prices.

POINT—FIFTEEN

The next point is to provide training to educated youth under the Apprenticeship Act.

When our Minister for Labour Mr. Rajaram announced some time back that, in the matter of utilisation of Apprentices' training places, the Tamil Nadu Government had surpassed the target and achieved a utilisation of 107 per cent. I myself was surprised. Only when I went through the figures could I see that 4,264 seats had been set apart in the Private Sector establishments and 2,123 on the State Sector establishments, the total being 6,387 places.

POINT—SIXTEEN

"The practice of bonded labour will be abolished," says the Prime Minister.

As far as Tamil Nadu is concerned, we affirm that the practice of bonded labour is not prevalent here. Even if it is said that the practice is there in one or two places, the Central Government has promulgated an Ordinance ending the same. If it were to rear its head anywhere, it would be eradicated. We have no objection to this Point.

POINT—SEVENTEEN

"Special legislation for confiscation of Smugglers' properties."

This legislation should be brought forward by the Centre. Therefore the Censure Motion must be moved there and not here, where it is out of place!

POINT—EIGHTEEN

"Liberalisation of investment-procedures and action against misuse of import-licences."

I happen to know that the C.P.I. entertains some differences of opinion regarding this. Yet this House is well aware that effort on this has to be undertaken by the Centre. And so, on this Point too, the Government of Tamil Nadu has no responsibility to shoulder.

POINT—NINETEEN

"National Permit Scheme for road transport."

We have already told them that as long as it is ensured that the rights of the State are not taken away, our Government would support the measure. They have said now something about 5,700 permits for lorry, of which 200 would be for Tamil Nadu. Nothing definite has, however, been communicated to

passage of so many years — when a memorial has come up for Rajaji and two Anniversaries have been observed after his demise — the Prime Minister has stated that there should be reservation for handloom!

In this very House, a Resolution was adopted unanimously in the year 1974, to the effect that certain varieties of cloth should be reserved for the handloom sector. That Resolution was also duly forwarded to the Central Government.

At least now they have come forward to do this. The Central Minister Mr. D.P. Chattopadhyaya too sought my views on reserving standard cloth for the Mill sector. I told him in categorical terms that if that were to be done, it would ruin both handloom and khadi. All this has been made clear to them by our Government in the course of our discussions with them, long before the proclamation of the Emergency and the announcement of the Twenty Point Programme.

The responsibility for carrying it out rests only with the Centre and certainly not with the State Government.

POINT—TEN

Ceiling on Urban Land : The Tenth Point in the Programme of the Prime Minister is this : " Legislation is being initiated to impose Ceilings on the ownership and possession of vacant land, to acquire excess land, to restrict the plinth-area of new dwelling units and to socialise urban and urbanisable land."

We are those who had welcomed the proposal for imposing a Ceiling on urban property, even at the time when the matter was mooted first.

We must examine the problems related to this Ceiling. Are we to restrict ownership and possession of vacant land in urban areas ? We should find an answer to this question. Should the proposed Ceiling be on the basis of houses already constructed ; or should it be on the basis of the property-value of the houses and the vacant plots ? When all these issues crop up, there is bound to be some confusion as to the manner in which the Ceiling Law is to be formulated. I feel it is because of all this that no decision in the matter has yet been reached by the Central Government. It is only with the object of being of assistance to them when they do take a decision, that the State Government has promulgated an Ordinance on the Urban Land Tax. We have given shape to the Ordinance after taking into consideration the views

of the Members of the Legislature, through the process of discussion.

Through this step we would now itself know the aggregate holding of each person and thereby we are working out ways and means for the Centre to bring Urban Land Ceiling. This has not been done in any State. It is only in Tamil Nadu that we are preparing the groundwork for the Centre to implement the Tenth Point of the Twenty Point Programme. It would soon be brought before this House.

POINT—ELEVEN

Hunt for Black Money

The next Point of the Prime Minister's Programme is the proposal to set up special squads to prevent the undervaluation of property and for the purpose of property valuation. Punishments would also be stern for those evading Income Tax.

In the year 1973 itself we adopted a Resolution in this Assembly and forwarded the same to the Centre.

Thus, as early as 1973, we had accorded our concurrence in advance, to this the eleventh Point of the present Twenty Point Programme. And so there is no hitch in regard to this either.

POINT—TWELVE

The next Point of the Programme relates to Schemes for workers' participation in the Industries and for employee-participation in the equity-capital.

From March 1973 itself, we have been insisting on this measure being implemented, but we have not received concurrence from the Centre till date. All we got was a letter expressing appreciation of the Scheme. And now the Prime Minister has included the Point in her Programme.

The fact is that, if investment is made, workers do not have to bear liability in case of loss, but would receive share in profits. The only snag in this is that dividends should not be calculated after payment of Income Tax : on the other hand Income Tax should be paid after working out the dividend — only then would the workers get more. We addressed the Government of India to amend the Company Law and the Income Tax Act so that the guaranteed dividend payable on the shares to Employees may be treated as an admissible deductible item of business-expenditure so that it can be taken into account before arriving at the net taxable income.

picked out a few and we call those the Twenty Points !

Censure without Purpose :

Even after seeing for themselves that this Government had already commenced implementation of fourteen or fifteen Points of the Twenty Point Programme ; that it had implemented in full one of two of them ; that, during the last four-five years, it is implementing the Manu Needhi Scheme under which our Officers go to the villages and listen directly to the grievances of the people ; that in a trail-blazing endeavour, which surpasses the Twenty Points, it has started the Government Employees' Family Welfare Scheme under which as many as 2,200 families of Government Employees have been paid Rs. 10,000 each ; that it has undertaken a number of social welfare schemes such as Eye Camps, Rehabilitation of the Physically Handicapped, Rehabilitation of Widows, and Homes for Orphans ; and that, by way of demonstrating that we march along the Gandhian path, it has done what even Congressmen have failed to, namely, the enforcement of total Prohibition although it had been suspended for a while ; and that it has abolished Raffles altogether apart from putting a stop to horse-racing—even after seeing for themselves that this Government has thus gone ahead of Twenty Points, is there any meaning in their seeking to censure such a Government ?

In which other State is there a Water Board ? Is there a Slum Clearance Board in any other State ? Is there a Corporation for providing Housing to Harijans in any other State ? Asserting that the only plans are those set out in the A.I.R. Broadcast, to say that we are to be censured for not implementing them -- is there any meaning in this ?

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this Government. Nor do we know whether Ministers of that Department would meet and decide the issue. This Point is also one which the Centre has to undertake.

POINT—TWENTY

"Income Tax exemption limit, will be raised from Rs. 6,000 to Rs. 8,000 per annum"—This is the 20th Point. We have nothing to do in regard to this as it is entirely a Central affair.

And so, you gentlemen who have brought a Censure Motion saying that this Government has not implemented the Twenty Point Programme, should you not have left out at least four or five points and stated that fifteen of the Points have not been implemented? Without stopping to grasp what all come under the responsibility of the Centre and what all come under the responsibility of the State, to have brought this Censure Motion stating that the Government has not implemented the total of Twenty Points is anything but appropriate! Had you but cared to show the draft to me, I would have amended it suitably; but you did not adopt that course of action.

'MAINSTREAM' ON TWENTY POINTS

I had said at the outset that it is the earlier Ten Point Programme that has developed into the Twenty Point Programme. In this context, let me now quote from the journal Mainstream which is known to our friend Mr. K. T. K. Thangamani. Its Editor is Mr. Nikhil Chakravarthy who is believed to be a member of the C.P.I.—I presume this information is correct, for otherwise Mr. K. T. K. would have by now refuted it! The 13th Annual Number of that journal has come out; it carries a message of greetings from the President of India even; and quite a few of the Central Ministers have contributed articles to that issue. In the Editorial of that issue of Mainstream, Mr. Nikhil Chakravarthy, who is a member of the C.P.I., writes as follows about the Twenty Point Programme:

"On the programmatic plane there is noticeable advance. From mere passing of Party-level Resolutions promising Reforms (and in this respect too, one can of course claim progress from the Ten Points of 1967 to the Twenty Points of 1975) there is all-round exhortation by public leaders at different tiers of relevance, calling upon the flocks under their command to take up the implementation of the declared programme. From Resolutions to exhortations marks a perceptible advance in commitment!"

The Editor of Mainstream Mr. Nikhil Chakravarthy who is capable of this degree of sarcasm writes further about the Twenty Point Programme:

"(Central Finance Minister) Sri Subramaniam's plan for setting up Rural Banks with the World Bank funds but without taxing the rural rich, deserves the serious note of every patriotic Congressman. Those who think that the popularisation of the Twenty Point Programme is by itself a guarantee for socio-economic advance, tend to forget that the first Party to welcome it within a couple of hours of its announcement, as pragmatically realistic, was the Federation of India Chambers of Commerce and Industry, then already fortified by the Prime Minister's official assurance against further nationalisations!"

Thus has Mr. Nikhil Chakravarthy commented in Mainstream. From this alone could one understand the nature of reception accorded by the commoners to the Twenty Point Programme.

Only a Radio-Speech:

They have handed out the Twenty Point Programme without stating or coming forward to state the ways and means to raise the resources required for its implementation. As Mr. Manali Kandaswami (of the Tamil Nadu Communist Party) said, they in the Parliament conveyed praise to the Government for the announcement of the Twenty Point Programme, but did they pass any Resolution to the effect that necessary funds should be allocated for the Programme?

Or did the Centre invite all the Chief Ministers, convene a session of the National Development Council and ask, "In which of the the States are these Points to be implemented and in what manner? What has been done so far; what is yet to be done; and what is the quantum of the financial assistance required for the purpose?"

Not only that, it is the radio-speech that we have taken as the Twenty Point Programme and we are in raptures over it, saying, "Indeed, what a revolutionary Programme this!" What I ask is: "In the Programme that I read out now, which of the items is revolutionary?"

In the broadcast, Prime Minister Mrs. Indira Gandhi had also mentioned that there would be no further nationalisation of Industries. Why was this not tagged on as the 21st Point of the Programme? We have

UNITS–A GOOD INVESTMENT FOR COMMON MAN

The Unit Trust of India is being patronised by people from various walks of life. Ever since it commenced operation in July 1964 it has mobilised nearly Rs. 200 crores.

The initial capital of the trust of Rs. 5 crores was contributed by the Reserve Bank of India, L.I.C. State Bank of India and other financial institutions. With this capital, the trust has acquired interest in over 500 companies in India including many in the growth sector.

The Unit Trust pools the savings of the public and invests the funds on their behalf in productive corporate investments. It provides the common man the advantages of indirect ownership of shares and debentures of industrial concerns through the medium of the trust, and at the same time provides the unique advantages of safety of capital together with reasonable returns and ready liquidity. To operate directly in securities on the stock exchange requires constant study and analysis of market conditions and a thorough knowledge of the factors that influence share prices. This function is performed by the trust on behalf of the Unit holders to ensure safety of capital and a growing return through diversification of investments and a balanced portfolio.

Assistance to Industry

The trust provides financial assistance to industry through underwriting support to new capital issues and direct subscription to shares and debentures of industrial concerns. It also provides financial assistance to concerns in the form of bridging finance pending actual disbursal of funds by the term lending institutions in respect of loans sanctioned by them. Government's policy of reducing the non-residents' shareholdings of Foreign Companies has also opened a new avenue as the trust gets an opportunity to take up these shares.

DIVIDEND TO SHARE HOLDERS

The income from the various investments described above is distributed equitably among the unit holders after meeting the Trust's Managerial Expenses. A full year's dividend is paid to all unit holders irrespective of the date of purchase. The units can be bought by individual, residents as well as non-residents, companies, co-operative societies and trusts. A minor by himself cannot apply for units, either of his parents or his guardians can, however, purchase units on his behalf. The face value of a unit is Rs. 10 and units are sold in multiples of 10. A minimum of 10 units has to be purchased and there is no upper limit. The units are sold at the offices of the trust at Bombay, Calcutta, New Delhi and Madras and at most of the Banks and Post offices spread all over the country.

SALIENT FEATURES

Units can be sold back to the trust at any time at the ruling purchase price which, under the current policy of the trust, is increased from August 1, onwards to take account of nearness to the dividend declaration date, on the analogy of the equity shares of companies which also go up in price on a dividend basis as the dividend declaration date comes nearer. All that needs to be done is to complete the form on the reverse of the unit certificate and send it to the office of the trust from where it was issued. The money is sent by draft cheque, money order or cash as requested by the unit holder.

TAX REBATE

As an incentive to encourage savings, special tax concessions have been given by the Government. Unit holders are now entitled to exclusive tax exemption upto Rs. 2,000 per annum on income from units from income tax and upto Rs. 25,000 on their investment in units from wealth tax. Besides the re-investment plan, the children's gift plan and the unit-linked insurance plan all suit the requirements of the unit holders.

Socio-Economic Objective

The trust as a financial intermediary is serving the Socio-Economic objective of Government by providing the small investors an opportunity to indirectly own corporate securities and to assist the individual growth of the country through its investment operations. It has taken concrete steps to economic growth in the context of 20 point programme. The objective of regular and growing dividend has been fulfilled in that the trust has paid consistently from the very first year of its operations and has been able to raise the dividend from 6.1 per cent in 1964-65 to 8.6 per cent in 1974-75.

ADYAR LIBRARY AND RESEARCH CENTRE

The internationally well-known Adyar Library and Research Centre, which devotes itself to the study of Indology and the promotion of oriental learning, is one of the Dept.of the Theosophical Society. It was established in1886 byCol.Olcott to restore oriental studies and research to their proper place of importance as they had suffered greately by neglect. The Library has some 17,500 palmleaf and paper manuscripts from many countries and more than 1,50,000 books on religions, philosophy mysticism, occultism and spiritual life. It has published about 150 books on Indological subjects, and scholars from many overseas countries as well as India utilise it for research.

THE INTEGRATED CHILD DEVELOPMENT SCHEME

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SCOPE AND OPERATION OF SERVICE

Child health and nutrition occupies a crucial place in the national development plan.

Various diet and nutrition surveys undertaken during the last 4 decades in the country have disclosed three main nutritional deficiencies : protein-calorie deficiency, ironfolate deficiency and vitamin-A deficiency, especially amongst pre-school children, pregnant women and nursing mothers in urban slums, tribal areas and other backward rural areas. There is close inter-dependence between the health and nutritional status and the level of socio-economic development of a community. Again, there is close inter-relationship between general socio-economic development and population trends. The Government policy is, therefore, to view health, nutrition and family welfare as one package of inputs, constituting an integral part of the overall development strategy.

At the Prime Minister's initiative, a large programme of supplementary nutrition for pre-school children, pregnant women and nursing mothers in urban slums and tribal areas was started in the year 1970-71. By the end of the Fourth Plan, this programme covered about 4 million beneficiaries in the country. The mid-day meals programme for school going children was continued and it covered about 1 2 million children by the end of the Fourth Plan. The applied nutrition programme for promoting nutrition awareness in rural area, encouraging local production and consumption of nutritious foods and spreading the knowledge through extension techniques like demonstration and training, covered 1181 blocks by the end of the Fourth Plan. Supporting programmes of production of processed foods, health and nutrition education, immunisation, and prophylaxis against nutritional anaemia as well as blindness due to vitamin-A deficiency have also been undertaken.

Article 47 of the Constitution enjoins the State to raise the level of nutrition and improve public health. On August 22, 1974, the Government of India adopted a National Policy for children, outlining a 15-point programme, allocating priority to child health and nutrition, education and training of destitute children, care of children of working and ailing mothers and the rehabilitation of handicapped children. Improvement in the nutritional status of the community is, in the long run, dependent on increased food production, economic uplift and health and nutrition awareness of the community. The large population of children and a high incidence of mortality, morbidity and malnutrition among children have been a continuous cause of concern. Several programmes of child health and nutrition have been taken up during the previous plans. The Fifth Plan lays its thrust on an integrated approach to the health, nutritional, educational and socialisation needs of children. An integrated child development services scheme has been started on an experimental basis from October 1975.

By
MADHU SUDAN DAYAL
Director, Child Welfare Division.

The integrated child development services scheme envisages an integrated delivery of the services of supplementary nutrition, immunisation, health check-up, referral services, non-formal pre-school education, and health and nutrition education to pre-school children, pregant women and nursing mothers. The scheme further envisages convergence of the mutually supporting services in the ICDS project areas such as drinking water supply, applied nurtrition programme, strengthening of health infrastructure, prophylaxis against nutritional anaemia and blindness due to vitamin-A deficiency, education and training in nutrition through mobile food and extension units, etc.

The ICDS scheme aims at an integrated delivery of the above-mentioned services through the focal point of an anganwadi in each village and strengthening of health infrastructure so as to provide one female health worker for every unit of 5000 population and coordination of all the mutually supporting services and their implementing departments at various levels. The scheme envisages that the anganwadis will be run by local institutions such as mahila mandals, local bodies etc. This will encourage participation of the community, especially parents, in the programme. The State social welfare advisory boards and the community development programmes can play an important role in promoting and organising voluntary organisations in villages. The success of the scheme will mainly depend upon the extent of involvement of the community and voluntary organisations in this scheme. If the scheme succeeds in making an appreciable impact on the health and nutritional status of children in the project areas, it can be expanded to other areas in a phased manner.

Various health and nutrition programmes are implemented under the direction of different ministries/departments at the Central and State levels. Coordination committees have been set-up at various levels. At the central level, a Central Coordination Committee on nutrition programmes has been set-up under the chairmanship of the secretary, department of social welfare. The nutrition monitoring cell in the National Institute of Nutrition, Hyderabad, reviews the nutrition situation from time to time and the nutrition cell in the Directorate General of Health Services, Delhi, provides technical assistance to the central ministries/departments implementing or directing various nutrition programmes. Similarly, the nutrition units in the States (these have been set up in 16 States and 6 UTs) provide technical support to the nutrition programems of the State departments. Nutrition education has been included by AIR in the SITE programme. NCERT has brought out literature to promote nutrition education of the community and has done considerable work in promotion of nutrition education through class rooms. The central coordination committee coordinates the various nutrition programmes such as the special nutrition programme for pre-school children, pregnant women and nursing mothers ; the mid-day meals programme for school-going children ; the applied nutrition programme for promoting nutrition awareness and encouraging local production and consumption of nutritious foods, production of processed nutritious foods, and nutrition education and research.

P. I. B.

THE INDIAN PARLIAMENT

VOICE OF THE PEOPLE

India became independent on August 15, 1947. The Constitution of Free India came into force on January 26, 1950. Republican and Federal in character, the Constitution provides broadly for a parliamentary form of government based on universal adult franchise and the accountability of the executive to the elected representative of the people. The Parliament represents all constitutionally organised shades of public opinion at the national level and occupies a pre-eminent and pivotal position in the constitutional set up of the country. It has over the years secured a unique place in the esteem and affections of the people as the forum through which they articulate and realise their aspirations and ventilate their grievances and difficulties. Among many great achievements of free India the successful working of the Parliamentary democracy is notable.

OUR HERITAGE

Democracy and democratic institutions are not new to this country. People had a long tradition of freedom and tolerance towards differing views, creeds and ways of life. Democratic institutions like popular assemblies, and elected monarchies had been in existence in our country as early as Vedic period (3000—1000 BC). In the later period of over 16 centuries (1000 BC to 600 AD) republican form of government flourished in many parts of the country. Popular assemblies like the Samiti (meeting together of people) and the Sabha, a smaller and selected body of elders, had been functioning more or less as the Parliament for disposing of public business by debate and discussion. Besides the Samiti and the Sabha, democracy at the grass roots had thrived in the country since centuries in the form of Gram Sabhas or village assemblies. These village republics survived the end of many dynasties and the downfall of empires. The country is rich in democratic traditions and the democratic temper of Indian people has enabled the adoption of parliamentary form of government in modern times.

The growth of parliamentary institution in the country had been chequered. In more modern times, the British introduced reforms as a step for establishing contact with public opinion. Under the Indian council Act of 1861, some important concessions were made by the British Improvements in the original Council Act of 1861 in subsequent years reflected themselves in the growing demand and the maturity of people of India for self-government in the parliamentary history of the country were the Indian Council Act of 1892. Minto-Morley Reforms Act, 1909 and the Montague-Chelmsford Reforms Act (The Government of India Act), 1919.

The first legislative assembly under the Government of India Act 1919 came into being at the Centre in 1921. The reforms establishing responsible government in the Provinces, did not introduce any element of responsibility at the Centre, but these proved totally inadequate to meet the popular demand for responsible government and national opinion gathered momentum for a fully sovereign Parliament and Government responsible to it. After a number of Round Table Conferences, held in London, the Government of India Bill was introduced providing for the establishing of federation of India, uniting the Governor Provinces of what was then known as British India and the Princely States then known as Indian States. The resulting enactment, the Government of India Act, 1935 also introduced Provincial Autonomy. The system could be described as a Parliamentary system of the "controlled type". Federal legislature, under the Act was bicameral and consisted of a Council of State and the Federal Assembly called the Central Legislative Assembly. Defence and External affairs were reserved subjects and were administered by the Governor-General while other subjects were administered with the help and advice of an executive Council responsible to the legislature. The experiment served as a training ground for parliamentary democracy in the country and familiarised Indian legislatures with various elements of the modern parliamentary procedure.

After the end of the Second World War, fresh negotiations with Indian National leaders were initiated by the then Labour Government in Britain and the British Government accepted India's right to decide her own destiny. Under the Cabinet Mission's plan of May 16, 1946 a Constituent Assembly of India was formed for framing the Constitution of the country. The Assembly, although constituted on the basis of indirect elections, was indeed a truly representative and a most impressive body consisting as it did of many of the foremost leaders of the country's freedom struggle, eminent jurists, constitutionalists and other distinguished men and women in the country's public life. With the partition of the country into India and Pakistan, the Constituent Assembly became a fully sovereign body. It also assumed full powers for the goverance of the country. Under the Indian Independence Act, 1947 the then existing Central legislature was abolished and the Constituent Assembly meant for framing Constitution was also asked to function as a dominion legislature. The functions of the Assembly as a Constitution making body and legislature were separated. The draft Constitution came into force on January 26, 1950. Under the provisions of the Constitution, the Constituent Assembly became the provisional Parliament of India and it acted as such, till the first General Elections were held in 1952 on the basis of adult franchise.

The Parliament today is bicameral consisting of the President and two Houses of Parliament known as the Council of States (Rajya Sabha) and the House of People (Lok Sabha). The strength of the Rajya Sabha is fixed at a maximum of 250 members, 12 of whom are nominated by the President for their special knowledge practical experience in the fields of literature, science, art and social service. The remaining seats are allocated to various States and Union Territories in proportion

to their population. The electorate of the Rajya Sabha consists of the members of the Legislative Assemblies of the States. The Rajya Sabha is not subjected to dissolution but one third of its members retire every second year.

The Lok Sabha is constituted by direct election on the basis of adult franchise with maximum membership of 525. The elected strength is distributed among States in such a way that the ratio between the number of seats allotted to each State and the population of the State is practically the same for all States. Normal life of the Lok Sabha is five years. The period could be extended by Parliament by law, by proclamation of emergency, for a period not exceeding one year at a time and not exceeding, in any case, beyond a period of six months after the proclamation has ceased to operate.

The first Lok Sabha came into existence in May, 1952 following General Elections held in the country.

The first and the two succeeding Lok Sabhas (Second and Third) were dissolved after completing the full five years term. The fourth had a life of only about four years and was dissolved by the Presiddent on the advice of the Prime Minister on December 27, 1970. After the premature dissolution of the fourth Lok Sabha mid-term elections were held in March, 1971. These involved a total electorate of about 274 million as against 173 million in the first general election held in 1952. The Fifth Lok Sabha was constituted in March, 1971.

Like other Parliamentary democracies, Parliament in India has three cardinal functions—legislation check over the executives and ventilation of grievances. The Parliament can under certain circumstances assume legislative power over a subject falling within the State's sphere. It may legislate on matters included in the State list if the Rajya Sabha declares by a two-third majority that it is necessary and expedient in the national interest to do so. It also acquires power to make laws with respect to any of the matters enumerated in the State. List in times of emergency or breakdown of constitutional machinery in a State. The Constitution also vests in the Union Parliament, the constituent power or the power to amend the Constitution. The procedure for amendment envisages its being passed by a special majority and in certain cases, its ratification by State legislatures. The amendment of the Constitution, subject to these provisions, follow practically the same legislative process as any other legislation.

In conclusion, it may be said that democracy in India has not only struck deep roots in our country but the democratic process has shown both resilience and ingenuity in tackling the manifold challenges of building up a new society and a great nation.

The successful functioning of Parliamentary government and democratic institutions in India is not a mere coincidence because, over a quarter of a century since Independence, the country has passed through periods of stresses and strains and successfully overcome them. This is wholly due to the intrinsic soundness and vitality of the Indian experiment in democracy This has been proved time and again. For example, it was the basic strength of the Constitution and the stability of the democratic system in the country which made it possible for a smooth succession after the passing away of a great leader like Jawaharlal Nehru.

Again, it was the inherent strength of Indian democracy that enabled the country to withstand the critical days of the Chinese invasion in 1962 and the confrontation with Pakistan in 1965 and in 1971 which came in the wake of a staggering influx of about 10 million refugees from Bangladesh with all its serious and attendant consequences. Not only did the Indian people rise as one man to defend their freedom and future but this amazing unity in purpose and action was achieved without sacrificing the democratic modes and freedoms enshrined in the Constitution. Even in the darkest days of the Chinest aggression, Parliament and the Press continued to function as vigorously as ever; there were no witch-hunts and no arbitrary infringements of individual freedom.

Considering the country's political stability and its achievements in the economic and social spheres, since Independence, it can be confidently claimed that parliamentary democracy has worked well in India, and has come to stay. Not so much because the system derives its authority from the Constitution but because it has been able to fulfil and continues to echo the aspirations of the people at large.

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MUSHROOMS

Scientific Notes, And Recipes For Delicacies

MUSHROOMS are a gift of nature and are included in a group known as Fungi. The members of this group differ from other plants mainly in that they cannot manufacture their own food with the help of carbon dioxide and water in the presence of sunlight., but grow on the decaying waste parts of plants or organic matter under the shade of trees. They are called saprophytes. There are about 50,000 known species of fungi, of which around 1,000 are edible ones. The most evolved ones of this group produce conspicuous fruiting bodies for reproduction. The word mushroom is used for these reproductive, fruiting bodies or sporophores. During rainy season mushrooms are seen growing in meadows, fields, lawns and dirty places. Mushrooms are often referred to as "toadstools" also.

Use of mushrooms as food has been known through centuries. According to old tales, the Romans and Greeks considered them as food for the gods. They used to prepare various dishes with mushrooms and eat them with great gusto on different festive occasions. However, among the mushrooms there are many varieties which are poisonous but similar in shape and size to edible ones. But now mushrooms can be grown artificially, and this removes all doubts and fears of finding a poisonous one among cultivated mushrooms.

High Protein Contents

Unlike other vegetables, mushrooms have no part which need be thrown away as waste. The whole mushroom is washed and used as food. the bigger ones may be cut into two or four pieces. Mushrooms contain almost double the quantity of minerals as compared to other vegetables. They offer a higher content of proteins, twice as much as knol-khol and potatoes, nearly four times as much as tomatoes and carrots, and about six times as such as oranges. Being devoid of starch, mushrooms are an excellent food for diabetic patients and for those who do not want to increase body weight. They can be digested easily. When cooked in milk as porridge, they are an ideal diet for invalids and convalescing patients.

Mushrooms are the source of a sufficient amount of vitamins also. The important ones found in them are vitamins B and D. Some enzymes are also available in them, particularly 'trypsin' which aids digestion. Apart from these, appreciable quantities of a few amino acids like lysine and tryptophan are also found in mushrooms.

Unlike other plants, mushrooms do not produce seeds for their cultivation. They are propagated through tiny spores which are produced in innumerable numbers on the ventral surface of the fruiting body (cap) between the gills. As soon as the spores get the suitable environment of temperature and humidity, they germinate and form a cottony mass called "mycelium". The mycelium growing in soil or the decaying leaves or twigs of plants is called spawn. This is used as "seed" for cultivation of mushrooms. When such a naturally growing mycelium is collected, it is called "virgin spawn". It was used in olden days for cultivation. Later, "brick spawn" and "flake spawn" were prepared by artificial means. But now, grain spawns and straw spawns are prepared scientifically in the laboratories under aseptic conditions.

In fact, a good spawn is the first pre-requisite for a good yield of mushrooms. Recently, a Mushroom Research Institute has been opened at Solan in Himachal Pradesh which is expected to produce 60,000 spawn bottles for the benefit of mushroom growers.

On account of their high nutritive value and subtle taste and aroma mushrooms are a popular food among all classes of people. Their meat-like flavour is a great attraction to both non-vegetarians and vegetarians, but some vegetarians in India may dislike them for this very reason. The use of mushrooms as food has been restricted mainly because a number of varieties are poisonous and cannot be easily differentiated from the non-Poisonous. But now, the known edible varieties can be conveniently grown artificially.

Mushrooms can be grown for profit and pleasure, in rotation with other agricultural crops, because of the possible use in the fields of spent manure obtained from mushroom cultivation. If the mushroom spawns of Volvariella and P. flabellatus are readily made available in the market, housewives can grow them easily on paddy straw in their kitchen gardens, just like other vegetables. For growing Agaricus (button mushrooms or champignon), it would be desirable to get spawned and cased trays (ready for yield of mushrooms).

by
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Delicious Dishes with Mushrooms

Mushrooms can be used in the preparation of various delicious dishes along with vegetables, cereal and dairy products and flesh foods so as to enhance and improve the flavour of the dish. Some simple recipes with mushrooms are given below :

1. Tomato soup :

Mushroom (sliced)		1 cup
Tomato	..	10 Nos.
Onion (big)	..	1 No.
Butter	..	3 teaspoon
Cornflour	..	2 teaspoon
Sugar	..	1 teaspoon
Pepper salt	..	to taste

Scale the tomato in boiling water, peel and extract the juice without seed. Melt butter in a pan and fry the mushroom for 10 minutes

Add the tomato juice and a cup of water and cook till mushroom is well cooked.

While the soup is boiling, tie the finely chopped onion and pepper powder in a white cloth loosely and put inside the soup.

Take the bag out when mushroom is cooked.

Make a paste of corn flour in small quantity of water and add to the soup and continue boiling for 3 minutes. Remove the soup from heat add the sugar and salt.

2. Omelette :

Mushroom	..	2 cups
Onion	..	4 Nos.
Green chillies	..	4 Nos.
Bengalgram flour	..	2 cups
Coriander leaves		
Curry leaves	..	little
Salt	..	to taste
Oil	..	to fry

Chop the mushroom and onion. Cut the green chillies and coriander leaves curry leaves to small pieces. Mix all the ingredients together and add sufficient water to give a thick slurry Fry as omelette.

3. Mushroom with Vermicelli :

Vermicelli	..	100 gm
Mushroom	..	150 gm
Cheese (grated)	..	1 cup
Milk	..	2 cups
Corn flour	..	4 tablespoons
Tomato sauce/ ketchup	..	5 tablespoons
Pepper Salt	..	to taste
Refined oil	..	3 tablespoons

Cut the mushroom to small pieces and boil in less of water till cooked. Drain the excess water and keep aside. (4 if canned mushroom is used, it can be used as such. In case of dehydrated mushroom it should be cut after softening in boiling water). Mix the corn flour in the excess water drained, to get a smooth paste. Heat the oil in pan and fry the vermicelli. (Try not to break the vermicelli as far as possible)

Grease a shallow baking dish. Arrange a thin layer of vermicelli. Arrange some mushroom pieces on the top of it and sprinkle some grated cheese, pepper powder and salt powder. Once again arrange a thin layer of vermicelli. Repeat this till all the vermicelli, mushroom and cheese are finished. Care should be taken to have a layer of vermicelli on the top. Boil the milk. Add the corn flour paste and continue cooking for 2 minutes. Pour over the contents arranged in the baking dish. Bake at 375°F for 15 minutes.

Spread the tomato sauce on top and serve hot.

4. Cutlet :

Mushroom	..	15 Nos.
Potato	..	3 Nos.
Onion (big)	..	3 Nos.
Green peas	..	1/2 cup.
Green chillie	..	3 Nos.
Ground coconut	..	1 tablespoon
Red chillie powder	..	1/2 teaspoon
Turmeric powder	..	1/2 teaspoon
Ginger (ground)	..	1/2 ,,
Coriander leaves	..	little
Salt	..	to taste
Bengal gram flour	..	1 cup
Oil	..	to fry

1. Chop the mushroom and boil it along with green peas in just enough water.

2. Boil the potato, peel and mash well.

3. Finely chop onion, green chillies and coriander leaves.

4. Mix all the above prepared item along with ground coconut, ginger, chillie powder, turmeric powders and salt.

5. Divide into balls and shape them.

6. Make a paste of bengalgram flour with water and add a dash of salt.

7. Dip the shaped cutlet into the flour to get a complete coating and fry in oil.

5. Fried Mushroom.

Mushroom	..	20 Nos.
Bengalgram flour	..	1 cup
Chillie powder	..	to taste
Salt	..	
Oil	..	to fry

Boil the mushroom in minimum amount of water for 10 minutes. Add required amount of chillie powder, salt and water to bengalgram flour to give a smooth paste.

Dip the mushroom individually into this paste and deep fry in oil.

6. Khorma:

Mushroom	..	1 cup
Onion (big)	..	3 Nos.
Green chillies	..	4 ,,
Coconut ground	..	3 tablespoons
Fennel		
Coriander seed	..	1/2 teaspoon
Poppy seed		each
Cloves	..	2 Nos.
Cinnamon	..	little
Cardamom	..	3 Nos.
All spice leaves	..	2 Nos.
Refined oil/ghee	..	3 tablespoons

Chop mushroom, onion and green chillies separately. Grind fennel, coriander seed and poppy seeds together. Heat oil and add onion, green chillies, cloves, cinnamon, cardomom and all spice leaves. When the onion turns golden brown add the ground coconut, fennel, coriander and poppy seeds.

Finally add the mushroom, cook for 10 minutes, then add required quantity of water and salt and cook until the mushroom is done.

7. Baked mushroom with cheese

Mushroom	..	20 Nos.
Bread crumbs	..	1/2 cup
Cheese (grated)	..	1/2 cup
Butter	..	3 tablespoons
Pepper, Salt	..	to taste

Grease the baking tray, and arrange the mushroom cut to halves. Sprinkle the bread crumbs, grated cheese, pepper and salt on the top. Finally sprinkle melted butter and bake at 400°F for 25 minutes.

8. Macaroni—Mushroom

Macaroni	..	1 cup
Mushroom	..	1 cup
Tomato	..	3 Nos.
Onion (big)	..	1 No.
Refined oil	..	3 teaspoons
Chillie powder	..	1/2 ,,
Turmeric powder	..	1/2 ,,
Salt	..	to taste

Boil macaroni in water for 20 minutes and drain the water. Chop the tomato, onion and mushroom separately.

Heat the oil and fry the onion till golden and add chillie and turmeric powder.

Add the mushroom and tomato and continue cooking without adding any water.

When mushroom is cooked add salt and macaroni and remove from heat after 3 minutes.

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DETAILS OF SERVALAR POWER HOUSE

River Thambaraparani, known as Peyar in its upper reaches, has its origin at the high hill ranges separating Thambraparani and Manimuthar basins in the north and Kodayar basin in the south in the Tirunelveli District. The Papanasam power house now under operation harnesses flows from a total catchment area of 332 sq. km. (12' sq. m.) of the River Thambraparani and its main tributary Servalar. At present there is only one storage dam across the Thambraparani Ar there being no storage dam across Servalar which contributes nearly 40% of the total flows realised in Papanasam diversion weir (forebay for the Papanasam P.H.) The Servalar flows are wasted to a certain extent and are surplussed at the diversion wier. The Upper Thambraparani Hydro Electric Scheme which contemplates construction of a number of storage reservoirs with 6 power houses has been proposed towards avoiding this surplus to facilitate extra power generation in the Papanasam Power House and to stabilise irrigation supplies and also to harness the untapped power potential available in the Upper reaches of the Thambraparani and Servalar rivers. Of the six Power Houses, four are in Servalar Basin, one in the Thambaraparani basin and the sixth power house will harness the flows of Kallar and Karunaiar streams, tributaries of Ghatana Nadhi. The last in the series of the 4 Power Houses contemplated in the Servalar basin named as "Mundanthorai Unit" is proposed at the foot of the Servalar Dam located at about 6.4 kms. up stream of the confluence of Thambarapani Ar and Servalar. This will help to arrest the surplusses at the Diversion Weir and help to develop power potential from out of waters that were so far unutilised. In addition, this will also provide good storage so badly wanted by the P.W.D. who had themselves contemplated a storage dam across Servalar. In view of these specific advantages offered by this Unit and as the necessary hydrological data required are available readily, the Project Report on this Unit (Mundanthorai Unit) has been prepared independently.

The scheme envisages the construction of the following :

(i) A 51.21 m. high masonary dam across Servalar river to act as the main storage dam.

(ii) An unlined tunnel of length 3318 m. to interconnect the existing Thambaraparani reservoir with the Servalar reservoir.

(iii) Embedding a 4.88 m. dia power pipe in the Servalar reservoir to convey water from the dam to the power house located at the foot of the dam.

(iv) A Power House with a single generating unit of 20 MW capacity.

The power station will add 75 MV of energy annually to the grid. The scheme is estimated to cost Rs. 647 lakhs and is expected to fetch a net revenue of Rs. 65.54 lakhs per year. The scheme is expected to be completed by 1978-79.

A Panoramic view of Naduvattam H. E. S. Dam.

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What is Nellithorai Hydro-Electric Scheme ?

Under Kundah Hydro Electric Scheme Stages I to III, five Power Houses with a total installed capacity of 425 M.W. have so far been set up for generation of power, utilising the good flows of rivers Bhavani and its main tributary Kundah with the steep falls available upto Pillur Dam, this being the last dam built across Bhavani river. Under Kundah Hydro Electric Scheme—IV Stage which has been cleared by the Planning Commission and is being implemented, a third generating unit of 60 M.W. capacity and a second unit of 50 M.V. capacity will be installed at Kundah P.H. III and IV respectively, so as to generate more power especially for peaking purposes during non-irrigation season. The total installed capacity with these additions will increase the installed capacity of Kundah Hydro Electric Project to 535 M.W. The last dam under the Kundah Hydro Electric Project is the Pillur dam on river Bhavani. From here the river runs in gentle cascades upto the point where it enters plains near Nellithurai village and the fall available below Pillur dam and this point is proposed to be harnessed for power generation.

This scheme called ' Nellithorai Hydro Electric Scheme ' due to its proximity to Nellithorai Village, is located down stream of Pillur dam in Reserve Forest area of Avinasi Taluk of Coimbatore District. The Scheme is approachable both from Pillur Dam and Mettupalayam, the nearest rail head.

The Scheme envisages utilisation of a nett inflow of 1613.13 mil. cub.m (average annual) from a total catchment area of 1307.05 sq. km. of rivers Bhavani, Kundah and adjoining Kallumaiduraipallam stream. The Scheme contemplates construction of

(i) a main storage dam across river Bhavani.

(ii) a diversion weir across the adjoining Kallumaiduripallam stream

(iii) a power house on the downstream toe of the main storage dam on the left flank.

The storage dam called ' Nellithorai dam ' is proposed with F.R.L. 356.6 m. and will back upto the tail race level of Kundah P.H. IV. This dam will command a gross storage of 27.9 mil. cu.m. A small weir will be built across ' Kallumaiduripallam ' an adjoining stream and the flows from this stream will be diverted to Nellithorai Reservoir by a sort flume of 195 m. long. The Nellithorai reservoir will act as forebay and waters from this reservoir will be drawn through a 6.1 m. diam. M.S. pipe (capable of discharging a peak discharge of 169.84 cu.mecs. embedded in dam masonry to a power house located at the toe of the dam in the left flank. The tail waters from the Power House will flow back into Bhavani River through a short tail race channel. The Power House is proposed with a single unit of 50 M.W. installed capacity.

Power generation at Nellithorai P.H. will mostly follow the pattern of discharges from Kundah P.H. IV. All the Kundah Power Houses will be operated as peakload stations especially during non-irrigation season when irrigation controlled stations will be either shut down or produce only meagre power.

The power House will be connected to the Tamilnadu Grid at suitable location with 230 KV transmission line.

The scheme is estimated to cost Rs. 1003.82 lakhs and is expected to yield a net return of Rs. 87.02 lakhs per year.

Turbine and generators of the V unit at Ennore.

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A PROUD MOMENT FOR SAINIK SCHOOL

AMARAVATHI NAGAR

TAMIL NADU

Wg. Commander T. B. Srivastava, Principal, Sainik School receiving Defence Minister's Trophy.

The Sainik School of Tamil Nadu which is located at Amaravathi Nagar has bagged the Defence Minister's Trophy for the 2nd year in succession, by sending the largest number of Cadets to the National Defence Academy.

In order to provide facilities to every sector of the population in India to send up leadership material for India's Defence Forces, seventeen Sainik Schools were established in different parts of the country. Patterned on the famous public school system of England, these Sainik Schools are boarding schools which take in their pupils from VI Standard i.e. from the tender age of 9-10 onwards and after completion of High School finals these pupils are meant to sit for the entrance examination to the National Defence Academy. The grooming in these schools had been so good that the Sainik School products seem to find it easy to score in the entrance examinations or interviews for the more prestigious medical and engineering courses. "Slowly it was becoming evident that admissions to the Sainik Schools were being sought after by parents for their wards, with ambitions other than the Defence Academy. Thus the "Defence Minister's Tropy" came to be established for being awarded to the Sainik School which sent the maximum number of students to the Defence Academy each year, judged of course, only from among the Sainik Schools. So the Trophy is not to be belittled because it is being awarded for accomplishing what one is intended to viz., groom ing the young to fit into the Defence Academy. The Tamil Nadu Sainik School had won the Trophy this year by sending the largest number of cadets to the 53rd course of the National Defence Academy. On top of it, the school has the distinction of producing the top-scoring boy in the All India H.S.C. examination among all Sainik Schools for the last two years—*Ed.*

The year 1961 found independent democratic and socialistminded India giving birth to Sainik Schools with the declared aim of producing healthy and patriotic citizens who would be leaders in different walks of life. Even the children born in the lowliest of families, were to be given admission on the basis of merit, for which purpose a liberal scheme of scholarship was to be instituted on the basis of merit-cum-means, by the State/Central Governments. The policy was to have a Sainik School in each State to act as feeder institutions to the National Defence Academy and at present there are 17 Sainik Schools in the country.

Fourteen years of existence of these schools with glorious success, has amply proved the justification for which they were started. Already they have contributed about 1300 officers to the Indian Armed Forces within the nine or ten years they have been sending up pupils to take the National Defence Academy Entrance Examination. Three Service Officers deputed from the Armed Forces to work as the Principal, the Headmaster and the Registrar have the responsibility of managing the institution. These personnel serve as living examples to the Sainik School Students. Apart from the contribution to the National Defence Academy, these schools have also given as many or even more than the Army, a number of youngmen of high calibre with sound character having leadership qualities to the other public services of the country.

These schools have an all India character in as much as boys from different parts of the country come here to study, play and live together in the dormitories learning to sink all differences of caste, creed, language and religion and imbibe qualities of courage, team spirit, patriotism and above all to even cultivate a one-world outlook. Self-reliance is another quality taught from an early age to the pupils as they come to the school at a very tender age of 9/10. The school caters to the different tastes of the pupils through hobbies, clubs and associations; thus every child in the school gets an opportunity to develop his inner talents. Indoor and outdoor games and sports of all kinds at the same time give the child the much needed recreation and help it to have a healthy body and develop its physique, thus contributing to fulfilment of the aim of education—a sound mind in a sound body.

ANNUAL DAY FETE AT AMARAVATHI NAGAR

Sainik School, Amaravathinagar (Tamil Nadu) celebrated its Fourteenth Annual Day with great pomp and grandeur on 10th September, 1975. The Chief Guests on the occasion were Dr. V.R. Nedunchezhiyan, Minister for Education and Thiru S.J. Sadiq Pasha, the Minister for Electricity and Industries, Government of Tamil Nadu.

The day's programme started with an armed 'Guard of Honour' by the senior boys after the Chief Guests were garlanded on their arrival. They were then taken to the library by the Principal Wg. Cdr. TB Srivastava, where a beautifully illuminated model of the school campus was displayed. The coloured lights twinkled intermittantly as the water in the reservoir simmered and flowed into the canals. It was a beautiful sight to watch.

Later they went round the Exhibition arranged by different clubs and associations viz., Social Studies, Mathematics, Physics, Chemistry, Biology, Radio, Photography, Philately, Ship and Aero Modelling, Home Science, Art and Crafts. Both the Ministers evinced keen interest in the exhibits prepared by the students and commended their efforts.

Next they witnessed a swimming Demonstration by the pupils which commenced with a swimpast. Their performance, including different swimming strokes, life saving, diving and waterpolo was highly applauded by a large gathering of distinguished guests and parents.

The athletic events started at the school oval on the call of buglers from the top of the Fort, specially erected for the occasion. The marchpast of the athletes led by School Captain Narendra Kuar, commenced as a green signal carved a streak of trajectory in the sky. Thereafter the athletic events were conducted and the school report was read by the Principal. It high lighted the achievements of the school which had the dinstinction

SAINIK SCHOOL, AN EXAMPLE OF NATIONAL INTEGRATION

of producing the first boy amongst all Sainik Schools of the country in the All India Higher Secondary Examination for two successive years. On the Principal's request, Thiru S.J. Sadiq Pasha gave away the prizes to the winners of various events.

Afterwards the Education Minister Dr. V.R. Nedunchezhiyan presented the 'Defence Minister's Trophy' which the school had won by sending the largest number of cadets to the 53rd Course of the National Defence Academy from among all Sainik Schools. It was a thrilling moment for the inmates of the School to have gained this honour. The Education Minister in his speech said "Sainik School, Amaravathinagar sets an example for the National integration, as students from various States of the country are studying here with cordial relationship. This school fosters all the requisite qualities that are

By

Thiru B. Jayaprakasam,

District Public Relations Officer,

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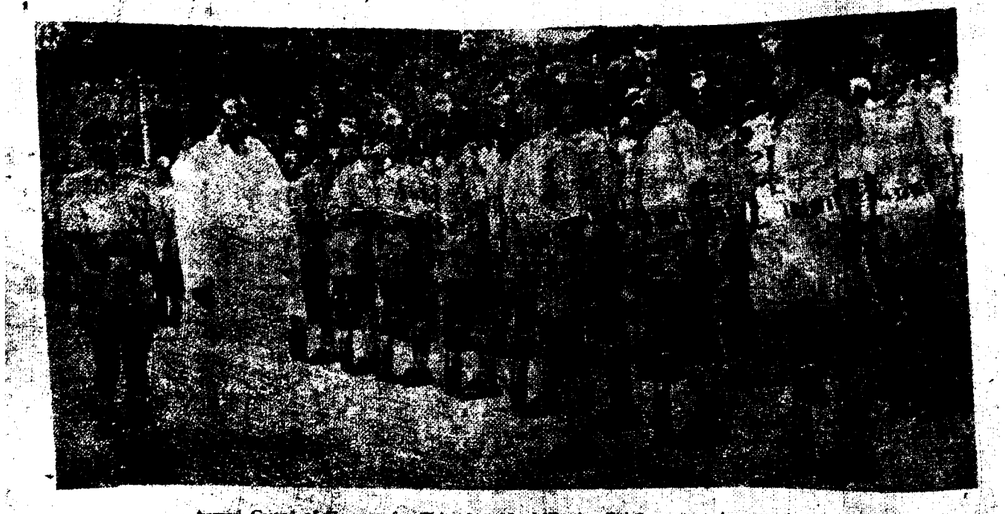

Armed Guard of Honour for Thiru V.R.N., M.E., the Chief guest at Amaravati Nagar

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essential to join the armed forces, in addition to the qualities like character-building, original thinking, discipline, physical training, dedication to purpose and patriotism. If all the 2800 High schools which are functioning in Tamil Nadu were to follow the footsteps of Amaravathinagar Saink School, I am sure that Tamilnadu will be developed in every field and people would be more prosperous."

The school band in their colourful uniform gave a fine display and finally sounded 'Retreat' on which the School Flag was lowered ceremoniously.

After a short interval for tea, the School Oval came to life again for the Torch Light Tattoo. The fort and arenas for the events were beautifully lit up as soon as the Chief Guests arrived and then, with a flash, all lights went out. The school band marched out of the Fort with lights gleaming on their caps. Their performance captivated the hearts of everyone present there.

The next items were demonstration of 'Bayonet Fight' by N.C.C. Cadets, P.T. Dance, Dumb-Bells, lezim by smaller boys followed by ground exercises, vaulting, horse work and flaming torch demonstration by Senior boys. The novelty of presenting these events in the night in floodlit arenas received thunderous ovation from the huge crowd present on the occasion. The function came to a close on a red light signal fired in the air and National Anthem played by the band.

THE EARTH WORMS OF RICE SOIL

SOME CONTROL MEASURES

Some species of earthworm are considered as a great nuisance because of their habit of castings on turf, lawns and gold greens and interestingly as early as 1947 earthworms were listed among pests of rice in the Philippines. During 1973 it was reported from Chennimalai area (Coimbatore District) that nearly 100 hectares of rice crop have been stunted badly due to reddish earthworms occurring in rice soil. The thin thread-like reddish worms measuring 5 to 7 cm long cast the earth at the base of seedlings soon after transplantation to a height of about 4 cm from the soil surface and produce a physical strangulation effect affecting tillering considerably. The worms are found in large numbers around the roots of rice plants. The poor stand of rice crop has been mainly attributed to the earthworm though it does not cause direct injury. The earthworms were identified as *Malabaria sp.* (*Ocnerodrilidae*: *Annelida*) through the kind courtesy of the Director, Zoological survey of India, Calcutta.

When the problem was brought to the notice of the Department of Entomology by the Farmers Training Centre, Coimbatore, in the earthworm infested rice field observational trials were laid out for controlling it by incorporating tobacco waste intlo the soil, by surface spray application of parathion 0.50% and fenthion 0.1% by impounding a thin film of water for two days and by incorporating into the soil endosulfan (Tnhiodan) 4% granule. It was seen that application of endosulfan 4% granule at 1 kg. a.i. /ha, or (25 kg/ha) brought about appreciable control of the earthworm and the stand of the crop became normal.

SOURCE :

Dr. T. R. Subramaniam and
Dr. B. Vasantharaj David,
Department of Entomology,
Tamil Nadu Agricultural University,
COIMABTORE-3.

CHEMICAL WEED CONTROL IN CUMBU

The farmers are aware that weeds compete with the standing crop in food and space and out grow the crop and produce loss to the farmer. Usually to eradicate weed, weeding and hand-hoeing is done. This involves labour and cost. The research study conducted at Tamil Nadu Agricultural University revealed that chemical weed control is more economical and advantageous than hand hoeing and weeding.

The researches conducted on direct sown HB 3. cumbu showed that pre-emergence application of atrazine at 0.375 kg active ingredient is highly effective and economical. The cost for chemical weeding works out to Rs. 36/- per hectare only whereas hand-hoeing and weeding costs Rs 60/- per hectare. The farmers are advised to take up the economical chemical weed control for controlling weeds of cumbu.

SOURCE: Department of Agronomy,
Agricultural College and Research Institute,
COIMBATORE-3.

HEART ATTACK AND PSYCHOLOGICAL FACTORS

Until recently people who had suffered a heart attack were scratched off the list of active, able-bodied citizens. But now medical advances, especially those made in recent years, have injected a large dose of optimism into attitudes about such people. Everyone knows that the number of heart attack victims is steadily growing; and no one is surprised to hear of men and women who have weathered even three such attacks. Through the care of therapeutists, cardiologists, climatologists these people are gradually enabled to return to normal life and work. It has become clear, however, that the aid of psychologists and psychiatrists is also essential, for, a heart attack often affects a person's mental state no less than his heart.

It has been established that about fifty per cent of heart attack victims are prevented from returning to a normal life by psychological factors alone. Some are haunted by the constant fear that their heart is going to "burst" perhaps even in their sleep. They become afraid of the night and develop insomnia. Others withdraw into themselves, anxiously charting every heart beat and change in their condition. They turn into hypochondriacs, attaching great importance to every little detail and exaggerating any deviation from what they consider to be normal. Still others react in an opposite way. They pretend that their disease does not exist at all and try to carry on with their former way of life in every way.

Psychological Disturbances

All of these reactions reflect psychological disturbances and are especially dangerous because they do not exist in isolation. They are closely connected with the physiological functioning of the entire organism. Anxiety, fear and depression inevitably produce physiological and biochemical changes. Blood pressure rises, the heart beats faster, gets less rest, and becomes overburdened. As a result, the blood circulation of the heart, already disturbed by the disease, becomes still worse, aggravating the patient's condition. This is one of the problems being dealt with by a team of specialists at the Institute of Cardiology of the USSR Academy of Medical Sciences.

To speed the heart patients return to normal living the Institute's leading cardiologists keep them under observation, apply various methods to determine the kind and degree o psychological disruption caused by the disease, and prescribe treatment. In addition, the specialists try to and prescribe treatment. In addition, the specialists try to induce the patient to adopt a proper attitude towards his condition and treatment and help him develop certain new habits and patterns of living. There are some patients, for example, who refuse to believe that smoking is harmful—"I've been smoking all my life!"—and cannot part with cigarettes, which are now particularly dangerous for him. If he is not moved by statistics, they seat him in front of a cinema screen so that he can see with his own eyes what happens to the heart and blood vessels under the influence of tobacco, and how the organism benefits from fresh air and activity. The specialists also teach the patients auto-suggestion to relieve nervous tension and anxiety.

Other Problems

All this, of course, is confined to the hospital. But for many patients the critical stage comes after they are discharged. This is understandable: the constant attentive care of the doctors is behind them; they must go out into the world and look after themselves. Despite our advice and preparation, the patient is still beset by many problems. How much should he walk? How much weight may he put on? Will his condition worsen when he returns to work? Can he return to a normal sexual life? Besides, these complex problems, difficulties arise in daily life: how can he bear walk beside his wife while she struggles along under a heavy load of groceries? How should he conduct himself in a crowded bus or train?

Here, a person's mental state assumes great importance. Those who are usually referred to as "man with a strong character can successfully cope with numerous problems of this kind, whereas a self-conscious, inhibited person cannot. The latter must be treated in a special way, particularly by the people close to him. Relatives and friends should discard once and for all any home-grown, outmoded notions such as insisting that he be less active, spend more time in bed, and avoid as much as possible the turmoil of life and people in general.

Wife's Role

The wife's role is especially important. Unfortunately, she is most often moved in the wrong direction by compassion and pity. With the best of intentions she advises her husband not to do this, that or the other thing, thus turning him into a sort of living mannequin. Once a useful member of society, the head and mainstay of his family, he now feels himself an invalid and a burden. This state of affairs must be avoided at all costs. Along with the doctor, the wife must help return not only the patient's physical health, but also his self-confidence and mental balance. This is a fully realistic goal, and one that most of our patients have achieved. Many of them now lead an active life, even including sking, swimming, etc.

Once the patient is free of the mental stresses and resultant heart pains, he is rid of nagging fear and becomes increasingly conviced of the simple truth that with proper living habits he will live!

Naturally, such "proper living habits" differ a great deal from individual to individual. There is no blanket advice covering every recovering patient. There is one general rule that can be applied, however: the fear that follows a heart attack can be overcome, and success depends to a large extent on the patient himself and his near ones.

By
VADIM ZAITSEV
Institute of Cardiology USSR Academy of Medical Sciences

WHY PEOPLE FEAR SNAKES

WHEN THEY DO GOOD TO THE COMMUNITY ?

IMPORTANCE OF SNAKES

What we know about snakes is only one side of the coin : that it is poisonous and harmful to human beings. The other side of the coin is completely obscured for the fear that we have developed for it. If we have close study with it we will understand the beneficial activities they perform to the community as a whole. Proper understanding of these creatures and their venom can be very useful to humanity and in many ways they help to compensate the losses caused by the loss of human lives by snake bites. The destruction of forests and expansion of urbanisation has already had the effects of bringing snakes out of their hiding and diminishing their number. We must remember at the same time that this loss of reptiles is a great loss to our community.

In the new emphasis on agricultural development and production, the problem of rat control is essential and it is here that the role of snakes shows its importance. Technical observation shows that snakes prefer rodents like rats as food. The vipers brought to research institutes like Haffkine are often seen vomitting a rat or two. The economic value of rattle snakes has been realised in America by reason of their destruction of small animals like rabbits, squirrels and gophers. These would otherwise have caused great destruction to agricultural fields and grazing areas. In fact many specialists caution that before any methods of rattle or other control are adopted except where safety of human life is paramount, consideration should be given to the economic aspect to find out whether depredations by rodents on agriculture are not greater than danger from the snakes themselves.

Importance of Rodent Control :

It is not realised that while the farmer is busy ploughing his fields during rains, it is the snakes who mainly control the rats. These rats do more material damage to food and health in our country than snakes. Dr. Kunhardt has estimated in 1919 that the damage caused by rats to the country in 20 years was about, Rs. 1,241 crores and that the probable " population of rats in India may be 8,000million".

As compared to the damage caused by other diseases and animals death inflicted by snakes or snake bites is very much less.

Many people in India by custom avoid killing a snake, particularly a cobra. In fact in Kerala in many houses, a part of the compound is set apart for snake worship where the snake is supposed to come and take the offerings. Possibly the idea seems to have originated from the belief that destruction of rodents by snakes prevents damage to property thus preserving and adding to Lakshmi or wealth. Sometimes gardeners ask for snakes for their gardens to keep rats down.

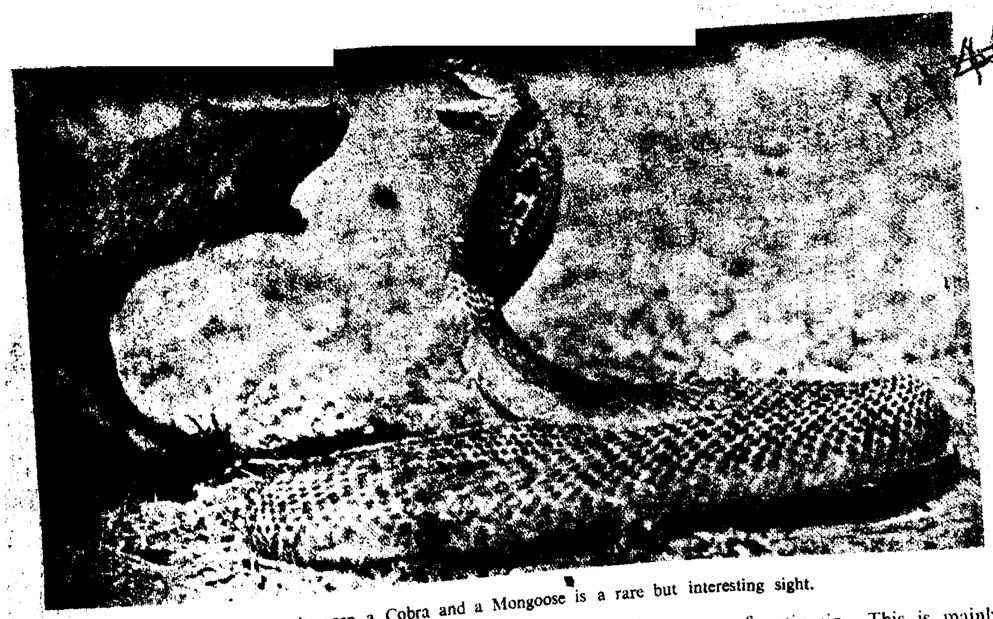
Snakes as Food :

During the last war, " chindwin " expedition survived on phython soup. Snakes, more especially pythons, are eaten as food in China and Burma. Some people in these areas consider it a delicacy. In fact now, even in America and certain Western counties, python steak is served as a special delicacy in many restaurants. Many wild tribes in Madhya Pradesh and NEFA areas also eat snakes. In certain Chinese areas even the gall-bladder is used for making wine and medicinal preparations. Some authorities consider that rattle snake meat can rank with other flesh for palatability, and many consider the meat definitely appetising. While frogs have been put for sale in India as food, snakes are yet to come. They are not yet accepted as a palatable food by most of the Indian community.

A rattle snake normally lays about 70 eggs. These are slightly bigger than the eggs of fowl and they have a softer covering and blunt ends. It has been reported that people in the wilder tribal areas eat snake eggs and like it but definite information is not available about it.

Snake Fat :

The use of snake fat for medicinal purposes is prevalent though not very common. Some Ayurvedic doctors try it for certain medicinal purposes. Experiments with this fat are being carried on for medicinal use as a substitute for other drugs. However, the use of snake oil has been practised from ancient times and was quite widespread. It was considered a well established remedy long before the



The fight between a Cobra and a Mongoose is a rare but interesting sight.

rattle snake brought it to the attention of the Europeans and Americans.

Viper snake's oil was commonly recommended for some medicinal uses in India. Later in Europe rattle snake oil was substituted for it and was more favoured.

Among the many uses of the oil are " to absorb tumours or swellings ", " for relief to frozen limbs ", " for bruises, aches and sprains ". Some authorities have however doubts about the real utility of the oil. It appears necessary for this aspect to be further experiented and verified. However, Dr. Klauber who doubted some of the supposed virtues himself tried it as a pain reliever.

Snake skin :—

Snake skins are in demand for making many things like scarfs, belts, shoes and handbags. The skins are more in demand outside India and are not so much favoured here. On the other hand in India the cast-away exuvia (skin) of snakes which is cast regularly every few months, is in demand for various medicinal purposes. It is used in all parts of India though no systematic effort has been made to see whether its use for various ailments is really effective. In Western countries the products of snake skins are quite popular and the uses to which it is put are varied like belts, wallets, purses, handbags, combcases, cigarette cases and tobacco pouches. Even articles of sport such as sports jackets, caps, neckties are sometimes made of snake skins. Snake-skin covered shoes are considered attractive and are in demand. Sometimes lamp-shades, book-covers, knife-covers are also made from snake skins.

Antivenin :—

In India snake venom is in demand primarily for the manufacture of antivenin. This is mainly manufactured at present at the Haffkine Institute, Bombay and at Central Research Institute at Kasauli.

The use of snake venom in relieving pain and certain other muscular disabilities is becoming more common. Experiments are taking place regarding its use in various ways. **The injunction of cobra venom solution has given relief from pain in a large number of patients who are suffering from meural leprosy. The use of cobra venom is also being more and more recommended in chronic pains of nervous and muscular origin, arthritis and in inoperable malignant diseases. Its solutions have even been recommended in the treatment of epilepsy.**

American medical experiments show that cobra venom solution is useful in intractable pain due to cancer, neuritis, arthralgia, neuralgia, migraine and nerve leprosy. The consensus of medical opinion there appears to be favourable about the therapeutic uses of cobra venom. Toxicity of such preparations is not great and the chief point to be kept in mind is that dosage is determined for each patient separately. The main advantage of cobra venom therapy appears to be that it is not depressing for higher centres of the brain. It can also be substituted gradually for opium in cases of narcotic addiction to that drug.

SNAKES are found all over the world, excepting the Arctic, New Zealand and Ireland. It is estimated that there are about 2,500 species of snakes in the world and they predominate in the warm climate and lush regions of the tropics. About 216 species of snakes are found in India of which only about 52 species are poisonous. The exact number of persons bitten by snakes in India is not known though it has been estimated that about 2,00,000 persons are annually bitten by snakes and about 15,000 succumb every year to snakebites.

The venom of Russell's viper can be used as a haemostatic agent on account of its coagulating principle. In cases of haemophilia and haemorrhages from other causes, graded intramuscular injections of this venom have been used with encouraging results in haemorrhages from the uterus and the retina. Its solution is frequently used by dentists to stop excessive bleeding. It is also used in a dilution as an intramuscular dose for the arrest of internal bleeding. It has been included in a standardised medicine against haemophilia.

In the homeopathic system of medicine, certain diseases like epilepsy asthma, neuralgia, neuritis, lumbago, sciaticatics, coccygodynia, laryngitis, pleurisy, debility, nerve exhausion and insomnia are considered to be curable by the venon of rattle snake. Even Krait venom is sometimes used for this purpose.

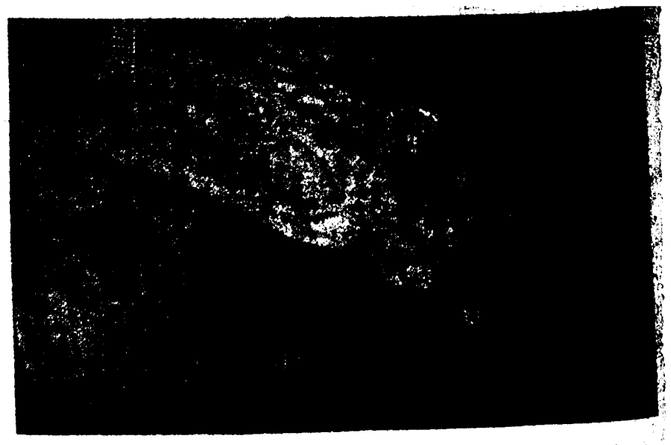
In the Ayurvedic system of medicine, cobra venom is often utilised in preparing certain Rasas considered to be a medicine for T.B.

Venoms of other snakes had also been regarded as of great medicinal value in India though it is the venom of the cobra wich is principally used.

There is popular belief in the medicinal utility and properties of the flesh as well as skin of certain snakes in most Eastern countries. The dried and powdered flesh of 'Tamool' (an inoffensive hill snake) and the Malayan 'Pamboo' have been popularly considered in that country as a remedy against leprosy. The exuvia of snakes powdered and mixed with oil of Dalbergia arborea, when applied outwardly, is considered to be of value in epilepsy. In the Unani system of medicine, the blood of snakes is also used in the treatment of leucoderma. In many parts of North India, a preparation of arsenic and dead cobra is applied externally for leucoderma and syphilitic rashes. The venom of snake also mixed in arsenic, opium and musk is sometimes used as a drug by some addicts and many considered it as a tonic. It is also used as an aphrodisiac and also prophylactic against some diseases. In popular belief, it is used as a hepatic stimulant in cholera collapse.

Enzymes :—

Venoms are a good source of enzymes. Neurotoxin has been separated from crude cobra venom. This caused the augmentation of the heart beat in toad's heart. Neurotoxin also paralyses the respiratory movements. Haemolysin which had been isolated from venom produces augmentation or depression in heart beats without causing cardiac failure. Cholinestrase isolated from the venom in high concentration slightly stimulates the heart of a toad but has practically little effect on blood pressure or on respiration in other animals like rabbits.



Extraction of a Cobra venom. The Snake is made to bite a plastic cloth tied tightly over a vine glass.

A number of other enzymes have been isolated from snake venom for important biochemical research. Some of them are hyaluronidase, ribonuclease, ophip-oxidase, phosphodiestrase, nucleotidase and lecithinase. They have already found their way in the many research projects.

It will be clear that snakes form an important and integral part in the natural structure of things in this world. No doubt there are many poisonous snakes but fatality from snake-bites is not so great as it is thought about in public nor are the majority of snakes poisonous. Moreover, there is a great deal of exaggerated fear of snake and its poison. As already indicated, the majority of snakes are non-poisonous but having no means of identifying them, bite by any snake generally so frightens the bitten patient that he is already half dead with fear. The psychological fear of snake-bite can be removed by some method by which poisonous and non-poisonous snakes can be distinctly identified.

Many normal precautions can be taken to prevent being bitten by snakes. It is first of all desirable for persons going about in areas where snakes possibly abound, to cover their legs properly with shoes. Keeping rats and frogs away from our houses also helps in keeping snakes out because rats and frogs attract snakes as they are their natural food. The keeping of peacocks in agricultural areas, the taming of mongoose and sometimes wherever possible attempts at keeping the bigger owls, falcons and kites in farms would to a great degree help in the reduction of snakes because peacocks attack and eat snakes and mongoose are natural enemies of snakes.

So also are birds like falcons and owls. One method of keeping rats away from houses would be to spray diluted carbolic acid around the houses. A concentrated solution of any insecticide or even phenyle kills a snake. Snakes can also be driven out from burrows and holes by smoke. In Rajasthan it is customary to put onion pieces in tents in the desert areas to keep snakes away though there is no definite evidence of the utility of this practice. It is possible that the pungent smell of the onions might have some effect.

If we take proper precautions and try to understand the distinction between venomous and non-venomous snakes, it will help us in utilising the majority of snake population for useful purpose for which nature has meant them.

Source : SNAKES OF INDIA
by
P. J. DEORAS.

Tamil Nadu Urban Land Tax Measure

NEW EXEMPTION LIMITS FIXED ON REPEAL OF ORDNANCE

The Tamil Nadu Government has decided to exempt the first two grounds from the Urban Land Tax where a person owns a total of five grounds of residential land or less in Madras and the towns of Madurai Coimbatore, Salem and Tiruchi. In case where the holding is more than five grounds, the entire extent will be liable to tax.

In the belt areas of Madras (falling within 16 km. of the City limits), the exemption is given to the first three grounds where the aggregate extent of residential land owned by a person is seven grounds or less. For holdings above this limit, the entire extent will be subject to the levy.

Bill to Replace Ordinance :

These are the important changes made in the Urban Land Tax (Amendment) Bill, introduced by the Revenue Minister, Mr. S. Madhavan, in the State Assembly to day to replace an Ordinance issued earlier.

The Ordinance, promulgated on July 30, sought to make the entire extent of holding liable to tax when it exceeds the exemption limit. It also made a distinction between lands used for residential purposes (including vacant lands) and those used for non-residential purposes, and introduced differential rates for the two categories. It withdrew the concession granted in the principal Act for owner-occupied buildings.

As for non-residential urban land, the Bill fixes the exemption limit at half a ground in Madras and the four towns and makes the entire extent of land liable to tax if the aggregate area exceeds it. In the belt areas of Madras, the exemption limit is fixed at one ground. (The Ordinance granted no exemption to this category).

The Bill fixes July 1, 1971, as the crucial date for the determination of market value of the land.

The following are the rates of tax applicable to Madras (other than belt area) Madurai, Coimbatore, Salem and Tircuhi.

Residential land (including vacant land) : Where the aggregate extent of land is two grounds or less-Nil ; where it exceeds two grounds but does not exceed five grounds—0.7 per cent of the market value on the extent in excess of two grounds which have the lowest market value; 10 grounds or less—one per cent of the market value on the whole extent ; 20 grounds orless—two per cent ; more than 20 grounds—2.5 per cent.

Non-residential land : Half a ground or less—Nil ; 2 grounds or less—0.5 percent on the whole extent ; 5 grounds or less—one per cent ; 10 grounds or less—1.5 per cent ; 20 grounds or less—2 per cent ; more than 20 grounds—2.5 per cent.

Belt Area:—

The following are the rates applicable to the Madras belt area :

Residential land (including vacant land) : 3 grounds or less—Nil : 7 grounds or less—0.7 per cent on the extent in excess of 3 grounds which have the lowest market value ; 10 grounds or less—one per cent on the whole extent ; 20 grounds or less—2 per cent ; over 20 grounds—2.5 per cent.

Non - residential land ; one ground or less—Nil ; 2 grounds or less—0.5 per cent on the whole extent ; 7 grounds or less—one per cent ; 10 grounds or less—1.5 per cent ; 20 grounds or less—2 per cent ; over 20 grounds—2.5 per cent.

**

HONORARY PHYSICIAN TO PRESIDENT OF INDIA.

Appointment of Dr. KHADRI.

Dr. S. K. KHADRI the famous Unani Physician of our State, the Chief Medical Officer (Unani) Arignar Anna Govt. Hospital of Indian Medicine and the Project Officer, Central Council for Research in Indian Medicine and Homoeopathy, New Delhi, has been appointed as the Honorary Physician to the President of India with effect from 7th, October 1975.

Week-long Children's Day Celebrations in Madras.

Opp. & this page

Below

On 21—10—75 the Annual Commemoration Parade of Tamil Nadu Police took place to honour all Police Personnel killed on duty.

LAYING OF PATHWAYS TO BURIAL GROUNDS USED BY HARIJAN COLONIES

In order to provide in a phased manner, pathways leading to burial/cremation grounds for needy villages or hamlets in all the districts of the State, particularly in respect of those used by Harijans, the Government have, in the first sanctioned Rs. 30 lakhs this year. It has been estimated that the State needs 12,425 Kilometers to 20,663 Kilometers of such roads to be formed at a cost of Rs. 310/- lakhs, if all the communities in the villages are to be benefited. In respect of burial/cremation grounds used by Harijans, it will be sufficient to form 5,790 Kilometers of roads benefiting 9950 Harijan Colonies at an estimated cost of Rs. 115/- lakhs. Out of this, 3166 Harijan Colonies can be provided with this facility by the formation of roads to a length of 1827 Kilometers at an estimated cost of Rs. 55 lakhs, after acquiring lands for the purpose. For the remaining 6784 Harijan Colonies, roads to a length of 3963 Kilometers can be formed at an estimated cost of Rs. 60.00 lakhs without resort to land acquisition.

In the first instance the Government have sanctioned the creation of roads to burial grounds which do not need any land acquisition i.e. 3963 kilometers to 6784 Harijan Colonies at a cost of Rs. 60 lakhs. The expenditure for this year will be limited to Rs. 30 lakhs. The district-wise break-up of the roads to be formed is given in the following statements. It is expected that after formation, the roads will be maintained by the respective Panchayat Unions.

Sl. No.	*Name of District*	*Works not involving Land Acquisition*			
		No. of works	*No. of Harijan Colonies benefited*	*Length in Kilometre*	*Cost in lakhs*
1.	Chingleput	818	818	416.30	6.25
2.	North Arcot ..	740	740	324.50	4.87
3.	South Arcot ..	1,047	1,047	458.65	6.88
4.	Thanjavur	924	924	690.20	10.35
5.	Pudukkottai ..	88	88	34.60	0.52
6.	Trichy	495	495	329.29	4.94
7.	Madurai	523	523	271.60	4.07
8.	Ramanathapuram ..	1,253	1,253	733.20	11.00
9.	Tirunelveli ..	269	269	158.00	2.37
10.	Coimbatore ..	165	165	136.60	2.05
11.	Dharmapuri ..	82	82	64.90	0.97
12.	Salem	324	324	325.10	4.88
13.	Nilgiris ..	8	8	6.40	0.10
14.	Kanyakumari ..	48	48	13.50	0.20
		6,784	6,784	3,962.84	59.45 (or 60 lakhs

Rs. 60 Lakhs Scheme

To benefit 6,784 Colonies Sanctioned

Green
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of Land to
the Poor
Slum
Clearance
Welfare of
Backward
Classes
Free Education
up to P.U.C.
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HELP THE
STATE
Despite these Achievements
Rising Population Raises Problems
SURELY YOU CAN
PLAN FOR YOUR FAMILY
PARTMENT OF HEALTH SERVICES AND FAMILY PLANN

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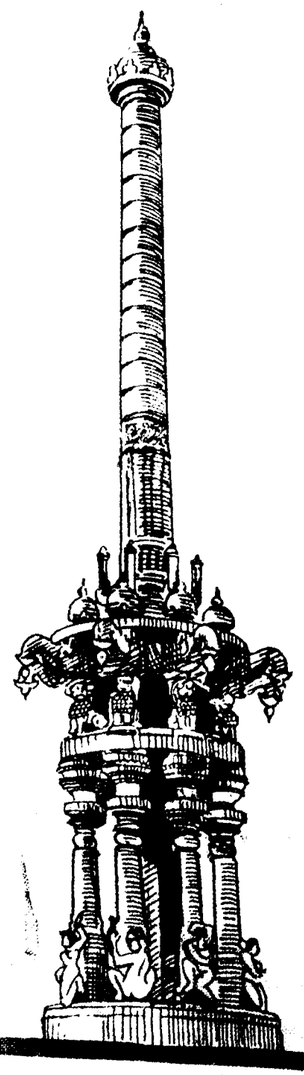
VISIT

THE ART GALLERY AT

POOMPUHAR



- Where the stones tell a tale and recapture scenes from *Silappathikaram*, the ancient Tamil classic;
- Where a city sunk beneath the wave comes glowingly alive!
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- The *piece de resistance* is the exquisitely carved statue of Madhavi, the temple courtesan.

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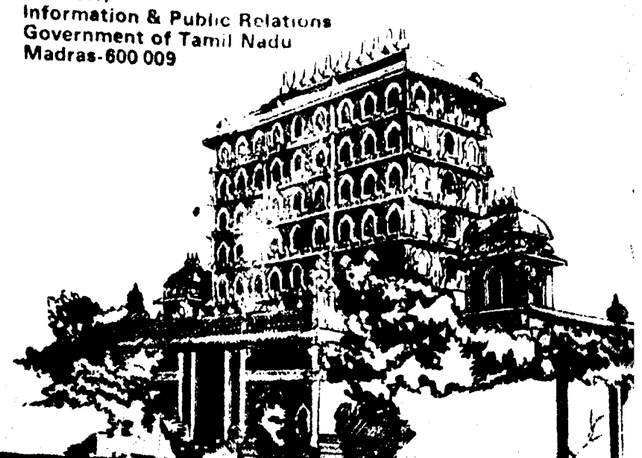

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Tamil Arasu

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ARMED FORCES FLAG DAY

The Flag Day has become an institution which reminds us of our duty to our Soldiers and ex-Servicemen.

The Central and State Governments have of course, taken a number of measures for the Welfare and Rehabilitation of ex-Servicemen. The community also has a significant role to play. It has not only to supplement the governmental effort but also to generate an atmosphere in which the Service personnel can feel assured that the entire community is backing them up.

Here, in the two pictures are seen the Governor and Chief Minister contributing to the Flag Day call and giving the lead to the community to rise to the occasion.

WOULD BEGGING ONE DAY BE KNOWN ONLY THROUGH WOOD and STONE CARVINGS

Wishes the

CHIEF MINISTER

The Mahatma Gandhi Birth Centenary Memorial Awards instituted by Victoria Technical Institute for outstanding artists of 1975 were presented to the winners at the Institute at a colourful function on 3-12-75 by Chief Minister of Tamil Nadu, Dr. M. Karunanidhi.

Thiru Mahendra of Kerala, obtained the first prize for his impressive oil painting, 'Music of Melancholy'; Thiru Subramania Achar won the second prize for his exquisite ivory inlaid rosewood table. 'Beginning of a Day' a carving in teakwood won the third prize for Thiru K. K. Valsan. Certificates of merit were given to two Madras artistes Thiru Udayashankar for his oil painting, 'Madurai Temple' and Thiru Thirunaavukarasu, for his terracott a work of "a lady's head".

"It gives me great pleasure to participate in this pleasant function held annually by the V. T. I. said the Chief Minister, and added:

When the word handicraft is mentioned it denotes the skill and efficiency of the local craftsman which results in world wide acclaim and contributes to the further development of the area.

The Government would do its best and take all measures to encourage talented craftsmen and artisans. Steps would be taken to conserve rosewood and ivory available in the State for supplying raw materials to the makers in handicrafts.

The award given for the second prize winner is for a carved rosewood table inlaid with ivory. It depicts scenes from the life of Krishna. This has been bought by a foreigner for Rs. 8,000 which gives me great pleasure since it proves how much our art is being appreciated abroad. Our country is full of legends and puranas that have been handed down to us. Such rich legends and mythology give great scope for the artist and the sculptor to show their skill of which this carved table is one such example. I do not want to go into the authenticity of the puranas. But as an art they are of great use to test the ingenuity of the craftsmen and artisans. The third piece, carved in teak with the title, 'Beginning of a Day', depicts a day in the life of a beggar. First we find him sleeping; next he is seen getting up at dawn and getting ready for the day. This simple carving throbs with life. Looking at this carving. I am much moved by it and would rather have it that the beggary in the country should also become wooden; and begging should not be present in our midxst. This is the aim of the Government. After beggary is wiped out and begging itself becomes a thing of the past, we can have them with us in wood and stone as beings who were with us once upon a time even as one learns from another carved piece that Krishna lived once upon a time; It is also my fond hope that the existence of beggars should one day be known only from carvings of stone and wood and not from life. I consider that this unique carving a harbinger of such a future.

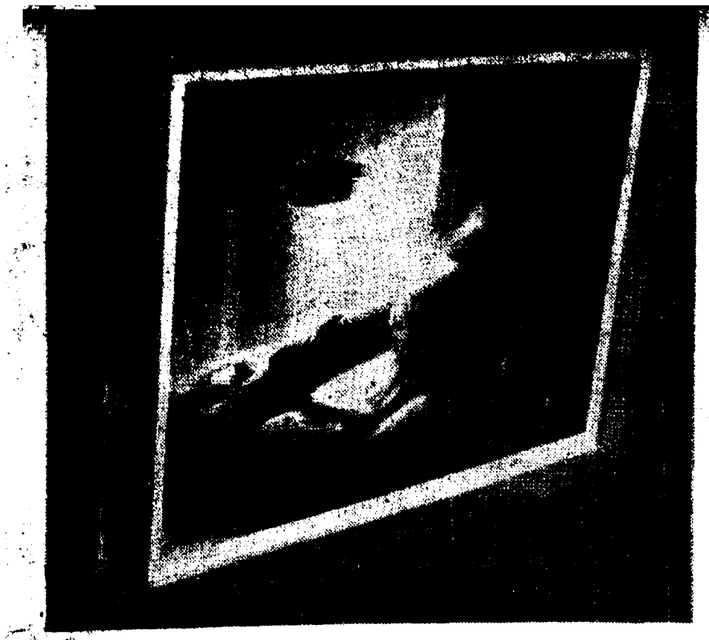
Thiru Mahindra receiving Award

How far has art developed in Tamil Nadu. How much westerners appreciate our art, could be seen in an incident. The Sivapuram Nataraja idol has not been returned to us. This goes to show how much love and affection the foreigners shower on our art. Whether it is a piece of wood carving, or done in gold or silver, the skill with which it had been created by our master-craftsmen, thousands of years ago is valued and treasured, admired and appreciated.

We see foreigners spending over thousands of rupees on our handicrafts. While I am fascinated by this unique piece of wood carving, I cannot but help recalling the numerous figurines carved in the wheels and panels of the temple cars, the sculptures and carvings, some partly demolished, some uncared for, lying about in the numerous temples all over Tamil Nadu.

When I was in the opposition in the Tamil Nadu Assembly, I had pointed this out to the then Government. In those days, there used to be a practise of auctioning old temple cars.

When Thiru Bhaktavatsalam was the Chief Minister, I as opposition member, asked him under which Head of Account the Hindu Religious Endowment Board would be discussed. I was told that it came under "Miscellany". Though it was 'miscellaneous', I considered the subject highly important and made an appeal, that the practice of auctioning old temple cars be put an end to.



During those days, there was a practise to auction old temple cars, all over Tamil Nadu. Twenty or thirty persons used to gather at the auction and saw to it that they were not auctioned for more than five or ten thousand rupees. After removing the timber portions they used to sell the figurines for 20 thousand rupees to persons in Bombay and share the 10 thousand profit amongst themselves. These from Bombay, in their turn would sell the figurines at exhorbitant prices to westerners. Even though we manufacture temple cars more exquistely and even better, the westerners will not go for them. They are particular that the figurines are ancient. They attach great importance to the hoariness, the antiquity etc., the older they are the more readily will they sell.

Such auction resulted in a great loss to the Hindu Religious Endowment Board. The loss is also great, since we find that our beautiful handi crafts are found as decorative pieces in the drawing rooms of millionaries of America, Britain, Germany and Italy. I had made an earnest appeal for the protection of these handicrafts. But it went unheeded.

After the change over of Government, today, the auction of temple cars has been put to an end and the figurines have been given adequate protection and are preserved with great care.

Today, while we admire, the exquistely done paintings and carvings and the beautiful pieces of handicrafts, we cannot help wondering at the aesthetic sense of our talented craftsmen and artisans, through whose skilled hands these have been executed."

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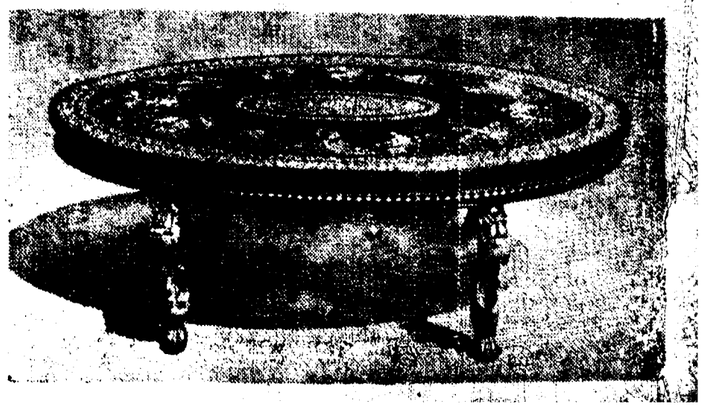

FOR THE PEOPLE OF TAMIL NADU...

In the Republic of India, Tamil Nadu has always been renowned for its multifarious welfare schemes for the people. Each programme aims at bearing fruits for a particular vulnerable section of the society. Truly, the Government of Tamil Nadu is building up an egalitarian society. Tamil Nadu is a Welfare State.

MONTHLY PENSION SCHEME FOR THE AGED

A major portion of the public do not have any pensionary benefits. The Government, which has always been concerned with the welfare of the public, especially the lower salaried classes, has introduced a new pension scheme for them. Under this scheme a 30 year old person contributes a monthly amount of Rs. 10 and is entitled to a monthly pension of Rs. 100 from the age of 55 till death. Provision has been made for the refund of principal and interest to dependents in case of death.

SPECIAL FAMILY BENEFIT SCHEME FOR GOVERNMENT EMPLOYEES

A special scheme has been introduced in order to supplement the benefits available under the pension-cum-gratuity scheme. If an employee contributes Re. 1/- every month, in the event of death while in service, a sum of Rs. 10,000 will be paid to his family. In the case of an employee retiring on superannuation or demitting office for any reason, he will be paid back the amount contributed along with interest. This scheme is applicable to all Government servants including temporary and non-pensionable post holders.

SOCIAL SECURITY SCHEME FOR BETTER FUTURE

The Social Security Scheme, 1974, extends principle of Security in old age in return for a small and regular payment during the working life to the public at large. Wage earners and the self-employed, men, women and minor children, the young and the old, can participate in the Scheme. Seven types of subscription plans which are available. Rs. 10 per/- month for 25 years or Rs. 20/- per month for 20 years or Rs. 30/- for month for 15 years or Rs. 60/- per month for 10 years will in each case earn a monthly pension of Rs.100 to the subscriber. Even if death occurs soon after the subscription period is over, the monthly pension will be paid for 30 years. Those who desire to have a monthly pension of Rs. 100 can join any one of these four plans depending upon how much they can subscribe per month and for how long they can make regular subscriptions. Every good scheme serves more than one purpose. This Scheme is a piece of financial engineering designed to promote thrift, provide social security and increase investible funds. It is like a dam which uses water to generate power and thereafter, leaves it free for irrigating.

EMPLOYEE'S PARTICIPATION IN PUBLIC SECTOR PROJECTS

Nowhere in India, a scheme has been introduced, for emplo[illegible] participation in ownership and management in the public sector. The Governmentof Tamil Nadu has taken the initiative in pioneering this. To start with, the Government has introduced the programme of employees' participation in the equity capital of State owned Transport Corporations. The uniuqe scheme of providing incentives in the form of bonus has also been introduced in the Tamil Nadu State Transport Department. Bonus is distributed for collection, punctuality, attendance, performance etc.

The following is the full text of the speech of Thiru K. K. SHAH, Governor of Tamil Nadu, at the inauguration of the First State Conference of the Tamil Kavignar Manram on the 30th November, 1975.

Bring in once again Era of EPIC POETRY

—oOo—

GOVERNOR'S CALL TO TAMIL POETS

Mr President and Poets of Tamil Nadu

I do not know how I deserved your invitation to inaugurate the First State Conference of Tamil Poets. The great cultural h[illegible] which you, poets of Tam[illegible]adu, can proudly acclaim is unrivalled not only in India or Asia, but in the whole world. You know my views on Tamizh. You know how I am struggling to remove the poison injected by politician-turned scholars about the difference of Aryans, Indo Aryans and Dravidians. **There are no languages in the world as old as Tamizh and sanskrit but Tamizh is the only language which has continued both as an ancient classical language and also as a common spoken tongue of the people, over an unbroken period of several centuries.** No language in the West has such a long history. Sanskrit has not continued as a spoken tonuge. Greek and Latin had ceased long ago to be the spoken tongues in their native homes. But I am proud to say that Tamizh still continues with all its prime vigour as a powerful language which can plumb the emotional depths of love and devotion, and rise to patriotic heights of selfless sacrifice for the cause of the Motherland.

I have spoken from several platforms that the habit of quoting foreigners to signify scholarship is a sign of weekness. Let us learn as much as we can. That is our culture but let us develop our own individuality. How can we accept the theory that sanskrit came from the West and Tamizh came from absoal ? From the East, being Scythian ? Is our civilizationmerely a few thousand years old ? Has any language developed as scientifically as Tamizh or Sanskrit ? Luckily evidence is mounting about our civilization being more than 10,000 years old. Once it is proved that ours is the oldest civilization, how can our languages be imported from outside.

Both Tamizh and sanskrit possess common striking features which no two other languages of the world possess. Sanskrit owes a tremendous debt of gratitude to South. Shankara, Ramanuja, Madhva, Chola kings, Pandya kings and Chera kings have contributed immensely to its richness. Would they have adopted if sanskrit was a foreign language or did they look upon sanskrit as an improved version of Tamizh for the benefit of the whole of India ? (E. G.) Instead of writing consonant K and using it for K, Kh, g and gh, they invented separate consonants for k, kh, g and gh, etc. **Mohenja Daro-Harappa would have thrown up some evidence to support the contrived theory of some interested scholars. On the contrary, it lends support to the theory that Tamizh was prevalent throughout the whole of India. What I request is dispassionate research and honest conclusions.**

PROPOUNDS NEW WAY OF LOOKING AT HARAPPA

Madras Down the Ages—A City of Poets

You have rightly chosen Madras as the venue of your conference. This city has a long association with poets and poetry. Tiruvalluvar is said to have lived here in Mylapore and written his immortal Tirukkural. One of the 12 Alwars, Pey-Alvar, was born here and wrote his Third Antadi of the Vaishnava canon. The miracle of the young damsel Poompavai restored to life from her ashes was wrought in Mylapore by the Saivite Saint Tirugnana Sambandha more than 1300 years ago. The great poet-Saint, Pattinattar, lived here and attained mukti at Tiruvotriyur. Coming to our own times, Saint Ramalingaswami stayed in Madras and his simple and sweet poetical compositions constitute 'Tiru Arutpa'. Subrahmanya Bharati, the great Tamil national poet, the Bard of Freedom, lived, wrote and sang in Madras and died here. Thus you have a line of poets and continuous tradition of poetry in Madras city itself.

It is remarkable that in the Tamil language all writing up to the beginning of this century had been only in verse. Prose has been a vehicle for the communication of thought even from early times in Sanskrit. Prose and verse or champu had been the common form in the Telugu language. **Only in Tamil, do we have all writing in poetry. The fact that grammar, lexicon, astrology, medicine, architecture, sculpture and similar sciences are also written in poetry proves that Tamizh had developed as a perfect language long, long ago and was nearer to civilization just as poetry is nearer to humanity.**

Tamil Epics Indicate Love of Motherland Comes first with Tamils

Epistolatory verse forms a branch of the literature of the last two centuries. Kalidasa tells us that Sakuntala wrote to Dushyanta in verse form. Silappadhikaram tells us that Madhavi wrote to Kovalan in metric lines. Some centuries later, we have a reference to a note of introduction, said to have been composed in poetry by the Lord Siva Himself to the Chera prince, introducing a songster and asking him to help him. In recent times, many poets have sent their appeals for help to theirpatrons in the form of poetic epistles.

There is no branch of Tamil literature which does not contain inherent evidence of a highly developed language. Epics like Silappadhikaram of immortal age, Kambaramayanam and Periyapuranam of the mediaeval age and Panchali-Sapadam of Bharathi of modern age are all gems of purest ray serene. Tamil is very famous for didactic poetry—from Tirukkural down to Pudiya-Attisudi of Bharati. The devotional hymns in Saivism and Vaishnavism are vast and unparalleled in the World.

You have a convention that all epics devote two chapters in the beginning to the description of the glories of the land and of the capital city. You find this feature in all epic poems from Kamba Ramayanam down to the smaller poems of the last century. Puranas in the Tamil language are legion and all of them conform to this convention. Does it not indicate that the Tamil people have been living a full life, in tune with nature ?

What shall I say of Tamil Grammar ? Along with the Sanskrit grammarians, the Tamils are the only people who have scientifically studied the science of language—alphabets, words, syntax, poetic themes, prosody and rhetoric, all these, for the purpose of memorization, have been composed probably 2,500 years ago in verse form in Tolkappiyam. The earlier book Agattiyam has been lost to us. Every effort should be made to restructure it.

Another remarkable feature of Tamil poetry is that a poem is always intended to be sung. That shows that our taste for rythm and alliteration had so developed and that our poetry was intended to touch the innermost corner of the heart. It can be so only if it makes us muse. Even today all verses are sung by learned pandits. Even mendicants hum these songs in the streets.

Women Poets

This is the international Women's Year and it is but fitting we remember the place of women among the poets of Tamilnadu. We have had a galaxy of women poets of repute. Saintly women poets have enriched our cultural heritage. Avvaiyar is the most celebrated woman poet. Even crowned monarchs bowed before her. Avvaiyar today is a household word in this country and is remembered by her ethical maxims which have stood the test of troubled times. Karaikkal Ammaiyar and Andal are besides being women saints are great literary geniuses.

It is the privilege of women to sing lullabies to children in the cradle to put them to sleep. Even today you all know our women folk are using hundreds of lines of the lullabies for this purpose in the melodious nilamburi tune. Some of them have learned the classical songs but there are others who improvise songs at the moment and sing. How many of us were lulled to sleep in our infancy by such creative genius ?

Richness of folk songs is yet another yardstick of a highly developed language. Folk songs of Tamil Nadu are replete with rhyme, assonance and alliteration. The Tamil language is rich in folk-song literature from very early times. There are any number of work-songs among rural folk. As we go along the country roads, in the early morning during the paddy transplantation period, we find music setting the pace for the transplanting work. A leader among the women engaged in the work sings a song and all the other workers follow in chorus. The singing relieves the monotony of the work and ensures quick and uniform execution of the work.

I am mentioning these to indicate how poetry and singing have been closely woven into the fabric of the lives of the people of Tamil Nadu from times immemorial.

Longest, Literary Tradition.

Poetry is something which the common man in the West shuns. What you call the man in the street does not like poetry and would always run away from it. A popular writer has remarked that poetry is the one word which will scatter a crowd more quickly than a hose-pipe, hornets, or the rumour of plague. The average lettered man there says that he does not read poetry. The picture is different in our country. Look at the engagement columns in our daily newspapers ! They are full of engagements of expositions of poetry such a as Kambaramayanam, Maha Bharata, Kural, etc. This shows

EARLIEST GRAMMAR OF THE WORLD IS IN TAMIL

Tamils have the Genius for Listening to Poetical Expositions even to-day

that even today in the 20th century, there are people who can go on expounding poetry and there are many more who can listen for hours to the exposition of poetry. This is a unique tribute to the inherent poetic genius of the people of Tamil Nadu. Exposition of poetry in the West has only an academic value. Poetry there is found only in the classroom. But here in India, particularly in Tamil Nadu, large gatherings of people collect together for listening to the interpretation of poetry. This shows that the people of Tamil Nadu are a highly sensivite, emotional and cultured intellectuals.

Tamil drama occupies unique position in Tamil poetry. We know Shakespeare wrote his plays, directed them, and acted in most of his plays. Everything were all dialogues, utterances by actors ; there were only occasional songs. Though whole plays were written in blank verse, they were merely spoken as prose and never chanted. The position is different in Tamizh. The greatest attraction about the Tamil drama is great most of it is in song. If it were prose, attendance would be very meagre in the theatres. The poems in the Tamil dramas are intended to be sung, they are indeed sung and the masses go to the drama and to the cinema, to listen to the verses and the songs that are sung.

All these indicate that poetry is in our blood. Whatever one wants to say, one tries to say it in song. No wonder Tamil Nadu has the longest literary tradition in the World.

Bharathi's Poetry

The era of modern poetry in Tamil Nadu can be said to have started with Bharati. He was the harbinger of the new wave in poetry in his day more than 55 years ago. He was soaked in the literary conventions and traditions of the ancient Tamil language. He chose some easy themes and elegant metres from and adopted them to the needs of the days of the grim struggle for freedom. He has sung on classical subjects such as devotion and mysticism, he has dealt with epic poetry and also ethics ; but we remember him today as the symbol of revolt against foreign rule, the voice of a new emerging resurgent India. The clarion call of freedom is seen in every one of his verses. His greatness lies in the fact that he took the spirit of a resurgent India through poetry to the masses. He adapted classical poetry to the common man and made him feel the urge and the elation of poetry. Only from his day did the writers begin to feel that even the greatest classic could appeal to the average man and poetry divored from the ordinary people, had no future. The Tamil people remember him with gratitude and affection for the impetus which his songs gave to the freedom struggle. The volunteers and freedom fighters fired by his immortal songs like 'Achham Illai' braved lathis and nullets with a smile. Bharathi's songs have still relevance as they can inspire us to work for our economic freedom and remove inequalities in society.

Pattimanrams of Present Day

Pattimandrams and Kaviarangams are very popular with our young men. Many young men participate in these literary gatherings. Some of them easily compose verses on the spot on given subjects to an eagerly listening and appreciative audience. The composer puts a lot of enthusiam in his utterence and adds illustrative gestures and the audience equally responds. Large responds. Large audiences for these Kaviarangams demonstrate their increasing popularity. This cannot happen unless our people have a natural poetic instinct which finds an echo in the poems recited. **How natural this instinct of expression in poetry is can be verified from the many addresses in poetry, both blank and metric, received by me as Governor**] The sentiments that they convey and the literary genius that they present are a high mark of literary perfection.

THE UNIQUE INSTITUTION OF PATTIMANRAM

Poetry and The Common Man

Our ancestors, the Naranmars and the Alwars prayed to God in exquisite tunes, composition of high literary achievements. Even grievances and petitions are presented in verse. Are they not more effective and telling ? To us it is natural to offer blessings in verse. Newly married couples are offered framed addresses in which the Almighty is invoked to bless them with long life and prosperity. Even the marriage invitations are sometimes in verse. There are others who sing welcome addresses in verse and recite their vote of thanks in verse on the spot.

It is uncommon for friends and close relatives to write elegies in verse on the death of dear and near one or on a popular personality on the spot. Some of them have high literary value and are preserved as rare collections.

Puns, conundrms and riddles are an integral part of our classical poetry. Kalamegham and Irattaiyar are outstanding examples of mastering in this important limb of effective poetry. One of the most effective ways of lingering in the memory of others is to use this art effectively.

Even advertisers use verses as their medium for attracting public notice. Hawkers and pedlars go along the streets repeating some kind of rhyme to attract purchasers for their wares. Just as democracy can succeed only if it becomes a mode of living, poetry can survive as an immortal mode of expression

HOLD ALOFT THE PURITY OF TAMIL EVEN IN THE FACE OF THE WRATH OF GOD

if people maintain high intellectual calibre and inspiring emotion and decent taste. Any one with this urge can have entrance into the great brother-hood of poets. Poetry is the real integrating force in a nation. Poetry does not know caste or creed, class or sex. Harijans had been devotional poets throughout history in this land and some of them like Tiruppanalvar are hailed as great saints. In the same way who does not know Tiruvalluvar ? No high caste appendage was necessary for him to be hailed as an outstanding saint. Ruling kings have been known as renowed poets. Poems of some of them have been included in the Saiva and Vaishnava Canons. Jains have been great grammarians and ethical writers. Bhuddhists had also written epic poetry and grammar. On the impact of the Crescent and the Cross, we are having substantial Muslim and Christian poetry respectively. A lady from Cuddalore, Pandit Asalambikai, I am told. had sung during the first quarter of this century the lives of Tilak and Gandhi as a kind of the metrical purana. Physical handicap is no bar to poetry Many blind persons have been eminent poets ; the two poets who goby the name of Irattaiyar (the cople) have been lame and blind. **The gift of poetry transcends all wordly barriers and makes a real poet, respected and adored.**

Heroic Traditions

Tamil Nadu poets are renowned for independence and fearlessness. The story of Nakkirar is an inspiring saga of bravery. When a purse of gold was to be presented to the young bachelor Dharmi in the Pandiya court, the legend says that the poet Nakirar intervened and stopped the presentation of the purse, saying that the verse brought by Dharmi was wrong in content. He said that the hair of damsels was not fragrant by nature, but only the association of flowers imparted fragrance to it and so the verse which attributed natural fragrance to a lady's hair was faulty in content. When the author of the verse zappeared in person as Lord Siva Himself and showed his anger at the affornt of the poet Nakkirar, he would not flinch. He braved the wrath of God Himself and defied Him when it came to a question of holding aloft the literary merit of Tamil. Really heroic, is the tradition of Tamizh poets.

Before I conclude, I wish to dilate on the function of poetry. Poetry is Nada Brahma. Shabha or voice becomes powerful vehicle of emotions when it is in verse. Music is scientific in content and immeasurable in strength. Melodious music represents utmost harmony in nature. Expressions in verse become power as they acquire harmony Once this harmony between thoughts as well as in expression is acquited, it acquires tremendous power and moves the innermost chords of human beings. These chords vibrate and produce indissoluble ecstasy. When emotion and rhythm combine, nature yields its secrets. That is the prime function of poetry. It is a source of joy and perennial inspiration.

Poetry enshrines Discipline

Another equally important function of poetry is the ineluctable ethical code which it lays down. Without such a code, the coherence in any society cannot last. Poetry being harmonious reveals harmony of nature which is nothing else but ethical code of conduct. And that code gives man lasting peace and a faith and a strength to face life's problems. This code is nurtured by poetry to preserve the emotional integration of humanity and nature. **Tamilians have excelled in perpetuating this exquisite art of establishing harmony and preserving the innate basis of truth, love and affection on which humanity survives.** Thus cultural heritage is a vast reservoir or inspiration. Let us be worthy of this heritage and transmit vibration of that heritage through immortal compasitions like Tirukkural for curing the ailing humanity.

TAMIL POETRY IS VEHICLE OF DISCIPLINE

Poetry for Peace and Fearlessness for Facts :

Let your motto be Peace—Poetry for Peace. Man has landed on the moon. He is now trying to probe Mars. No one can foresee if it cannot be proved that life existed on the Moon and Mars. Man thus is able to conquer new realms. But men has not conquered himself. He does not know how to love his next door neighbour and live at peace with him. When he is unable to develop this attitude of what avail is space-conquest ? Hence it is the great and sacred duty of the Poets of today the world over to propagate the gospel of Peace. Nuclear weapons pose a threat of total devastation. Poets endowned with imagination, certainly do have the wisdom to foresee what is coming. Now it is up to them to visualise the future and appeal to the peoples to tread the path of Peace.

I would like to share with you another fundamental thought. Mere lyrical poetry does not make a nation's poetry great. It is only long narrative poetry, which is sustained and which brings out all the inventive and creative genius of the nation, that makes for great poetry. Only such poetry can lay claim to classicism and only that can secure for you a lasting place in the great commonwealth of poets. I do appreciate your efforts to write lyrical Poetry out of an inner urge and an occasion demands. Yet, you should also keep great poetry an view. Generally what has been written is only in the nature of minor poems.

Aim at great epic poetry. Some day, out of all such attempts may perhaps be born a poet of the stature of Kamban.

Let me conclude with the words of Tagore. "May your minds be without, fear, and may you hold your head high." May your poems help to enrich Tamil literature.

I have now great pleasure in inaugurating this First State Conference of Tamil Poets. **

Psychiatry is an Integral Part of our Life and Social Discipline

INDIA CAN GIVE NEW MEANING TO THIS BRANCH OF MEDICINE TO BENEFIT WORLD

GOVERNOR'S CALL AT FORMATION OF PSYCHIATRY ASSOCIATION

While inaugurating the Indian Association of Psychiatrists at Madras Medical College on 1—12—75 Thiru K. K. Shah, Governor of Tamil Nadu said : I am indeed happy that the number of psychiatrists in Tamil Nadu is increasing. Now there is no longer any need for them to go to other States for Post-graduate training in Psychiatry. The Madras University and Madurai University have already started training courses in Psychiatry and Diploma in Psychological Medicine. There is M.D. Course in Psychiatry in Madras ; in addition, the Christian Medical College, Vellore, admits students for Post-graduate Diploma Course. I am glad that Psychiatric clinics have started functioning at the teaching Medical Colleges of Madras, Coimbatore, Thanjavur and Thirunelveli and in the non-teaching district Headquarters Hospital of Tirichirapalli, Salem, Cuddalore, Nagapattinam and Vellore. I feel confident that the remaining districts will take no time in having Psychiatric out-patient facilities. I do hope that this Association which is being newly formed, will promote the study and practice of Psychiatry throughout the State in a phased manner.

Let me, at the outset, draw a line of difference between Psychiatry and Psycho-analysis. Psychiatry is a branch of medicine devoted to the study of the genesis, diagnosis, prevention and treatment of emotional illness and mental disorders whereas Psycho-analysis is an analytical study of the circumstances and factors that have contributed to the mental and emotional disorders of a patient and either preparing his mind for necessary adjustments or correcting his surroundings to restore balance of his mind.

Our Religion is Psychiatry

A question is naturally asked as to why Psychiatry is not so popular in India as it is in advanced western countries. The answer is straight and simple. Psychiatry forms an integral part of our religion, daily life and social discipline. It is so ingrained in us that it has become a habit. It preevents many of us from being willing victims of the evils of material civilisation without knowing what we are doing. We are treated every day by these religious beliefs and social customs and are made to practise the art of stilling the mind as part of our spiritual discipline, since the hoary days of our ancient civilisation.

If today our Yoga system with all its emphasis on mind control has attracted the entire world, it is because it has established and pro its superiority over Psychiatry and Psychoanalysis of the Western type. I do not wish to elaborate this point further because it is common knowledge. I shall, therefore, confine myself to the subject of Psychiatry. **I must, however, admit that, if the scientific facilities of the West become available to us to explain the wonderful curative, preventive and promotional aspect of mental health that the asanas and pranayam bring about, it will open vast vistas of human happiness.**

It is estimated that about 1 1/2 crores of people in America are suffering from emotional conflicts and that they are seeking the help of Psychiatrists for remedy. It is the Psychiatrist who studies the patient's joys and sorrows, hopes and fears. It is his professional duty to find out what sort of patient he has got just as it is important for him to find out what sort of disease the patient has. A Psychiatrist is confronted with the problems of personality, maladjustments, fears, sexual maladjustments, mental incongruities, mental depressions, alcoholism, inferiority complexes and nervous breakdowns. Freud believed that neurotic behaviour stemmed from sexual conflicts. Alfred Adler explained human behaviour with his WILL-TO-POWER theory claiming that every human being strives to overcompensate in one way or another for his basic feelings of inferiority. Carl Jung emphasised man's need for religion as a cure for mental imbalances. It is the conviction of Psychiatrists — and I agree with it — that by learning to understand ourselves by cultivating consciousness, our ability to control our fears and anxieties increases and we develop an urge to be unselfish, and ultimately achieve peace of mind.

Anxiety Neurosis :

It is now admitted that greater the anxiety, greater the strain on brain. Greater the craze for change, greater the pressure on brain to adjust to every changing circumstance. Human beings do not realise that change of habit casts a strain on mind unless the mind is trained to adapt without strain. It is a good development that scientists have in their quest for human happiness are turning to the basic concept

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of religion which is common to all religions. It provides excellent opportunity for them to examine the beneficial effects of several practices to control the mind, cultivate detachment and ultimately enjoy mental peace. **They are agreed that Prayer and Devotional music are therepeutically proved to be possessive of tremendous healing and comforting powers. Music, according to our ancient theory, has a wonderful therepeutic value.** Modern science has tested its efficacy on plants and human beings. That is the reason why our Indian music is becoming more and more popular in the western countries just as our Yoga system is attracting a lot of adherents. We are now entering an era of generating energy through vibrations which are converted into light and vice versa.

As Herbert Spencer said, " it is the Mind that maketh good or ill, that meketh wretch or happy, rich or poor." Today, the external pressures on the mind of each human being are becoming so heavy that unless he looks within himself in search of some new strength or new wisdom to meet the challenges, he cannot survive for long. Harold Sherman rightly says " Man creates in mind the world in which he lives.'. Does this not demonstrate a perfect agreement with the theory of past life (Purva Janma) influencing the present life. Does not it accept the belief that life is a fight between Destiny and Divinity ? Does it not prove that all happiness and misery spring in mind and that unless you practise the art of controlling those springs, you cannot have peace ? That is why the Rig Veda says "*Ano Bhadrah Kritavo Yantu Vishvtaha*". That is why Lord Krishna in Bhagvad Geetha preached Karma Yoga. Scientists all over the world are now on the way to the acceptance of Karma theory. They are now convinced that genetics)are the source of many things and that the genetics are pre-ordained. In fact they go to the extent of saying that chance or luck does not exist in a universe which is ruled inexorably by the laws of cause and effect.

Discipline & Detachment :

Yama and Niyama which mean control and discipline are nothing else but mental exercises. We are practising physical exercises without

THE PSYCHIATRIST MUST HEAL WITHOUT HURT

training the mind which is the source of all ailments. Prayer is an attempt to draw strength from Yama and Niyama. That is why the famous Psychiatrist Dr. Simley Blanton whose article appeared in Readers' Digest some time back pleads for prayer and advised thousands of patients who had gone to him to practise Prayer. He says " In prayer, whatever the creed or denomination, one accepts the concepts of a Creator, who is the source of life and to whom one can turn in humility and trust. Here again the surrender of self is the indispensable attitude. " Not my will, but Thine be done." When this attitude is truly dominant, the results can be astonishing. Whether you choose to call it mobilising the unconscious or making contact with God, prayer is a channel through which enormous power can flow." What else is this but our Bhakti Yoga ? It settles the mind and establishes contact with your Creator. If the concepts of Shabda Brahman and Nada Brahman are understood, Psychiatrists will find a new method of treatment. It rests on the theory of your mental vibrations being immortal, wandering all over the world, ultimately grouping together and acting on your mind which has the same frequency as the group of vibrations which are yours.

Qualified and experienced Psychiatrists who handle patients have to bear in mind that even if it is not possible to preventdistrubances, the patient must be taught the art of minimising its pressure and accommodating its existence. The principle he follows is that we cannot stop rain but we can protect ourselves from it. No one can know that this own behaviour shows him as a neurotic or is filled with too much of self-love called Narcissism. He may feel unhappy that he is not getting on well in society or is not popular with people. It is given to a Psychiatrist to make him conscious of these traits without hurting him and make him realise that these traits are responsible for his unpopularity or for his losing friends. That applies to every trait in excess —Selfishness, Sarcasm, excessive health-complaining, conceit, frugality, over-aggressiveness, stubbornness, excessive criticism, shifting moods, unreasonable jealousy, emotional immaturity, vulgarity and bad manners, irritability, over-sensitiveness, excessive shyness, dishonesty, argumentativeness, untidiness, tactlessness, bad temper, lack of appreciation and unadaptability —these traits have their own reactions. It is for the Psychiatrist to measure their proportion, devise methods of balancing them and inspire the patients to transform or replace or counterbalance them.

Poverty and Mental illness

Most of the mental illnesses in a poor country like ours can be traced to grinding poverty and lack of suitable employment opportunities. Sometimes, a Psychiatrist cannot suggest remedy. In suc chases he must wisely analyse variousfactors of the mental illness of a patient and give him hope and encouragement. This is not a very easy task. It requires enormous patience, tolerance and a helpful attitude. I do hope that this Association which I now have the pleasure of inaugurating, will plan out new paths in the study and practice of Psychiatry and combine them with our age old wisdom enshrined in Yoga. You must always remember that our indigenous systems of medicine and Yoga are perennial sources of wisdom and inspiration. Draw as much as you can on them. They will not fail you.

You have my best wishes.

Help people keep Mind Clear

Health Minister Tells Psychiatrists

PEOPLE MUST BE PREVENTED FROM RESORTING TO ILLOGICAL TREATMENT OF MENTAL DISORDERS

Thiru K. S. Bhushanam, President of the Association in his welcome address observed that though modern science had advanced very much, psychiatry and psycho-therapy have still to make an impact on the common man. People not only in the villages but many in the cities also held on to various vague beliefs such as the existence of evil spirits controlling body and mind. As long as this state of affairs existed, the patient with mental illness would not be considered as having a disease, which could be treated but would be considered as having been afflicted by the "devil." Therefore illogical methods in an effort to drive out the so called "devil" were being practised in various parts of the country. As such he pleaded for wider publicity being given not only for the recognition of mental illness wherever it occurred but also for the spread of knowledge regarding the availability of psychitaric help.

Health Minister's Speech

In his Presidential address, the Hon'ble Health Minister, Prof. K. Anbazhagan stressed the fact that a man is differentiated from the animal world only by the fact that he possesses a mind and can reason with it. **As such, the mind had to be kept free from confusions which directly resulted in mental diseases. Stating that a wide variety of reasons were responsible for the production of mental illness or diseases, the most important aspect of any disease was the study of the mind which was highly sensitive to a reception of ideas, attitude, behaviour, people and to the environment.** As such, the mind had to be kept in a clear state to prevent diseases or illness. It was towards this end that people in the olden days resorted to meditation, prayers and various other means which in later days tended to be abused with overtones of superstition. Observing that modern medicine did not fully cater to the requirements of the mind which got disturbed even during physical illness, he pointed out that in the ancient systems of Indian Medicine, this fact was recognised by the early Indians. The Siddha system of medicine, was unique in that, it took into consideration the fact that the mind had to be nurturned as carefully as the body was being tended. The Minister commended the practice of Homoeopathy and advised medical graduates of allopathic medicine to study the effects of various drugs obtained in the Indian systems of Medicine and put these into use in their day to day practice. He made a special plea for the study of the effects of various herbs and other indigenous medicines in order that they could be made use of. Even accupuncture, he stressed, originated in India but came to be refined in other countries and was making a come-back as a sort of "imported stuff." As proof of his thesis he pointed out that some traditional practitioners of acupuncture could still be found practising in parts of Tirunelveli District.

ELECTRONIC ACUPUNCTURE

An electronic device by two scientists has been jointly developed by Dr. Mathew George, orthopaedic surgeon of the Ernakulam General Hospital, and Prof. M.N. Nampoothiripad of the Department of Electronics of the local St. Albert's College. which not only kills pain but obviates the use of expensive drugs and antibiotics.

Experiments conducted on about 200 patients at the General Hospital so far had yielded "wonderful and encouraging results" in killing pain as well as curing orthopaedic complaints like backache (lumbago), neck pain (spondilities), shoulder pain (periarthritis), knee pain (ostio-arthritis) and the like.

The scientists have named the therapy as "mycrolytic therapy" since it involves electrolysis with a very small measure of current obtained from a dry cell battery. The idea has been derived from the Chinese acupuncture treatment. In acupuncture, electric charge is generated while rotating the needle slowly during insertion into the body.

A searching electrode current of the order of 150 microamperes is applied and points where there is pain are located by the electrode and the measuring meter which is part of the instrument. The experiments are still going on. So far no untoward reaction has been found.

Perhaps this is the only instrument, which monitors the operation visually as well as audibly. All the components used to the sleek and attractive prototype are indigenous as also its design. It costs a little over Rs. 1,000 and can be carried in a brief case.

PROPER COUNSELLING THE NEED OF THE HOUR

We have to look around ourselves and see the plight of our friends and ourselves to be convinced of the fact that human energy is wasted, lives are misspent and misery results from the lack of direction and from the unwise selection of educational opportunities, of recreation, of occupation, of companion and of spouse. Having made a wrong selection, one stands bewildered and perplexed.

Need for Guidance :

A considerable variety of problems and difficulties are experienced by young people, who do not have any source of guidance to find answers to the questions that arise in their minds. The difficulties may be intellectual, arising out of some conflict or contradiction between what they believe and what they hear or see being practised. These may generate doubts, undermine their confidence in themselves or their faith in society. Some times the difficulties may be emotional, arising out of failure to understand how to adjust their feelings and emotional reactions to the demands of their parents, their teachers or their fellow students. The emotional problems may even be deeper, arising out of maladjustments in social life, or in relationships with other people. A third group of difficulties may be in relation to their future. The adolescent is conscious of the fact that he is growing up. He is inevitably assertive, and resistant to parental authority. This resistance may become generalised to even other forms of authority such as the school, the college, the police and the like. There are other factors like the complexity of the society, individual differences, economic disparities, rapid industrialization, urbanisation, technological advancements with their concomitance, employment of women in large numbers, religious and caste prejudices, rapidly increasing population, broken home, changed family pattern, lack of guidance at home, and the realisation of the inadequacy of class room instruction to meet the extra-instructional needs of the students, warrant the need of a guidance programme.

Various reasons have been given in order to highlight the need of guidance. Many critical situations arise in our lives when important and far-reaching decisions should be made and it is very necessary that some adequate help is provided in order that these decisions may be made wisely. We have to look back to ourselves to find the strange paths we have adopted to get to our present professions.

Types of Guidance :

Various authorities have given their classifications. According to Peterson, Williamson and others there are five types of guidance.

1. Educational guidance.
2. Vocational guidance.
3. Personal guidance.
4. Health guidance, and
5. Economic guidance.

Jones in his book "Principles of Guidance," lists six phases of guidance. He calls those as :

1. Vocational guidance.
2. Course, curriculum and School guidance.
3. Civic and Moral guidance.
4. Social guidance.
5. Leisure time and Vocational guidance.
6. Leadership guidance.

Purposes of Guidance :

Erickson has listed six important purposes of Guidance :

(*a*) Careful study of individual.

(*b*) Informational Services.

(*c*) Counselling.

(*d*) Placement and Follow up.

(*e*) Assisting the teachers.

(*f*) Coordination.

It requires a volume, to write on the benefits derived out of a guidance programme. To be precise, the definition given by Traxler and North serves the purpose. They observe, "Ideally conceived, guidance enables each individual to know his abilities, interests and personality traits, to develop them as well as possible to keep them flexible in order to meet the demands of a fluid environment, to relate them to his life goals and to clarify these goals, and finally to reach a state of complete and mature self guidance as a desirable citizen of our democratic social order and of the world."

Benefits of Guidance Programme :

Psychological counselling for the youth aims at the achievement of integrated personality in the youth, enabling him to see that much of what society expects of him, is for his own good and that in essence what is good for others is good for him too. The enlightenment of conscience is thus inseperable from the integration of personality in youth. A constructive programme of youth counselling will thus include actions, individual as well as collective, which promote the common good and foster in the mind of the youth, a desire to engage in socially useful activity. It cannot be forgotten that today, under conditions of modern social life, the problems of the teenager are coming more and more to the forefront.

Hence it is but incumbent on us to realise fully that the need of the hour is to have a psychological counsellor in every educational institution.

By
G. RAJ MOHAN
M.A., D.G.C., D.H.M.S.,

THE INSTITUTE OF NEUROLOGY MADRAS

India, on the threshold of Independence had drawn up plans for the economic and social development of the country. Technology and Science were given priority. Medicine got its due recognition and many medical officers were sent abroad for training in specialized fields.

The Government of Tamil Nadu, known to have many " firsts " to its credit in the various fields, was the first to take credit for starting the speciality in brain surgery in the country as early as 1950. Even at that time, the Government of Tamil Nadu embarked on a policy of expansion of medical facilities, selected medical officers to go abroad for training in various specialities. One such was brain surgery, for which a trainee was deputed to U.K., *viz.*, Dr. B. Ramamurthi.

Until 1950, surgery of the nervous system was practised only to a very small extent in the General Hospital. However, on his return in 1950, Dr. B. Ramamurthi was asked to organise a separate neurosurgical unit. With only ten beds and one half of an operation theatre made available to him, one day in a week, the Department of Neurology and Neurosurgery has now grown into an imposing multi storeyed complex, achieving international eminence.

The neurology institute houses the neuroradiology section. Neuropathology, EEG, EMG, Echoencephalography, Isotopearadiography, Neuro-chemistry etc., a well-equipped library, a well maintained museum, auditorium etc. The nerve centre of the building are the two main operation theatres, the Intensive therapy ward and the E.E.G. and E.M.G. rooms.

All modern diagnostic and operative facilities have been provided.

Today it is well known for the :

1. National and international character of patients with neurological illness.
2. The highly complicated and modern operations that are being performed.
3. The Post Graduate courses of training in surgical and medical neurology.
4. The quality of scientific papers presented at National and International meetings and published in various journals.
5. The research work undertaken under the auspices of the Madras State Research Committee, Indian Council of Medical Research and P.L. 480 funds.

The department has also the following to its credit :

1. The first E.E.G. (Electro-encephalograph) machine to be brought into the country.
2. The first to start P.G. courses in neurology and neurosurgery.
3. The only head injury centre in the country.
4. Intensive and extensive work in the field of stereotaxic surgery, *i.e.*, depth surgery of the brain, which has attracted the attention of workers in the field in Japan, the U.K. and U.S.A.

Extensive basic research is being carried out in the various laboratories. In the neuropathology section, brain tumours have been induced by clinical methods in nearly 300 mice for the first time in India in a strain of mice not used for such experimental purposes before. This work is expected to add current knowledge in the causation of the production of the much dreaded disease, cancer ; another field of work where much research has been done in this section is in the field of neurotoxins. A detailed study of the changes in the brain in toxins, such as organophospharon, oleander and methyl alcohol poisoning has been made.

Yet another field of work where newer knowledge has been gained in the study of changes in the brain in head injury. Knowledge gained in these areas has afforded considerable help in the diagnosis and management of patients with head injuries.

These constitute a few examples of the work that is carried on in the Institute in which progress appears to be the byword.

The late Dr. A. Lakshmipathi, denoted a sum of Rs. 1.80 lakh for the Neurology block, and the block has been named after him. The Government of U.K. has donated equipment worth £ 30,000. The U.S. authorities under P.L. 480 and the Indian Council of Medical Research are helping by generous grants for research.

It was due to the keen interest taken by the then Chief Minister Arignar Anna, that the construction of the block was taken up. This farsighted decision was made possible by the keen enthusiasm shown in the project by the present Chief Minister Dr. Kalaignar M. Karunanidhi, who was the Works Minister at that time.

Posterity will remember for ever these three stalwarts (Dr. Lakshmipathi, Arignar Anna and Dr. Kalaignar) who made a dream come true and today, Tamil Nadu is in the forefront in the advancement in the Neurological sciences. —R.B.

MADRAS NEUROLOGY INSTITUTE HOSTS INTER NATIONAL SCIENTIFIC MEET ON ITS 25TH BIRTH DAY

The Madras Institute of Neurology celebrated its 25th Anniversary by holding an International Scientific Meet at which several papers of scientific value were read and discussed. In addition to the Scientific Congress the 10th Annual Conference of the Middle East Neurosurgical Society was also conducted at the same time, under the patronage of the Hon'ble Chief Minister of Madras Dr. M. Karunanidhi, the Hon'ble Prof. K. Anbazhagan, Minister for Health and Hon'ble Dr. Nedunchezhian, Minister for Education between 10th to 12th November 1975. The inauguration which was held at Rajaji Hall was marked by an impressive and illuminating ceremony at which 57 foreign delegates from abroad, many with their families and 65 Delegates from many parts of India, participated.

Talented Staff

Dr. B. Ramamurthi, Head of the Department of the Institute of Neurology, Madras Medical College, while welcoming the delegates and other participants, indicated that it was a special achievement on the part of the Institute of Neurology to have not only completed 25 years of useful service to patients but also to have made significant contributions to academic knowledge. The nearly 700 papers published by the various staff members of the Institute testified to the academic achievements of the Institute. He added that it was a matter worthy of note that a large number of trainees in this Institute had not only gone to several parts of India but also to many countries in the world. He was particularly grateful to the enlightened Govt. of Tamil Nadu for having given all facilities for the development of this Institute.

Dr. Willem Luyendijk (Netherlands), Dr. Watanabe (Japan), Dr. Sorour (Cairo), Dr. Taptas (Greece), Dr. J. B. Foster (United Kingdom) and Dr. B. Pertuiset (France) and Dr. Kelly (United Kingdom) congratulated Dr. B. Ramamurthi on his pioneering efforts in the field of Neurology in India and extended their greetings and good wishes. Dr. P. N. Tandon (Delhi), Secretary, Neurological Society of India reviewing the contributions made by Dr. B. Ramamurthi towards establishment of the Institute observed that in him, young surgeons had a glorious example to emulate.

Resume Furnished by :

DR. R. SARASA BHARATI, M.D., F.I.C.A.,

Professor of Neuropathology, Madras Medical College

and

Neuropathologist
Registry of Neuropathology
Peripheral Cell-Indian Council of Medical Research.

Dr. N.O. Ameli (Teheran) giving the inaugural address of the 10th Annual Conference of the Middle East Neurosurgical Society recalled that several thousand years ago, Teheran had sent some of their own Doctors to India to learn from the Indian Scientists and also had caused translations of several Indian books of scientific value to be carried out and brought back to Teheran.

Inaugurating the Silver Jubilee Celebrations of the Institute of Neurology, Dr. M. Karunanidhi, Chief Minister of Tamil Nadu observed that in the medical field, Madras State had always been in the forefront of service and teaching. Though 25 years may not be a long time in a nation's history, in the development of science or a man's life, it could be used as a span to measure achievements. He further observed that the growth of advanced specialities of Medicine and Surgery had been commendable in Madras because of the interest and enthusiasm shown by the medical scientists here with the close help and cooperation of the public and the Government. One speciality which developed early had been the speciality of brain surgery and Neurology. The set up of the Institute was largely due to the far sightedness of Agrignar Dr. Anadurai, Former Chief Minister of Tamil Nadu who in fact was mainly responsible for the creation of the Institute.

Chief Minister's Tribute

The Chief Minister was particularly happy that the Institute of Neurology over the years had contributed to the development of Neorology and Neurosurgery not only in the City but also in the whole of Tamil Nadu. He further observed that the uniqueness of the Institute lay in the fact that it housed all the different disciplines of Neurological Sciences under one roof

The Chief Minister commended the energy, enthusiasm and dynamism of Dr. B. Ramamurthi, which were directly responsible for the growth and development of a small unit into an Internationally famous Institute of Neurology. He congratulated Dr. B. Ramamurthi and his colleagues on the excellent work that had been done over the past 25 years and wanted the delegates who

had arrived from all over India and the rest of the world to make their discussions purposeful and successful.

Prof. K. Anbazhagan, Minister for Health in his prsidential address congratulating Dr. B. Ramamurthi and his staff for their excellent work but for which the Institute could not have either grown or obtained an Interational reputation, pointed out that the arrival of a large number of foreign delegates to the Institute showed the esteem in which the Institute was held by Neurologists the world over.

Dr. M. Natarajan, Principal, Madras Medical College, Madras proposing a vote of thanks observed that the number of publications that have come from the Institute of Neurology was easily the highest in any particular Department in the Madras Medical College.

The scientific sessions got off to a fine start with an excellent presentation on direct surgery of intracranial aneurysm by Dr. Suzuki of Japan who had operated on more than 100 cases of such aneurysms. 12 scientific sessions spread over 3 days were held in different halls simultaneously, where over 50 papers were presented and discussed at length. The feature of this meeting was that the presentation of the various papers were made exclusively by delegates from abroad and the sessions were chaired by notable Indian Neurologists.

Trigeminal neuralgia a condition in which intense pain is felt in various parts of the face by a patient as a result of disturbances in certain nerves, was discussed at length by Dr. Voris from the U. S. A., and Dr. Petty from Australia.

Dr. Walsh, Neurosurgeon from the United Kingdom gave an interesting talk on a subject of current interest "Spasmodic Torticoflis" i.e. abnormal movement of the head and neck.

Psychosurgery and Schizophrenia, Stereotaxic surgery and Parkinsons disease (Shaking palsy) and various newer techniques in operative procedures were also considered and well discussed.

Useful and sometimes elaborate discussions followed the presentation of each paper and newer ideas newer knowledge and newer methods of approach in the diagnosis, management, surgery and treatment of patients were obtained. An additional feature was the discussion on certain diseases peculiar to the tropics. An useful suggestion was made by Dr. Adoylye from Nigeria who indicated that a symposium on Nervous diseases of tropical interest would benefit most of them.

An important part of the meet was a Symposium on Neuro Traumatology held under the auspices of the World Federation of Neurosurgeons which was chaired by Dr. O. Sorous of Egypt. The problems in the fields of Head Injury and Spinal Cord Injury were considered at length and the basic aspects raised intracranial tension and other similar important facts were discussed in detail.

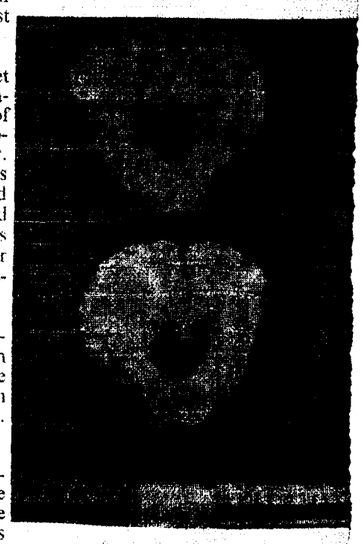
A very exciting film on Microneurosurgery, a technique which involves the use of the microscope to tie up delicate blood vessels in the brain was shown by Dr. K.K. Jain of Switzerland.

On the last day of the Conference the Delegates visited the Institute of Neurology and were taken around the various sections such as Electroencephalography, Electromyography, Neuropathology, Neurochemistry, Neuro-Radiology, Neuro-Ophthalmology and Neuro Physiology. The research work done in these various sections in adition to those in Neurology and Neurosurgery were observed and appreciated by the delegates.

The concluding sessions was marked by an exceedingly thought-provoking lecture on 'The Place of the Academic Unit in Neurosurgery" by Dr. R. Kelly (U. K.), Dean of the Institute of Neurology, Queen's Square, London who observed that the features indicated in his lectures were already available in the Institute of Neurology, Madras and thus the Institute had not only chalked out a place for itself in world Neurology, but in fact had become an outstanding example for other neurological centres to follow.

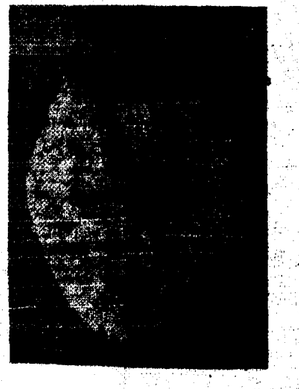
The Institute Day Oration was delivered by Dr. P. N. Tandon in which he drew attention to the enormous difficulties and handicaps faced by the Neurosurgeons and Neurologists in India despite which much had been achieved.

The Delegates who were feted well were also given useful souvenirs to carry away as momentos of their visit to the Madras Institute of Neurology.



Head Injury with Cerebellar Haemorrhage.

Head Injury with bleeding over The Brain.



Kodaganar Reservoir Scheme of Madurai District

T3 14

Means Water for the "dry" taluks of a fertile district

The Kodaganar reservoir scheme in Madurai District has been completed and awaits formal inauguration.

The surplus waters from the Kodaganar river used to overflow into the Amravati. A major portion of the Kodaganar, traverses the dry areas of Dindigul, Vedasanthur and Karur. If this heavy flow were arrested and utilized for irrigation purposes, additional acres could be brought under cultivation. The agriculturists of Vellianai were clamouring for a reservoir, so that they could irrigate their dry lands. This long felt need of theirs has now taken shape into the Kodaganar Reservoir.

KODAGANAR

The river Kodanagar originating from the Eastern slopes of Tower Palani hills, runs through Dindigul Vedasandur Taluk of Madurai district towards North and traverses in Karur Taluk, Tirichi District and finally joins with Amaravathi near Karur town. The length of the river is about 109 K. M. (68 Miles). It runs through the dry area of Vedasandur and Karur Taluks. The hydrology of the river has been examined earlier and few proposals for utilising the lows have been framed.

The total catchment area of the river is 2,173 Sq. K.M. (839 Sq. Miles). The catchment area of the river is influenced by both South-west and North-east monsoon. The river floods during October and November. After November, the flow dwindles down and upto May the flow is meagre not to speak of uncommon floods. The catchment area of the river is included by the rainfall stations at :—

1. Kodaikanal
2. Dindigul
3. Vedasandur and
4. Aravakurichi.

Existing Irrigation :

The river has fourteen anicuts along its run. They have got a direct ayacut of 1,310 H.A. (3,236.15 Acres). The impounding of water by Kodaganar Reservoir scheme will not affect any lower down irrigation interests as there is a heavy surplus of water available in this basin after meeting its requirements for its registered ayacut.

History of the Scheme :

The People of Vellianai, Karur Taluk were repeatedly requesting for the implementation of this scheme. The Scheme has been finalised after detailed investigation.

Scope of the Scheme :

The Scheme provides for formation of a Reservoir besides excavation of two canals, one on either side with sill at 195.00 M. (639.8 Ft.) to irrigate a new area of 2,080 H. a. (5,140 acres), to bridge a gap of 144 H. a. (356 acres) and to assure supply to an existing ayacut of 331 H. a. (819 acres).

The ayacut benefitted district-wise are as given below :—

	New	*Gap.*	*Stabilisation.*
Madurai District.	2,230 Ac.	..	..
Tiruchi District.	2,910 Ac.	356 Ac.	819 Ac.
Total :	5,140 Ac.	356 Ac.	819 Ac.

Hydrology.

Rainfall :

The catchment of the proposed reservoir is influenced by North-east and South-west monsoons and there are four rainfall stations. Out of which three are within the catchment area and the other one is near the catchment area. The dependable yield for all the rainfall stationed as per dry damp-wet method was prepared and the same is adopted for yield computation.

	Average catchment.
1. Kodaikanal ..	0. 18 M. Com./Sq. K.M.
2. Dindigul ..	0. 10 do.
3. Vedasandur ..	0.064 do.
4. Arvakurichi ..	0.062 do.

The surplus from Kodaganar at the confluence point of Amaravathi river, after meeting the requirements of existing cultivation at a duty of 6 Acres/M. Cft. is 54.9 M.

Cum. the quantity required for the existing ayacut under the Amaravathi channel below the confluence of Kodaganar is about 35.67 M.Cum. for 7.559 acres. By assuming that half of the requirement would be met by the flow from Kodaganar and also taking into account the new proposal as for 7.41 M. Cum., the net surplus is 29.08 M. Cum. The selected site is just near Alagapuri Anicut, the twelfth anicut in the river. Allowing 7.41 M. Cum. for 3 Minor works under execution and three other minor schemes under consideration in the higher reaches, the balance yield available for utilisation is 21.6 M. Cum. (765 M. Cft.) Hence the storage of 21.6 M. Cum. (765 M. Cft.) can be thought of this being the net yields available at the site. The capacity of the reservoir will be 12.3 M. cum. (434 M. Cft) and will have 1-3/4 fillings.

Maximum Flood Discharge :

The maximum flood discharge from the catchment area works out to 1,295 cumecs (45,000 c/s) adopting Ryve's formula with a value of 750 for 'C'. To dispose off the flood, it is proposed to construct Surplus Regulator of Five vents, each 12.2 M x 3.05 M (40' x 10') size. Basin type energy dissipating arrangements have also been provided. The cost of spillway works out to Rs. 67.00 lakhs.

Crop requirements :

The new area proposed for irrigation will have single crop of paddy. The cultivation season is from October to February. The catchment and the ayacut of the Reservoir are influenced by North-east monsoon. The soil throughout the area is clayloam and red earth mixed with clay which is suitable for paddy cultivation. A duty of 7-1/2 acres/M.Cft. for the new ayacut is adopted.

HEADWORKS

Salient features :

The scheme proposed is to form a Reservoir of about 12.3 M. Cum. (434 M. Cft.) capacity across Kodaganar river in Vedasandur taluk of Madurai Dist. The site is about 10 K.M. (6.3 Miles) north of Vedasandur. A metalled road leads to the site proper. The latitude and longitude of the site are 10° 35'-32" east and 77° 58'-24" North. The nearest Railway station is Dindigul, which is at a distance of 33 K.M. (20 Miles) from the site.

ECONOMICS OF PROJECT

Spillway and Earthdam :

Maximum flood discharge	1,295 cumecs (45,000 cusecs).
Crest level of spillway	192.00 M. (628.86 Fl)
Length of Spillway portion	73.15 M. (243 ft.)
Length of Earthdam	2,425.00 M. (7,956 ft.)
Top width	4.7 (M (16 ft.)

Front slope 2:1 and 2-1/2:1 below 6 M from T.B.L.

Rear Slope. 2:1 and 3:1 below 6 M from T. B. L.

Sluice :

	Sill level.	*No. of vents.*	*Discharge.*
Left side Canal.	195.00 (639.80 M. Cft)	One	1.3 cumecs (46.4 cusecs)
Right side Canal.	do	One	4.6 cumecs. (161.5 cusecs.)

Ayacut Proposed :

(Ha./Acres)	*New*	*Gap*	*Stabilisation.*
Right side canal	1,405/3,470	144/356	331/619
Left side canal.	675/1,670	..	

FOOD PRODUCTION

From the new areas o 224 ha. (5496 acres) at 0.8 tonne/acres. (including gap of 144 ha. (356 acres)	4,396.8 *Tonnes.*
From the stabilisation of 331 ha. (819 acres) at 0.5 tonne/acre.	409.5
Deduct for acquisition of land at 0.25 tonne/acre for dry lands and at 0.8 tonne/acre for $\frac{1089.08 \quad 62.67/4 \quad 0.8}{4}$	(--) 322.4
Total net production	4,483.9 or say 4,484

Total cost of the scheme	Rs. 212.00 lakhs.	
Cost of one tonne of food production works out to :	212.00 lakhs/4484	: Rs. 4,728.00
Cost per acre :—		
The cost per hectare	Rs. 212.00/2555	Rs. 9292.00
The cost per acre.	Rs. 212.00/6315	Rs. 3352.00

Land Acquisition :

The total land to be acquired for the scheme is 466 ha. (1151.75 acres) for headworks, the total land acquisition is 383 ha. (760.75 besides 38 tiled houses, 93 huts and 92 wells are also coming under submersion. For canals the land acquisition is about 153 ha. (391 acres) the nature, classification etc, of land, houses etc., required for the scheme are given in a tabular form below :—

Left side canal :

There will be two supply channels taking off at L. S. 880 M (2,886 ft) and 1,425 M. (4,675 ft). from the Reservoir. The left side canal is 9 K. M. (56 Miles) in length. The canal is aligned on contours so as to irrigate lands on one side only since the terrain permits only contour canal. A balanced depth of cutting is adopted. There are nine nos. of sluices in the left side channel to irrigate 675 ha. (1670 acres) of ayacuts. The first reach of the left side canal is from 0 to 5 K.M. and the section is 3.1 x 0.61 M. and the second reach is from 5 K. M. to 9 K. M. and the section is 2.4 x 0. 61 M. The villages benefitted under the canal are (1) Kalvarpatti and (2) Periamanjuvali.

Right side canal :

The right side canal is aligned on contour canal and it takes off at L.S. 1425 M (4675 ft.) The total length of the canal is 48 K.M. (30 Miles). There are 22 nos. of sluices in the right canal. The total ayacut proposed under this canal is 1830 ha., (4045 acres) which includes a new ayacut of 1405 ha. (3470acres) and gap of 144 ha (356 acres) besides stabilisation of the existing ayacut of 332 ha. (819 acres) under four tanks. The villages benefitted are (1) Pallappati and (2) Koombur.

The first reach of canal is from O to 12 K. M. and the section is 2.7 M x 1 M and the second reach is from 12 K. M. to 43 K.M. the Canal section is 1.9 M. x1 M. The third reach of the canal is from 43 K.M. to 48 K.M. and the section of canal is 1.6 M x 0.8 K.M. There are three nos of drops at L.S. 47.2 K.M. 47.4 K.M. and 47.65 K.M.

The right side canal is proposed to be lined with cement concrete 1 : 4 : 8 as the soil is very porous and the length of the canal is as long as 48 K.M. The side and the base are provided with cement concrete libs of 7.5 cm. X 7.5. cm. at 2 M. intervals. The loss in transmission in the right side canal will be utilised for bringing under cultivation a new ayacut of 920 acres.

Estimate and Programme of execution :—

The scheme was sanctioned Govt. on G.O. Ms. No. 1296, P.W.D. dt. 23-8-1973 for Rs. 212.00 lakhs. The scheme estimate is technically sanctioned for Rs. 233.2 lakhs. in Chief Engineer's (Irrigation) Madras No. 7F/1973-74 it is programmed to complete the Head works in 640 days commencing from 1.4.1974 to 31-12-1975. Foundation stone was laid by the Honourable Chief Minister of Tamil Nadu on 25-8-1973 at Uppida Mangalam. The Secretary, PWD, inspected the works on 1-8-1974. The Honourable Minister for works also inspected the works on 2-3-1975. For execution of this scheme a special Division with three sub-divisions with Head Quarters at Dindigul was formed on 19-12-1973 on completion of the office Building at Vedasandur Camp, the Office was shifted on 16-9-1974 to Vedasandur.

Present stage of the Scheme :

All quarters are completed and occupied. Earthdam left and right Regulator are nearing completion. Necessary urgent action are being taken to celebrate the inauguration function of the scheme and to commission the dam shortly. In addition of Special Division for Canals with three sub-divisions with Karur as head quarters was formed on 21-10-1974.

RETURN ON THE PROEJCTS

The total extent of the ayacut benefitted is 2,080 ha. (5140 acres) of new ayacut, 144 ha. (356 acres) of gap and 331 ha. (819 acres) of existing ayacut.

The presentage of return on direct charges without and with betterment levy works out to 0.554 and 0.810 respectively. The return on the Project is, however, only 0.324% at the tenth year of completion of the Project if arrears of interest is also taken into account.

Reservoir.		*MRS Units*	*FPS Units.*
Catchment area	..	1,670 Sq. K.M.	645 Sq. Miles.
M.W.L. and F.R.L.	..	200.25 M.	657.00 ft.
T.B.L.	..	202.75 M.	665.00 ft.
Capacity at F.R.L.	..	12.3 M3.	434.00 M. Cft.
Water spread area	..	492. H.a.	1,216 acres.
Spillway :			
No. of vents and size. 5 Nos.	..	12.2 x 3.05 M/40' x 10'	
Crest Spillway	..	192.00	628.86
Maximum flood discharge	..	1,295 cumecs.	45,000 C/s
General :			
Total ayacut benefitted :			
New	..	2,080 hafi	5,140 ac.
Gap	..	144 ha.	356 ac.
Stabilisation	..	231 ha.	819 ac.

Details.	*Patta*		*Garden Acts.*	*Porom-boke Acs*	*Tiled Houes.*	*Huts*	*Wells*
	Dry acs.	*Wet acs.*					
1. Head works	634.45	62.67	63.63	558.15	38	93	92
2. Left Canal.	49.00	..	..	..	..	..	..
3. Right Canal.	342.00	..	..	..	..	..	..
4. Total.	1025.45	62.67	63.63	558.15	38	93	92

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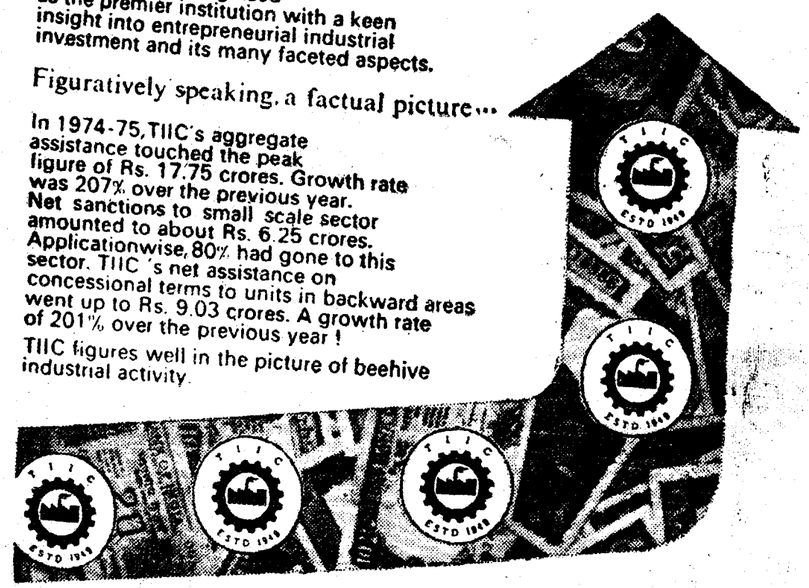

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DIETING WITHOUT TEARS FOR DIABETICS

Madras Doctors Prove Rice is no "enemy" of diabetes

It is still widely believed that rice should be totally avoided by a diabetic and instead, he should eat wheat or ragi. While it is difficult to explain the origin of such a belief, it probably goes back to the pre-insulin era, that is, the Naunyn period, when treatment of diabetes consisted of severe carbohydrate restriction and intermittent fasting. **However, with our present understanding of diabetes and in the light of experience with rice diets at the Diabetes Research Centre, Madras, we feel that the avoidance of rice is hardly justified. In fact by prescribing a carefully worked out rice-diet to a rice-addicted diabetic, the disease is brought under control quicker.**

The fallacy of a diabetic changing over to a wheat or a ragi diet as part of the treatment of diabetes mellitus becomes obvious as we take a look at the food values of major cereals.

Table 1, shows very little difference between the various cereals in their carbohydrate content. The diabetic who changes over to a wheat or a ragi diet and then consumes twice his normal amount of food under the firm belief that he is undergoing 'treatment' for diabetes is only deceiving himself. The first step in the treatment of diabetes by diet control is reduction in the total calories of food. It is quite immaterial whether one takes rice, wheat or ragi.

It might be thought by some that wheat contains more protein than rice (11.8 gm per cent in wheat compared to 8.5 gm per cent in rice). While this difference itself is not appreciable, Gopalan and his colleagues at the National Institute of Nutrition, Hyderabad, have shown that the protein of rice is superior to that of wheat. **Experience with rice diets over a period of 15 years has convinced that if the total calories are restricted, a rice diet can be used for a diabetic to achieve easier, quicker and better control of diabetes.**

In India, in the majority of the population, cereals form bulk of the diet and constitute the major source, if not the only source, of nutrients. In South India, people are accustomed to a relatively higher carbohydrate content in the food at the expense of proteins. A typical South Indian meal of the middle income group is of about 3,000 calories, which consists of a morning tiffin of iddlies or dosas, rice meal in the noon and night and coffee in between consisting of the composition as shown in Tables 1 and 2. The respective percentage of carbohydrate, proteins and fat is shown in Table 3.

By

A. RAMACHANDRAN,

M. VISHWANATHAN,

Diabetic Research Centre,

Madras.

The food of an average Indian is quite rich in carbohydrate in the form of rice and wheat and severe restrictions in their diet pattern, is unlikely to be adhered to over a long period of time. In view of of the pattern of food in our country, many workers felt that a higher carbohydrate content in the diet of the diabetics was necessary. Patel of K.E.M. Hospital, Bombay and Vaishnava of the Maulana Azad Medical College, New Delhi noted the usefulness of diets with a higher content of carbohydrate.

In 1968, Viswanathan of Madras reported his results with the high carbohydrate diet that he formulated for diabetics, with carbohydrates constituting about 60% of the diet. The carbohydrate given was usually rice. The total calories was calculated at 25—30 calories per kg. of ideal body weight. It was found, however, that many patients did not have sufficient protein in their diet. The protein content of the diet was then raised, which resulted in a further reduction in the fat content of the diet. While selecting the fat, steps were taken to see that a good percentage was of the polyunsaturated variety.

The protein added was in the form of pulses like bengal gram, green gram and black gram. This helped not only to provide a greater variety of palatable food, but also to achieve easier and better control of diabetes. There was yet another important reason for addition of these pulses. Cochrane and his colleagues in 1956, and Mathur in 1969 from Agra, have shown that bengal gram helps in the prevention of arterosclerosis by reducing serum cholesterol and triglyceride and possibly through some other mechanisms. As is well-known in the diabetic, the arterosclerotic process is accelerated. Hence, in the diet described above, it is felt that addition of bengal gram might help in delaying arterosclerosis and prevent its crippling vascular complications. Gopalan has also stated that the proteins of cereals and pulses have a mutual supplementary effect and the deficiency of one amino acid in one food stuff can be made good by its excess in the other, if both

are consumed at the same time. This makes this diet a well balanced diet for diabetics. It may be called a restricted calorie, high carbohydrate high protein, low fat diet.

A break-up of the high carbohydrate-high protein diet is given in Tables 4 and 5.

When patients were put on this diet the fasting blood sugar was reduced and the glucose tolerance test showed improvement. The following observations have been noted during use of this diet over a long number of years.

1. The patients co-operation was more readily obtained, because the pattern of the diet was not changed.
2. The incidence of ketosis (diabetic coma) was found to be low.
3. The control of diabetes was easier and quicker.
4. The dose of drugs used was very low.
5. The serum levels of cholesterol and triglyceride showed a tendency to fall contrary to current belief.
6. The incidence of vascular complications was found to be low on follow up of patients on this diet.

Conclusion :

There is no such thing as an 'ideal' diabetic diet. Any diet that is restricted in the total number of calories, and which is likely to be adhered to by the diabetic throughout his life, and which will not lead to any deleterious effects by increased levels of lipids, which are important risk factors in arterosclerosis, may be considered a satisfactory diet. For the average diabetic in India, who is used to a diet richer in carbohydrate, a diet that is restricted in calories and in its fat content, and is rich in carbohydrate and protein seems to be the best diet. The protein is taken preferably in the form of pulses like bengal gram or green gram. Regarding the carbohydrate content, there is no difference between rice, wheat or ragi. Hence, there is no need to change from a rice diet, which is the usual diet in our country, to a wheat or a ragi diet.

TABLE 1

FOOD VALUES OF CEREALS

Cereal	*In gm. per 100 gm.*		
	Carbohydrate	*Protein*	*Fat*
Rice	78.2	8.5	0.5
Wheat	71.2	11.8	1.5
Ragi	72.0	7.3	1.3

TABLE 2

TYPICAL SOUTH INDIAN DIET COMPOSITION

	Gm	*Carbo-hydrate*	*Protein*	*Fat*	*Calories*
Cereals	550	440	33	2	1,910
Pulses	30	18	6	..	96
Oils and fats	40	..	..	40	360
Root vegetables ..	50	12	1	..	52
Leafy vegetables ..	50	3	1	..	16
Milk	300	14	10	11	195
Meat, fish and egg ..	40	..	7	5	73
Sugar and jaggery ..	60	60	..	..	240
Fruits	50	15	..	..	60

TABLE 3

TYPICAL SOUTH INDIAN DIET — BREAK-UP OF PROXIMATE PRINCIPLES

	Gm.	*Calories*	*Percentage*
Carbohydrate	562	2,248	75
Protein	58	232	8
Fat	58	522	17

TABLE 4 — HIGH CARBOHYDRATE—HIGH PROTEIN — LOW FAT DIET — COMPOSITION

	Gm.	*Carbohy-drate*	*Protein*	*Fat*	*Calories*
Cereals	175	140	11	1	613
Pulses	150	90	36	4	540
Oils and fats ..	30	..	..	30	270
Leafy vegetables ..	150	8	3	..	44
Milk (skimmed) ..	600	27	15	..	168
Meat and fish ..	60	..	12	10	138
Egg white ..	2 Nos.	..	26	..	104
Total		265	103	45	1,877

TABLE 5 — HIGH CARBOHYDRATE—HIGH PROTEIN — LOW FAT DIET BREAK-UP OF PROXIMATE PRINCIPLES

	Gm.	*Calories*	*Percentage*
Carbohydrate	265	1,060	56.4
Protein	103	412	22
Fat	45	405	21.6
Total Calories		1,877	

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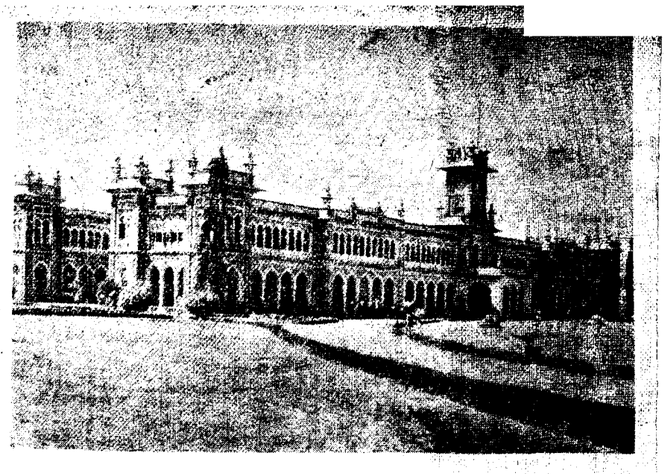


By

Dr. G. RANGASWAMI

Vice-Chancellor

Tamil Nadu Agricultural University.

The Agricultural College and Research Institute, Coimbatore started in 1907, and one of the oldest Agricultural Colleges in India, became the nucleus of the University when it started functioning on June 1, 1971. The College has to its credit to have been the second post-graduate institution in agriculture since 1958, the first one being the Indian Agricultural Research Institute, New Delhi. The Research Institute at Coimbatore has a reputation for its work on Plant Breeding and Genetics, Soil Science, Agronomy, Plant Pathology, Agricultural Entomology, Horticulture, Agricultural Engineering and a few other related areas. Ideally located in our agriculturally rich area, with typical red, black and alluvial soil types and dry-land, garden-land and wet-land farming systems spread over an area of about 720 acres, the campus is one of the most attractive spots in the State of Tamil Nadu. The research findings of the centre have benefited the farmers of the State to a remarkable extent that every year thousands of farmers from many corners visit the Research Institute. Together with the second Agricultural College at Madurai, started in 1965 the College has trained so far over 5,000 Agricultural Graduates and about 1,000 post-graduates from many southern States, and some of them are to-day's leaders in the fields of Agricultural Education, Research and Extension in several State and in All India institutions. The newer Agricultural Colleges in the States of Kerala, Andhra Pradesh and Karnataka have adopted several of the academic and administrative features of the Coimbatore College and Research Institute. Having played such a prominent role for over half a century, the College got its due recognition from the Joint Indo-American Team appointed by the Government of India, leading to an offer in 1958 from the Government of India for the establishment of the first Agricultural University in India at Coimbatore. Unfortunately this offer was not availed of at that time and the State waited for 13 long years by which time 14 other Agricultural Universities had been established. Today we have 22 Agricultural Universities in India, one in each State, excepting four in Maharashtra, three in Uttar Pradesh and one in Assam serving the needs of the hill States of Assam, Meghalaya, Manipur, Arunachal and Mizoram. The Tamil Nadu Agricultural University is now trying hard to re-establish its leading position as an academic and research institution.

During the first two years of of its existence the University organised its administrative, academic, research and extension education set up, gaining from the rich experience of other Agricultural Universities in the country. The University Statutes, Regulations, Rules and Guidelines were framed and finalised. The services of the employees of all categories who were transferred from the State Government and of those newly recruited by the University were regularised with effect from October, 1974. Of the seven Faculties provided for in the University Act four have already been established and they are : (*i*) Agriculture, (*ii*) Agricultural Engineering, (*iii*) Veterinary and Animal Sciences and (*iv*) Basic Sciences and Humanities. Under each of the Faculties several University Departments have been organised. The Agricultural College at Madurai was also reorganised to fall in line with the set up at Coimbatore. Barring the Madras Veterinary College, there are 22 Departments, which include Fisheries, Forestry and Food Technology. These latter three Departments would form the nucleus for the Faculties of Fisheries Science, Forestry and Home Economics, provided for in the University Act. Thus, the infra-structure for the integrated, multi-disciplinary activities to cover all branches of Agricultural Science in its broad definition has been provided. Each of the University Departments has been given the responsibility of teaching, research and extension education in an integrated manner and adequate administrative and financial authorities have also been given for the Departments to effectively carry out the functions entrusted to them.

Teaching :

On the academic side, the teaching programme was thoroughly reorganised with a modern outlook and flexible curricula in the under-graduate and post-graduate programmes. The Trimester system of education, with cent per cent internal assessment and continuous evaluation of students learning capacity in the class room and outside was introduced in 1972 and has been working most satisfactorily both in the main campus in Coimbatore and in the second campus in Madurai. New degree programmes leading to four year professional B.Sc. (Hort.) and five year professional B.E. (Agri.) were introduced in 1972. The new Department of Seed Technology established in 1973, offers a two year M.Sc. Ag. degree in Seed Technology, the first of its kind in India. The Department of Biology of the Faculty of Basic Sciences and Humanities offers a two year M.Sc. programme in Environmental Biology, again the first of its kind in India. The rush for admission to the under-graduate classes have been rapidly increasing ever since the University came into existence. As against about 7 or 8 applications for every seat prior to 1971, to-day we are receiving 10 to 15 applications for each seat, and this is inspite of the fact that the minimum requirements for filing applications have been substantially increased. Thus we have been able to select and admit candidates of high calibre and considering that to-day's students are to-morrow's staff, we are assured of continued improvement in the quality of work in our future teaching, research and extension education programmes of the University and in the State.

Research :

Research in the University has been reorganised to cover not only the new branches of Agricultural Science but also to make it field-oriented, project-based and time-bound. The research activities in the University are formulated under the guidance of a Research Council headed by the Vice-Chancellor, with Deans, Directors, five nominated Heads of Departments and five leading scientists from outside the University, as Members. In order to identify the field problems of regional importance and to review the research results, annual meetings with the senior officials of the State Development Departments are held, when the research findings useful for extension programmes, new problems needing attention and reorientation of the existing programmes to suit the changing needs of the extension agencies and the farming community of the State, are discussed and decided. To-day we have on hand over 900 research projects being carried out at 18 centres spread all over the State in which over 700 scientists and 500 technical and supporting personnel are engaged. About one third of the funds for the University's research activity is received as grant from the ICAR and the rest from the State Government and from the University's revenue. The University has developed a Master Plan for expanding its research activity to cover several branches of agricultural sciences and to strengthen Regional Research Stations so as to serve all the agro-climatic and hill regions of the State. The Plan covers both long and short range programmes and links up with the State Plan requirements in respect of technical man power for teaching, research and extension education in crop production, horticulture, animal production, agricultural engineering, home economics and rural development, fisheries, forestry, etc. Presently, the Plan is being implemented in a rather slow pace due to limited financial resources made available by the State and Central Governments.

"Firsts" to its credit

M.Sc., Ag. Seed Technology

M.Sc., Environmental Biology

The concerted efforts of our scientists during the past four years have yielded rich results and the chief among them are the release of five high yielding varieties of rice, two each of sorghum and ragi, one each of blackgram, greengram and redgram, five new varieties of vegetables, two of fruits, one of groundnut and two of cotton. The extra benefit on account of this to the State in terms of additional income to the farmers is estimated at about Rs. 20 crores per year. There are several innovations such as jasmine oil extraction plant, cultivation of nitrogen-fixing protein-

Tests being carried out in the Chemistry Laboratory

Research to suit all agro climates Planned

rich **Pleurotus** mushroom, use of **Rhizobium** and **Azotobacter** for increasing crop yields and packages of practices for cropping systems for different agronomic regions of the State have been made. Several newer research items such as improvements in seed production technology, design and development of new machines for farm produce processing and storage, formulation of new recipes from minor millets and of beverages from fruits, composite fish culture in inland waters and farm ponds, economic farm forestry practices, reducing the cost of feed for poultry and cattle are being actively pursued.

Extension Education :

The University has a Directorate of Extension Education with an Extension Education Council, headed by the Vice-Chancellor, with representatives of progressive farmers and of the University and State Government representatives as members. This body advises the University on the ways and means of disseminating newer knowledge among the farming community and the public. The extension wing organised 28 training programmes during the past four years for the benefit of the State Government staff and progressive farmers, the subjects covered being Minor Irrigation, General Agriculture, Farm Management, Extension Techniques, Hydrology and Sedimentation, Agricultural Economics, Seed Technology, Floriculture etc. About 500 persons have been trained under these programmes. Adaptive trials for assessing the performance of pre-release varieties of cereals and pulses have been conducted in different parts of the State. In all 74 such trials have been conducted during the past three years. This helps the extension staff to gain first hand knowledge on the newer strains and the research staff to learn about the strong and weak points of their research findings.

The National Demonstration programme had three centres under the University in the districts of South Arcot, Tiruchirapalli and Madurai during 1972—74. Presently, there is only one centre functioning in Madurai district. Under these programmes 151 demonstrations have so far been conducted in farmers' fields. The benefits to the farmers through adoption of modern scientific techniques in intensive farming are reflected in terms of net profits of Rs. 18,000 to 50,000 per hectare in 12 months. The demonstration farms were utilised for conducting Field Days in which over 6,000 farmers have participated.

Water Harvesting Techniques

There is one pilot project associated with dry farming at Kovilpatti. Several new cropping programmes and cultivation practices have been developed for the black cotton soil area of this district. Methods of intercropping and mixed cropping and to conserve soil moisture have been evolved and the same are being demonstrated in the farmers' fields. Techniques for water harvesting and its utilisation in an economic way, have been evolved and are being demonstrated in the pilot project area.

The Communication Centre has been active in publishing literature in English and Tamil covering many subjects pertaining to agriculture. The University Press, under the Communication Centre has already published about one hundred booklets and leaflets and a few books. A quarterly journal in Tamil "Valarum Velaanmai" is published for the use of the public. This journal is meant for popularising scientific knowledge on selected branches of agriculture among not only the farming community, but also the general public.

The University has started 'Correspondence Course' for the benefit of farming community and so far 18 batches have been trained bringing benefit to about 300 farmers in different fields such as Intensive Rice Cultivation, Poultry Husbandry, Vegetable Cultivation, Cotton Cultivation etc. Lessons on scientific farming are being broadcast through the All India Radio at regular intervals. Thousands of querries from the farmers have been answered so far. The **Farm Advisory Council** consisting of Heads of Departments of the University has been solving some of the most difficult field problems of the farmers. The problems of the farmers are referred to the Farm Advisory Councils through the State Government Extension Departments and through the Farmers Training Centres, two of which are located in the University, one at Coimbatore and another at Madurai. The Specialists of the University attend to these problems and find solutions which are transmitted to the farmers and where necessary, demonstrations are conducted in the farmers' fields.

In conclusion it may be stated that during the first four years of its existence, the University has organised and stabilised itself both administratively and academically, as an institution of comparable high standards. It has geared itself to meet with the challenging needs of the farmers of the State. Several newer departments have been started and through an integrated and interdisciplinary approach scientific data on economic and efficient utilisation of soil, water and other natural resources are being obtained for transmission to the farmers through the various extension agencies in the State. Given increasing support from the State and Central Governments it is poised for more rapid progress in the coming years.

SIPCOT BREAKS NEW GROUND—A CATALYST OF PROGRESS

State Industries Promotion Corporation of Tamil Nadu Limited (SIPCOT) during the brief span of three years of its working has cut new ground in the sphere of industrial dispersal in backward areas of Tamil Nadu. In just over three years, SIPCOT has sanctioned assistance for 192 industrial units catalysing a total investment of over Rs. 82 crores with an employment potential for over 13,200 persons. The total assistance sanctioned under the various schemes is over Rs. 11 crores excluding the direct investment of Rs. 1 crore by SIPCOT in the development of Industrial Complexes in backward areas. Except for five projects with a total assistance of Rs. 47 lakhs involving a total investment of less than Rs. 3 crores all the other projects are coming up in one or the other of the backward districts of the State. The fact that over 96% of the assistance sanctioned by SIPCOT has gone to units in backward areas and account for 96% of the total investment catalysed in all the projects assisted by SIPCOT brings out vividly how the Corporation has concentrated its attention on the achievement of the much needed industrial dispersal in the backward areas of the State. Adopting a marketing approach and the right strategy of converting backward areas into developing ones instead of pushing industries to the backward areas with mere financing incentives, SIPCOT has been able to achieve these significant results in a very short period.

In the very first year of its operations, SIPCOT assisted the development of a mini Industrial Complex at Anakaraipatti in Ramanathapuram District where one major engineering unit, two medium scale units and eleven small scale industrial units are already in production with a total investment of over Rs. 3 crores and offering employment opportunities to over 1,000 persons. In the last two years the Corporation has concentrated its attention on the development of a major Industrial Complex at Karunanidhinagar, Ranipet. All the items of work connected with the development of infrastructural facilities in Ranipet have been completed and already 31 projects involving a total investment of over Rs. 27 crores with direct employment potential for over 3,800 persons have been allotted developed plots extending over an area of 268 acres. It is significant to note that as many as eight projects have already gone into production at Ranipet and nine more are under various stages of construction and are expected to go into production shortly. The other 14 projects are under the various stages of formulations like arrangement of finance, procurement of machinery, etc. Viewed against the tight money conditions, sluggishness in the capital market and shortages of critical materials the progresss of implementation of the projects in the Complex is very encouraging. SIPCOT is confident that within the next two years the entire Complex would be fully occupied when the total investment catalysed in the Complex is expected to exceed Rs. 60 crores providing employment opportunities for over 8,000 persons. In addition to this, about 100 small scale industries will also come up in the area set apart for construction of sheds for small scale industries by SIDCO. In the development of backward areas the Ranipet experience has been unique and this has encouraged SIPCOT to take up development of Industrial Complexes one by one in all the backward districts of the State.

Already SIPCOT has acquired over 500 acres of land at Hosur, Dharmapuri District and preliminary work in connection with the infrastructural facilities have been taken up. Three projects involving a total investment of over Rs. 14 crores with an employment potential for 2,500 persons have been allotted land in the Complex. The construction of these projects is being taken up simultaneously with the work connected with the development of Industrial Complex. 32 applications for allotment of land in the Complex are under consideration by SIPCOT besides 15 small scale industrial units who have applied to SIDCO for allotment of developed plots and sheds. Despite the financial constraints SIPCOT has programmed to complete the development work in this Complex in the course of next two years and by that time the Industrial Complex will be humming with activity with about 10 industrial units in production and a few more under construction. SIPCOT has also planned to take up the development of a third Industrial Complex near Manamadurai where preliminary investigations for tapping the required water and survey of area has already been undertaken. It is SIPCOT's plan to develop Industrial Complexes

TANSI at TEN-
no TENder-feet,
but TENder-hearted!

In just a decade, we've come to be known for our service to the consumers. In new product development, in sales of industrial and consumer goods, in diversification and in consumer oriented down-to-earth approach, we have become a force to reckon with.

Even when it is tough going, we don't suffer from tender-feet. We are renowned for that 'full of feeling' feeling for our consumers.

Our product range— Steel and wooden furniture, Agricultural implements, Hospital equipment, Scientific glassware, Locks, Structurals, Enamelled wires, Forged and Die Cast components, Leather goods.

GOLDEN YEARS OF TANSI 10

TANSI
TAMILNADU SMALL INDUSTRIES CORPORATION LTD.,
26, Whites Road,
Madras 600 014.

TANSI Towers Receive Space Signal from "Aryabhatta"

Australia Buys Tansi Wool

TANSI WILL PRODUCE MACHINE-TOOLS WITH HMT COLLABORATION

SIGNIFICANT GROWTH IN TEN YEARS

Tamil Nadu Small Industries Corporation, popularly known as TANSI is entering its 11th year of existence today. It was exactly 10 years ago that this organisation was brought into being as a result of a decision of the Government to convert into Production Units such of those Units which were started by the Directorate of Industries and Commerce. Government of Tamil Nadu as Service Units, to enable entrepreneurs to start industries in Industrial Estates. The transformation of service-oriented industrial units into the production —oriented industrial units is beset with difficulties and challenge which are not easy to overcome. However, TANSI has greatly fulfilled the faith with which it was formed and to-day from a mere Rs. 300 lakhs of production in the year of its inception, TANSI has reached a production level of over Rs. 10 crores.

There are 56 production units and five sales units under TANSI which are scattered all over the State. The products manufactured and sold by TANSI are so many that it varies from cycles for school boys, fashionable leather goods, scientific glasswares for schools and colleges, cast iron specials for the pipe lines, tractor-drawn trailers and other implements for the Agriculturists, durable door locks for ensuring safety to buildings, copper winding wires for the industry, tanned and finished leather sides for the leather goods industry, processed goat hair for woollen carpets, steel and wooden furniture for the home, office and industry to the steel fabricated heavy structures for the factories and Railways.

In the field of heavy structural fabrications, TANSI's contribution to the various nation-building activities has really been significant. Challenging structural fabrication orders were executed by TANSI for the Bharat Heavy Electricals Tiruchirapalli, Hindustan Shipyard, Visagapattinam, Arkonam Steels, Mysore Iron and Steel Ltd., Bhadravathi, Hindustan Machine Tools, Hyderabad and Southern Petro-Chemical Industries Corporation, Tuticorin. Besides, TANSI has fabricated and supplied transmission towers to the various Electricity Boards in the country and the Middle East. The multitude of Micro-wave towers installed by the Central and South Central Railways and the Post and Telegraphs Department are manifestations of the memorable jobs executed by TANSI. It is a matter of pride for TANSI that one of the Micro-Wave Towers opposite the Madras Harbour has been utilised to receive the signals from the Indian Satellite 'Aryabatta.' TANSI is engaged by the Sugar Corporation of Tamil Nadu for fabrication and erection of some of the Sugar Factories in Tamil Nadu.

The pressure die casting unit of TANSI situated at Guindy makes die casts of non-ferrous alloys like zinc, aluminium etc. The Unit has been supplying die-cast components to many of the automobile manufacturers in the country. The Scooters India Ltd., Lucknow are also buying some of their die-cast components from this unit. The Tool Rooms of TANSI make sophisticated precision tools for various industries not only in Tamil Nadu but also in the whole country. The customers in this line include Bharat Heavy Electricals Ltd., Bharat Electronics, Scooters India Ltd., Hindustan Aeronautics, India Pistons, Chitaranjan Loco Works, etc.

The Machine Shops of TANSI have been supplying machined components for various defence units. The TANSI Forge Shop supplies forged components of high precision to industries like the Scooters India Ltd., Lucknow, the Neyveli Lignite Corporation, The Bharat Heavy Electricals etc. Leather division consists of 5 units of which the Tannery situated at Vinnamangalam, North Arcot District, manufactures finished leather of different kinds of a very high quality. This Tannery has produced a particular type of leather which is known as Vinnamangalam Leather in the whole country. The finished leather is largely exported to European countries earning valuable foreign exchange to the country. It is a matter of pride for us that this Unit has so far exported finished leather and semi-tanned hides to the value of Rs. 116.61 lakhs. TANSI Wool Processing Centre, Vinnamangalam, is completely an export oriented industry. This unit washes and dyes the goat hair and exports the entire quantity to Australia amounting to Rs. 15 lakhs annually. The other three leather Units under the Corporation specialise in the production of footwear and other leather goods, industrial gloves etc.

The wide range of agricultural implements produced by TANSI which include tractor-drawn trailers, cage wheels etc., are in great demand with the agriculturists. To meet the demands of the agriculturists, who are availing the loan under the World Bank Scheme of purchase of Tractors, TANSI has developed a heavy duty Trailer which can haul upto 10 tonnes of load.

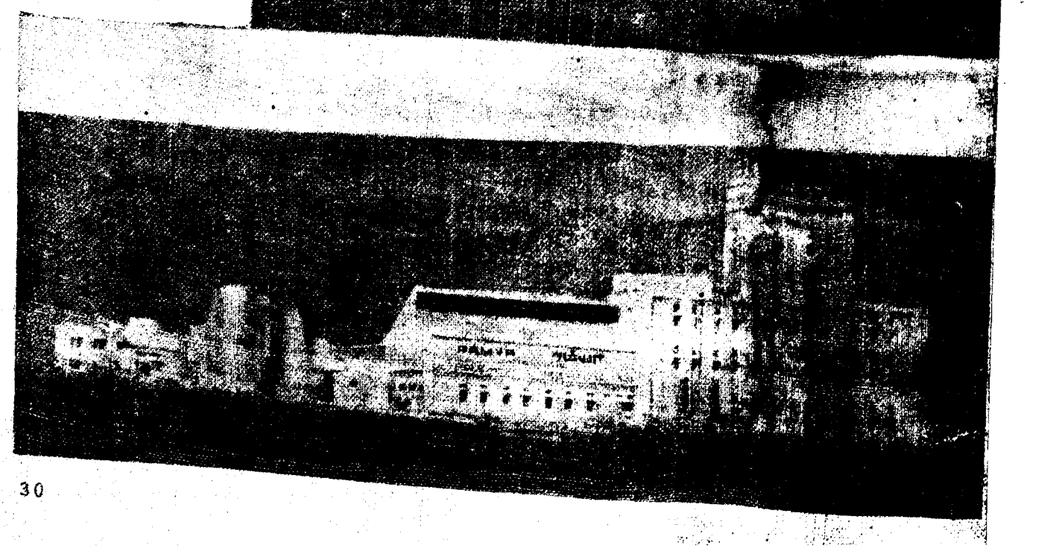
The wooden furniture of TANSI very well known both in our own State and in the neighbouring States, are made out of quality wood, using latest techniques of bonding. It has recently developed a Hospital Cot used for heart patients under intensive cardiac care. TANSI's Moped, whose design is completely indigenous and has been evolved by TANSI's own design and engineering staff, will be in the market very soon. Similarly, efforts of TANSI for a collaboration project with the H.M.T. for the manufacture of selected machine tools is in its final stage and a factory for this purpose is likely to be established soon in Ranipet. A TANSI-NID collaboration cell in the field of Industrial design is likely to materialise very soon. **

SOME FACTORIES IN SIPCOT, RANIPET

Above : **SECALS LTD.** They make precision tools with American collaboration.

Right : **SRP TOOLS** They make gear shaping tools which compete in world market.

Below : **ULTRAMARINE & PIGMENTS** They manufacture "RAMYA" brand detergent soaps etc.



in the other backward districts one by one during the course of the next five years.

In the sphere of financial assistance, SIPCOT has provided the needed supplemental assistance for 47 projects with total term loans of Rs. 4.77 crores and underwriting assistance for Rs. 52.5 lakhs. Already 13 of these projects are in production. While lack of finance has forced us to deliberately restrict our further assistance to the minimum required, SIPCOT will be able to ensure that no worthwhile project is allowed to languish for want of finance as it has developed close liaison with the State Financial Corporation (TIIC), Commercial Banks and other All India Financial Institutions. In respect of projects costing less than Rs. 1 crore it will be possible to ensure that in collaboration with TIIC, and Commercial Banks all the required finance is found from institutions within the State. As regards bigger projects, we will be able to ensure the necessary assistance from the All India Financial Institutions and consider extending underwriting support upto a maximum of 10% of the capital issues subject to a ceiling of Rs. 10 lakhs. Therefore, lack of finance will not stand in the way of new projects coming up in Tamil Nadu especially in backward areas.

The important incentive provided by the State Government through SIPCOT is the Interest Free Sales Tax Loans. Under the Scheme SIPCOT has assisted 15 projects with over Rs. 2.11 crores as Sales Tax Loan. Of the 15 projects sanctioned assistance under this Scheme 13 have already gone into production. It has been decided at the instance of State Government to provide for a ceiling of Rs. 15 lakhs under Part I of the Scheme in respect of expansion and Rs. 25 lakhs in respect of new units with a view to make the incentive available to as large a number of units as possible without increasing the overall commitment of the State Government. Already over 30units have applied for assistance under this Scheme.

Under the Central ubsidy Scheme SIPCOT has sanctioned over Rs. 379 lakhs of subsidy to 58 medium and major units and 112 small scale units. Together with Rs. 28 lakhs of subsidy sanctioned through SIDCO to 173 small scale industrial units, the total sanction of subsidy is over Rs. 407 lakhs. Over 105 small scale units and 38 medium and major units which have been sanctioned subsidy by SIPCOT have already gone into production. Because of the delay involved in the reimbursement of the subsidy from the Central Government nearly a crore of rupees of SIPCOT's funds including about Rs. 45 lakhs of the State Government's funds with SIPCOT have been utilised for the disbursement of subsidy pending reimbursement by the Central Government. Efforts are being made to evolve a suitable procedure for quicker reimbursement of subsidy by the Central Government and in the meanwhile SIPCOT has been able to meet all the eligible claims to the extent its limited resource can permit. In fact SIPCOT has so far disbursed over Rs. 37 lakhs as bridge loan with a view to see that the assisted projects are implemented without any avoidable delay.

10 projects based on the feasibility studies commissioned by SIPCOT are under the various stages of formulation and implementation. One project for the manufacture of Phyto Chemicals is likely to go into production before the end of this year.

SIPCOT has set up a Consultancy Division (SMACS) to provide technical and management consultancy services to entrepreneurs. Some of the studies which have been completed by this Division include a Survey of Chemical Industries for the Industries Department of the Government of Tamil Nadu, a Techno-Economic Feasibility Sutdy on Cashew based industries around Jayamkondan, Trichy District for the Collector of Trichy and a preliminary report on ancillary industries around Neyveli for the Industries Department. The Division is also making a preliminary study on small news print plants. In due course it is our aim to make this Division as a focal point for all consultancy services for State Government agencies as also private entrepreneurs.

Since its inception SIPCOT has been rendering a number of ancillary services covering the entire spectrum of entrepreneurs' needs in the conception, implementation and management of projects. Besides recommending the applications for Letters of Intent and Licences, SIPCOT has been closely following the implementation of the licensed projects and such project implementation services have been given to over 50 projects. Entrepreneurs have always been appreciative of all non-financial services rendered by SIPCOT.

Water being an essential infrastructure for promotion of industries, SIPCOT Complexes have water aplenty. Picture above shows the water-treatment plant and overhead tank at Ranipet Complex.

MANKIND'S MOST USEFUL DISCOVERY-THE SOAP

Soap is one of the greatest discoveries dating back to the very ancient times. The earliest known records show that Babylonians, Sumerians, Eygptians and Phoenicians (2,800 B.C. to 500 B.C.) were using a salve-like preparation obtained by boiling together oils and ash. More generally used cleaning agents in those days were natural soda ash (called natron), natural earths and wood plant ashes. The word soap is poss.bly derived from Latin "Sapo" which means a pasty mass, a pomade. The Greeks and Romans (800 B.C. to 500 A.D.) who were very fond of taking baths, whether cold, hot or vapour baths, rubbed oil on their bodies and cleaned them with mechanical agents like bran, sand, ashes, pumice, clays and juices of plants.

Pliny in his book "Nahorates Historia" (79 B.C.) has described the boiling of goat's tallow and beach ashes. This and such other preparations were used as a cosmetic and a pomade for application of hair and skin.

The credit of discovering soap goes to the Germans or the Tartars, about the beginning of the Christian era. By the 9th century, Marsielles in France and Genoa, Savona and Venice in Italy had already become active centres of soap manufacture. The industry was flourishing in many countries in Europe by the 12th century. The animal fats were gradually being replaced by vegetable fats, especially by olive oil which was abundantly available in the Mediterranean region. Alkali was available in the form of plant ashes which were rich in potash, and sea-weed ashes which were rich in soda-ash. These were used in the preparation of soft and hard soaps. The availability of soda ash by the progress of chemical technology and later of caustic soda gave a very great impetus to the soap industry.

Soap making was a house-hold industry, especially in the rural areas up to the 20th century. Later it had to decline as a natural sequel of several factors such as better and more uniform quality of the factory product, its low price, intense advertisement by soapmakers and changes in the fuel used at home.

Science could not Improve Upon Experience!

Soap-making involved the boiling of large quantities of fats and the alkali in such correct proportions and to such well-timed temperatures that it called for skill and long manual experience, nourished by critical observation of each and every detail of the boiling mixture in the pan and subsequent procesing of the boiled mass. On the basis of such observation, the early soap-boiler came to learn the properties of the raw materials, to devise the most suitable equipment-pans, furnaces, coolig frames, cutting tables etc. and to fix up the sequence of the operations. It is indeed remarkable that such a process has been evolved without any scientific information and remains the same in its fundamentals till today though substantiated by the scientific researches of the century. The art of soap making is thus far, far, ahead of science.

Inspite of a large number of flourishing centres in Europe, the factory-made laundry-soap, was not within the reach of the public, even as late as 150 A.D. Toilet soap was a luxury to be enjoyed by the nobility. Specially perfumed and coloured soaps were very highly-prized gifts to be exchanged among the royalty.

With the turn of the 19th century, however, the pace of development has been remarkably speedened. Several factors like economic, technical, political and social, helped to hasten this process. The discovery of Le Blanc in 1787 of how to make soda ash from common salt, an abundant supply of alkali was assured. Trade by sea to other countries increased. This made an abundant supply and new sources of oils and fats easily available. Due to their political influences many European countries had easy access to far off places in Africa, America and Asia which were rich in Oleagenous materials such as copra, palm, cottonseed and tallow. With the increasing industrial activity in Europe and the change in the pattern of living made the use of soap a prime necessity. Thus, the expansion of the soap industry was the result of rapid industrialization.

The real development in the soap industry, has however, been in its technological aspects. Discovery of new raw materials and of new methods of processing the older materials has widened the field of selection and has made the industry more flexible. Progress in the different branches of engineering has had its beneficial repercussions on the soap industry as on any other industry. Use of non-rusting and non-corrosive alloys in plan construction has led to improvements in the quality of the products. New techniques, continuous operations, novel designs and automation have brought the industry to a high pitch of efficiency and economy. High pressure saponification, centrifugal separation of soap, counter-current washing, press-cooling, chilling on rolls, continuous drying, dehydration of spraying and vacuum plodding are instances of novel applications of equipment and operations.

THE SOAP IN VEDA AND AYURVEDA

To mix up Vedas and soap might appear incongruous. Yet the Veda being the earliest records of the Ancient Indians give a clue to the then knowledge of chemical and practical arts. The use of metals, alloys, fermented liquours, dyes and several drugs obtained from the vegetable kingdom for the preservation of health and for the curing of diseases are mentioned therein. The smruti, are codes of behaviour on daily routine, laying emphasis on personal cleanliness. The daily routine, any ceremonial or function has to be started with the bath.

Ayurveda, the Indian Medical system discusses the ways and means of keeping the skin clean, soft and healthy. Daily bath with water was naturally essential, but it was to be preceded and followed by the application of Saponaceous, fragrant or soft plant materials. The methods were broadly classified as 1. Astringent plant materials : Amla. 2. Aromatic plant materials : Nagar Motha 3. Oily materials and oils (Pastes made from almonds or sesame or sesame oil 4. Lather producing materials (Ritha, Silkakai) 5. Miscellaneous materials : clays, gram flour, milk, honey, lime juice. Even to this day, many such powders and oils are used in large quantities on festive and ceremonial occasions.

For cleaning of garments, in addition to acqueous extracts of saponaceous plant materials, clays both neutral and alkaline—and extracts of plant ashes were used.

Although the ancient Indians possessed some knowledge of carbonates, caustic alkali and the vegetable oils which must have been available in plenty, they were not led to the discovery of soap making while under similar circumstances the contemporary Gauls and Germans discovered that art.

It is presumed that the art of soap-making came to be acquired in India after the contact between East and west first through commerce and later by conquest. However, the first recorded evidence is that the first modern soap factory in India, was established in Meerut in 1897 under the name of the North-West Soap Company.

The "Swadeshi" movement of the year 1905 and the First World War gave some impetus to soap manufacture in this country in a small way. The "thirties" of this century saw the establishment of big organized units, and this was the first phase of expansion. The sesecond phase of expansion was during the second world war during the "forties" which gave a fillip to the industry. Imports of soap which stood at the value of Rs. 2 crores in the year 1920-7, dropped to Rs. 18 lakhs in the year 1940-41, indicating a rapid growth of the Indian industry. Today, there is a complete ban on imports of soap.

Structure of the Indian Soap Industry

The Indian Soap Industry is made up of four sectors 1. registered organized units, 2. Unregistered organized units,3. Cottage scale units and 4. Cooperative village units. The first sector consists of large scale manufacturers who produce full-boiled settled washing soaps and milled toilet soaps. The soap making units are generally attached to oil mills or vanaspati plants so that the soapstock obtained as a by-product during refining of soft and hard fats serves as a cheap raw material for soap.

The unregistered organized units produce mostly washing soap and utilize both the full-boiled as well as the semi-boiled methods.

Factories in sector 1 produce high quality soaps and maintain a uniform standard. Products of many of them are known all over the country. Units in sector 2 produce both unfilled and filled soaps of a standard quality. Market for their goods is usually restricted either to a district or the State, Factories in sector 3 almost invariably produce heavily filled soaps for the cheapest market. The products cannot be expected to be of high quality or uniform standard. They have only a local clientele.

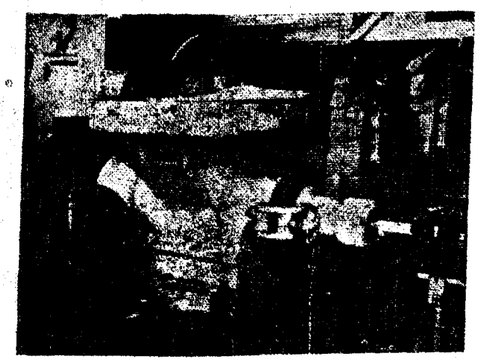
Raw Materials :—

The fatty raw materials used in the soap industry are coconut oil, groundnut oil, cottonseed oil, castor oil, Mowrah fat, Palm oil, Animal tallow, Hydrogenated oils, Linseed oil, Soapstock and acid oil, fatty acids and Rosin.

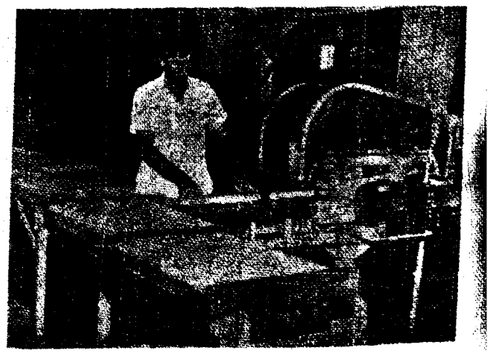
Caustic soda, caustic potash and soda ash are also used in the manufacture of soap. Some of the other additives are common salt, perfume, colour, sequestering agents, optical bleaches, germicides etc.

The toilet soaps are made from coconut oil, groundnut oil, palm oil and tallow, while for washing soaps, additional fats like mowrah, fat and castor oil and soapstock are used.

The most common filling material is sodium silicate and mainly silicated soaps may contain as low as 20% fatty matter. A low grade soap which is very popular with the dhobies and therefore called the dhobi soap is prepared out of the



SOAP PLODDING



Automatic cutting of plodded soap

Tamil Nadu Water Atlas Will show both quantity and quality

The Government of Tamil Nadu has done systematic hydrogeological survey in all areas of the State to assess the ground water potential for further development. We will have shortly not only a water table map but also a water quality map for the entire State.

Aerial photographs covering an area of about 8,460 square miles were used for preparing an uptodate geological map of Cauvery Delta and for planning hydrological studies. Water samples have been collected from different aquifer systems for ground water dating by the Tata Institute of Fundamental Research, Bombay. Electrical Analog studies were done at the Indian Institute of Technology, Madras to study the effect of pumping in order to specify spacing between wells in the Cauvery Delta to avoid mutual interference.

Based on the hydrogeological survey, the aquifers have been demarcated in depth and width and the ground water potential available in Madras City and Palar Basin and it has been ear-marked to the industries established in the Industrial complex at Manali near Madras and for the Madras Atomic Power Project, Kalpakkam. Part of the potential available in Panjetti and Minjur aquifers are extracted and supplied to the various industries.

The Government have approved a scheme for supplying the 11 Mgd. of water available at the Tamaraipakkam aquifer to the various Industries to which the water is allotted. This work is being taken up.

The Ground Water available at Paiganallur in Palar basin has been committed to the Madras Atomic Power Plant. Out of the 6.2 Mgd. available at this site about 4 Mgd. is at present supplied to the Project. As and when the demand increases, the full quantity will be supplied.

Collection of basic data.

Rainfall particulars have been gathered for the past 50 years and the average rainfall is being worked out to arrive at the total quantity of water available in Tamil Nadu. Meterorological information like temperature, humidity, wind velocity, sunshine hours, etc., are also being collected to arrive at the quantity of water which is likely to be lost by evapotranspiration. Fourteen **elementary watersheds have been selected in the districts and necessary equipments are being installed to collect information.**

CONTINUOUS STUDY OF RE-CHARGE RATE GOING ON.

A net work of about 1,660 shallow observation wells have been selected in the entire Tamil Nadu and water level fluctuations are being studied every month. Hydrographs depicting the water level fluctuations for all the observation wells are prepared and compiled. Water quality study is made once in six months to determine the suitability of water for drinking, agricultural and industrial requirements. Ground water level observation is the key information based on which water table maps and isopleth maps of the entire area can be prepared so as to have a comprehensive picture of ground water depletion and recharge in different basins. **Water table map and water quality map for Tamil Nadu is under preparation.**

Geological mapping.

Geological mapping of an area forms the most fundamental requirement for the evaluation of any resources especially for ground water resources.

At present the existing geological maps pertaining to Tamil Nadu available in the Geological Survey of India, Tamil Nadu Circle, Government of India, Madras have already been copied and the base maps are being prepared on 1" to 4 milescale. With a view to improve upon the existing geological maps, field mapping has already been undertaken.

Preliminary photogeological mapping has been done over an area of about 8,000 sq. kms. in Ponnaiyar basin, while work on 10,000 sq. kms has already been completed in other areas of the State.

Geophysical investigations.

Geophysical investigations comprising of surface prospecting and sub-surface prospecting are being conducted throughout Tamil Nadu.

Systematic resistivity survey in a grid pattern has been programmed and is in progress in each district to obtain areas favourable for ground water extraction. So far 1,800 depth soundings covering about one-seventh of Tamil Nadu have been conducted.

Sub-surface prospecting or bore-hole logging is being conducted in the exploratory boreholes in which resistivity and self-potential logs of the formations are obtained. This includes also electrical logging.

In the selected taluks of Thanjavur, Tiruchirappalli and South Arcot districts covered by the I.D.A. Programme, ground water clearance has been given for all the units proposed in the I.D.A. Agreement. Based on the clearance, appraisal maps are received from the Banks by the Ground Water Division, Thanjavur and No Objection Certificates are being issued.

In the case of the dug well programme in hard rock areas in 18 taluks of Chingleput, North Arcot, Salem and Dharmapuri districts, the Registrar of Co-operative Societies is responsible for rapid survey in those areas and he sends the recommendations to the ground water Division for clearance.

Though systematic hydrogeological survey takes as long as 4 years for a given area, rapid ground water surveys are undertaken in the areas referred to this Directorate for mulating Minor Irrigation Schemes to be financed by A.R.C. and based on this survey, feasibility reports are prepared and sent to Government. So far, 270 reports have been prepared and clearance has been given for more than 50,000 wells and pumpsets both under the A.R.C. and I.D.A. Schemes.

The FAO Experts in the disciplines of Hydrogeology and Hydrometeorology are working in the Ground Water Division and assisting in the Ground Water Investigations in their respective disciplines. Ponnaiyar basin has been taken for detailed investigation by the Expert on Hydrogeology. Proposals for further work on drilling, pump testing, etc., based on photo geological studies and geophysical traverses are underway. Infiltration tests have been completed.

TO SINK MORE WELLS & DEEPEN DRY WELLS —AGRICULTURAL ENGINEERS HELP TAMIL NADU FARMERS

In Tamil Nadu, out of 6.165 illion hectares of net area sown, e area irrigated is only 2.59 million ectares which constitutes about % of the net area sown. Again, t of the 2.59 million hectares rigated area, about 69% is irrigated y canals and tanks, and the rest is rigated by groundwater. It is oughly computed that there are ne million wells which extract ,800 million cubic meter of water.

The Agricultural Engineering Wing of the Agriculture Department s in charge of the following schemes which aim at improving the irrigation facilities from well water in the State.

1. Private Tube Wells. 2. Boring of Wells. 3. Deepening of Wells. 4. Filter Point Tube Wells.

The Agricultural Department is sinking tube wells (Bore Wells) in ryot's lands with the help of Power Drills and Hand Boring Sets, for tapping underground water for irrigating crops. In view of extensive cultivation and also the receding underground water level, the demand for sinking bore wells is on the increase.

The Boring Sets of the Department are supplied on hire basis. Loans are being granted to the ryots concerned by the Land Development Banks and Nationalised Banks on the security of lands to cover the cost of (1) Sinking charges including hire charges on Boring Sets. (2) Pump sets and accessories and (3) Pump shed.

Till the end of March 1975, 23,411 tube wells were sunk by the department. It is estimated that if a well is sunk successfully, it will irrigate an additional area of 20 acres (gross) resulting in an additional production of about ten tonnes of rice *i.e.*, 1/2 tonne/acre. It is anticipated that the tube wells available in the State irrigate an area of about 5.54 lakh acres. During Vth Plan period (1974—75 to 1978—79) it is proposed to sink 12,500 wells.

In view of the gradual lowering of water table observed in some of the districts, the wells yield very poor water supply or even go dry. This scheme is intended to put deep bores inside the wells with a view to tap aquifers to augment water supply. With the long hold equipment, it is possible to sink smaller dia. horizontal and vertical holes in the well extending the depth by 60 to 80 feet thereby increasing the chances of tapping greater number of springs for augmenting the well supply. Loan assistance is being provided by the Land Development Banks and Commercial Banks for meeting costs of sinking etc. This scheme was started as a separate scheme from 1—4—1966 and upto the end of March 1975, as many as 7,851 wells were sunk. If a bore is sunk successfully, it is estimated to irrigate an additional area of 2 acres (gross). It is proposed to sink 4,000 bores in open wells during Fifth Five Year Plan period.

Deepening of Well Schemes

Deepening of wells is taken up in rocky areas by blasting the rock bed 20' to 40' thick and such blasting exposes fresh aquifers which provide additional water supply to the wells and to increase the storage capacity of wells. This scheme was in operation from 1964—65 and till the end of March 75, as many as 10,636 wells were deepended. The ryots were finding it difficult to get the explosives which retarded the progress of this Scheme. Hence, this Department constructed explosive magazines at South Arcot, Trichy, Dharmapuri, Salem, Coimbatore, Ramanathapuram, Tirunelveli and Madurai Districts. The explosives are purchased and stocked by the department and supplied to the needy ryots who engage departmental Rock Blasting Units. Construction of similar magazines in the district of North Arcot for this purpose is under progress. Vans are also provided to transport explosive materials to these departmental magazines.

It is proposed to deepen 10,050 wells during Fifth Five Year Plan period. If a well is deepened it is expected to irrigate an additional area of 2 acres (gross).

Under conventional method, manual labour is engaged to remove the blasted materials. This method takes considerable time resulting in idleness of equipment and also costs much. In order to utilise the equipment to maximum advantage and to reduce the cost of removal of debris, the department has designed a suitable debris remover (crane). The department has programmed to supply debris removers also on hire along with Rock Blasting Unit as the farmers insist on supply of debris removers with Rock Blasting Unit. Loan assistance is being provided by the Land Development Banks and Commercial Banks for meeting the cost of deepening the wells.

Filter Point Tube Wells Scheme

The Filter Point is a device for pumping out water from sandy water bearing strata found within 25' to 40' from ground level.

In Tamil Nadu, the construction of Filter Point Tube Wells for encouraging irrigated cultivation was initiated in the Fifties, before the commencement of the First Five Year Plan. During the first Five Year Plan, 2,650 Filter Points were sunk in this State.

During the 2nd Five Year Plan, 2,765 Filter Points were sunk. During the IIIrd Five Year Plan period, the tempo was almost doubled and 4,065 Filter Points were sunk. During the last year of the 3rd Five Year Plan a Crash Programme for Filter Points was initiated in Thanjavur district in order to sink a large number of wells in a shorter period to tap ground water to supplement the canal water during the lean periods. These filter point tube wells help farmers to raise nurselings well ahead of the opening of Mettur Dam Canals ; if the farmers have to entirely depend upon Canal water even for raising nursery, generally the harvest coincides with the onset of North East Monsoon resulting in loss of valuable paddy crop. If nurseries can be raised before release of canal water transplantations can be done immediately after release of canal water. As the crop will come for harvest much earlier, it is possible to raise second crop by supplementing canal water with the help of Filter Points and Tube Wells. To get maximum yield and to bring more area under second crop, it is programmed to sink a large number of Filter Point Tube Wells and Tube Wells with the assistance of World Bank. This scheme is to be jointly executed by the Agricultural Engineering Wing Agriculture Department, the Ground Water Directorate and the Co-operative Department. During this plan period, it is proposed to sink 7,000 Filter Points and 1,190 Tube Wells in Thanjavur District.

So far, 29,299 Filter Point Tube Wells (upto March, 1975) have been sunk. If a Filter Point is sunk, it is expected to irrigate an area of 10 acres (gross). 10,000 wells are proposed to be sunk during Fifth Five Year Plan period.

filter mud (spent bleaching earth) available from the refining and vanaspati factories. Soap is also available in other forms such as chips, flakes, powders, etc. They have a limited mrket, that too in the urban areas.

Soap-making as a Cooperative Village Industry :—

The production of vegetable oils and soaps has been taken up as one of the village industries, and therefore, a separate section was established in the Khadi and Village Industries Commission to look after soap manufacture. The commission has commenced establishing oil pressing cum-soap making centres in different parts of the country. These centres are given financial assistance—a part as a grant and the rest as an interest free loan. Training centres have been established to train operators, chemists and supervisors in their respective jobs. Regional Testing Laboratories and a central Research Institute for Village industries have also been established. It is their responsibility to render technical aid, maintain quality control on the products and develop methods of analysis, methods of production and equipment suitable for this type of manufacture. Thus these units are able to turn out soap of very high standard for washing as well as toilet purposes.

Today, the village soap industry is competing with the large-scle manufacturers by using non-edible oils. But it will not be isolated from the impacts of modern facilities like transport, power and communications, nor will it be restricted to age-old methods. New methods, new implements and new techniques will be adapted accordingly. As a result of experience and continuous experimentation, the method of soap making and the equipment employed are bound to be improved.

Soap Products :

For ease in its handling or according to the customer's preferences and specifications, or by the ingenuity displayed by the manufacturers in attracting customers, the final product is marketed in all kinds of shapes, sizes, and forms.

Increase in soap production :

Soap production has recorded a 25 percent increase in 1975. During January—September this year, production amounted to 2,01,406 tonnes as against 1,61,281 tonnes during the same period last year. A significant rise in the production in the organized sector contributed to this increase.

A new variety of low-priced toilet soap 'Janata' soap was introduced during the year by many units in the orgonised sector and production of this variety totalled 5,454 tonnes, between January and September 1971.

The Indian standards Institution (ISI) is now working out ISI specifications for this variety of toilet soap for protecting the interests of the consumers as well as improving its quality and packaging.

The import of tallow, except for marginal quantities against export licences, was discontinued by the Government following negotiations with the Indian Soap and Toiletry Maker's Association, representing the organized sector of the industry. The country is expected to save Rs. 9 crores in foreign exchange annually as a result of this measure.

The organized sector of the soap industry is now increasingly using minor oils like rice bran, neem karani and mohwa oils. Use of such minor oils by the soap industry has not only reduced the pressure on the edible varieties of oil earlier used by them, but has also given employment opportunities to a large number of people.

—RAJALAKSHMI BHARATI.

The Association of Writers for Children had awarded the Gold Medal donated by AVM Charities for the best Tamil Children's Literature to the manuscript copy of his book entitled "ஆடுவோமே, பள்ளு பாடுவோமே," entered by P. V. Giri, of the editorial staff of 'Tamil Arasu'. The Award was presented as part of Children's Day Celebrations on 14—11—1975 at Rajaji Hall by Thiru K. Anbazhagan, Minister for Health.

STEPS TO IMPROVE THE EFFICIENCY OF WOMEN LABOUR FORCE

By

Kumari R. Padmavalli, M. A.,

Director of Statistics, Govt. of Tamil Nadu.

A study initiated by the Committee on the Status of Women in India in 1973—74, covering a sample of 200 undertakings in both private and public sector, has reaffirmed the position, that the practice of relegating women to limited and lower levels of employment, discriminatory wage payment, and retrenchment is quite pronounced, in spite of a spate of labour legislations. It is therefore needless to review the experience of the vast majority of women working in the unorganised sector. But it is recapitulated for the purpose of examining what would be done to improve their lot.

Farm labourers including a sizable number of women labour perhaps number about 47 million and they form approximately 38 per cent of the total Agricultural Workers in the country. In a far flung country with cultural diversities, complex tenure systems and strange feudal relationships, it is difficult to conceive of anything like a uniform pattern of minimum wages. The social and economic status of labour varies from region to region. For instance in Punjab, Haryana, Jammu and Kashmir and Assam, the proportion of farm labourers is relatively small, whereas it is very high in southern States and in U.P., Bihar, Orissa and West Bengal. In certain Stateslike Andhra Pradesh, Bihar, Maharashtra, Uttar Pradesh, Tamil Nadu and Madhya Pradesh there is a concentration of agricultural labour accounting for around 70 per cent of the total number of farm workers. Andhra Pradesh, Madhya Pradesh and Orissa have been consistently paying miserably low rates of wages. A relatively better record is to be seen in Haryana, West Bengal and Assam. The economic conditions of the agricultural labourers or the landless labourers, in general, has been continuously deteriorating in India.

The major difficulty is that no accurate information regarding the living conditions of landless labour, their indebtedness etc., is available. The information available on these aspects, is either inadequate or very old.

The two All India Agricultural Labour Enquiry (ALE) conducted by the Ministry of Labour and Employment for 1950—51 and 1956—57 revealed 28 paise and 27 paise, respectively as per capita income of agriculture household. This level tallies with that observed in West Bengal Surveys in 1972—73. It reveals the deplorable and continuously deteriorating economic condition of the rural labour, during all the years, despite the growing prosperity of the agricultural sector.

This situation has been an outcome of the continued negligence of most of the State Governments in the revision of minimum wages and the meticulous observance of its implementation. Since 1969, only very few States have revised wages. **It may be gratifying to note that Tamil Nadu revised the wages during 1973 and has now again set up a Minimum Wages Committee for revision.**

It is therefore observed that with the meagre wages, the labourer is forced to have a hand to mouth existance. Fortunately Prime Minister's recent directive has come in time to tackle this problem relating to this vulnerable section of the society which can look forward for improvement in their living conditions in the near future.

Nutritional Status :

Nutrition is an important factor in the development of "Human Capital". It works in two ways :

1. reduces the loss in man-days due to sickness and other nutrition — related ailments ;
2. improves the quality of the labour.

It is all the more true for the women labour force because, their nutritional status is comparatively neglected. Sex preference and preferential treatment has resulted in a comparatively poor nutritional status for women.

A diet survey conducted by the National Nutrition Monitoring Board of the Indian Council of Medical Research has shown that caloric intake is inadequate in all the States in the 'very low' and 'low' income groups. The details of intake by women is given in the table below :

TABLE I

INTAKE OF FOOD BY WOMEN—ALL INDIA

Food	*Actual intake gm.*	*Recommended Allowance*	
		Non-vegetarian gm.	*Vegetarian gm.*
(1)	(2)	(3)	(4)
Cereals	333	450	450
Pulses	15	65	80
Leafy vegetables	9	150	150
Other vegetables	23	75	75
Roots & Tubers	3	75	75
Fruits	4	30	30
Milk & Milk Products ..	23	225	325
Fats & Oils	12	55	50
Meat & Fish	18	30	..
Eggs	12	30	..
Sugar & Jaggery	15	50	..

FAMILY PLANNING FACILITIES STRETCH MORE MEDICAL FACILITIES TO WOMEN WORKERS

The survey has also revealed that protein inadequacy is invariably associated with caloric inadequacy in both these income groups in all States except Kerala where a small percentage of households (1.9 per cent) of the 'very low income' group had protein inadequacy with caloric adequacy.

Medical Facilities :

Through the implementation of Five Year Plans, the Government have managed to extend medical facilities throughout the length and breadth of the country. The labour under the Organised sector have the additional advantage of treatment under Employees State Insurance Scheme. This scheme provides the following six benefits to the labourers coming under its purview :

(*i*) Sickness benefit,
(*ii*) Extended sickness benefit,
(*iii*) Disablement benefit,
(*iv*) Dependents' benefit,
(*v*) Maternity benefit and
(*vi*) Medical benefit.

Maternity benefit as cash benefit payable to a female insured person for the specified period of absence from work, for a confinement. The daily benefit rate is double the sickness benefit rate and is thus roughly equivalent to the full wages. Benefit is paid for Sundays also, covering a period of 12 weeks.

Medical benefit is provided to the insured persons and their families under the medical benefit scheme. This consists of out-door treatment, inpatient treatment, all necessary drugs and dressings, pathological and radiological investigations, domicilliary visits, ambulance services, specialist consultation and care, antenatal and post-natal care, emergency treatment etc.

It is gratifying to note that the medical facilities provided for the labourers in organised sector go a long way to maintain them in good health and efficiency. While, on the other hand, the unorganised labour mostly working in the rural areas, suffer for want of the minimum medical facilities.

Another welcome feature is, that family planning services are made available to the people much more widely then hitherto. The various family planning programmes like sterilisation, IUCD insertion, application of conventional contraceptives have made good progress in India. It is needless to say that labourers, and in particular, the women labourers will be much benefitted by this programme.

Housing Condition :

Next to food, housing is an essential factor that affects human life. This is all the more important in the case of labour force who return after a day's hard work. But in practise, most of the labour force in India, are yet to be provided with adequate housing facilities. In the rural areas, they live in kacha houses (small thatched huts) and in urban areas, they live in slums which are extremely insanitary and over crowded. Labour employed in plantations, though assured of statutory protections in this regard, are also subjected to inadequate housing facilities or complete denial of such facilities, particularly where casual labour is involved. The problem of labour housing has to be tackled more efficiently.

Social and industrial laws have been worked out on a sound basis ; but due largely to ignorance, illiteracy, die-hard traditions and customs and superstitions, honesty and obstinacy and indifference on the part of the people and lack of official implementation, the laws have not been satisfactorily implemented in many cases. Villages and slums especially have to be visited by officials and voluntary workers, and the people should be made aware of the laws ; if we are to assure women workers be they in factories or farms, all the rights they derive from these Acts.

Besides the facilities offered under the above major schemes and legislations the following factors are worth examination

Provision of essential commodities through family cards :

Essential commodities comprising of food and non-food articles may be arranged to be supplied at nominal rates to the labour force working under the organised and unorganised sectors. The Rural Co-operative societies and the urban consumer societies, may be entrusted with the distribution work.

Provision of adequate cheap transport:

Majority of the labour force working in the unorganised section of Agriculture Industry, live in rural villages and therefore the transport problem does not affect them to the extent as it affects their counterpart *viz.*, the labour force in organised sector who live in semi urbanised and urbanised areas. For this portion of the labour force, steps may be taken to provide cheap transport facilities. They may be paid some transport allowance wherever housing facilities adjoining to the work spot have not been provided for, by the management.

Establishment of Day-care Centres :

In the Factory Act, 1948, provision has been made to compulsorily establish creches wherever more than 50 women employees are involved. In the case of organised sectors, strict implementation of the provisions of the above Act should be observed. In the case of unorganised sectors, the management should be made obliged to provide facilities for those women labour with children of 6 years and below. A high level committee may be set up by the Government to assess the extent of help to be provided in this regard.

Provision of Recreational Facilities :

No provision is available to provide recreational facilities such as games, cultural programmes etc., at periodical intervals, to the labour force working both under organised and unorganised sectors. There appears to be hardly any recreational facilities for the women labour force. Cultural programmes, educative lectures, good film shows, provision for games will certainly go a long way in improving the efficiency and the outlook of the labour force. This aspect has also to be studied..

In our country the women's role continues to be that of wife and mother whether she is a wage earner or brings additional income to the family. Her responsibilities both physically and mentally are ever increasing in the changing times of today.

In this International Women's Year the need for an overall uplift of women has been accepted by one and all. Indeed a worthwhile policy on women would bring about a transformation not only in the fortunes of women but in their role in the family and thereby in the social fabric in its entirety.

NUTRITION AND GROWTH OF INDIAN GIRLS

By
RAJAMMAL P. DEVADAS

The fascinating process of human growth and development are influenced by a number of factors which constitute heredity and environment. The type and quality of the interaction between heredity and environment determine the all round development of the individual. From the moment conception takes place with the fusion of the parent cells, a pattern for future growth and development is laid. To what extent and in which direction a child's potentialities will be realized depend upon the environment in which he grows and develops. The pattern of growth though genetically determined is strongly influenced by the dietary intake. Nutrition is essential in childhood for optimum growth. The growth pattern of a child is useful index for judging his nutritional status. Body measurements, such as, heights and weights, if properly obtained and interpreted, help to evaluate nutritional status.

Growth spurt :

From birth onwards the baby grows in height and weight but the rate of growth is different in relation to sex and other factors. Growth in height like all other human measurements, is not uniform throughout life. The maximum rate of growth occurs before birth, in the foetal life, and thereafter it is progressive slowing down, though at birth the baby is still growing very fast when compared with the infant and child. In the first year of life, the body length increases by about 50 per cent (from 50 cm to 75 cm) and in the second year another 12 to 13 cm are added. Thereafter, growth in height settles down to a rate of about five to six cm every year until adolescence. Although the pattern of growth is similar in boys and girls from birth till adolescence, the rate of growth differs considerably, after the girl reaches puberty. During adolescence a marked rate of increase in height occurs suddenly and remains fairly steady. The growth spurt starts at the age of 10.5 to 11 in girls and at 12 5 to 13 for boys although wide variations are possible. The steady increase in the rate of growth is maintained for about two years in both sexes.

During the growth spurt, boys add something like 20 cm to their height, mostly because of the growth of trunk (10 cm/year). Girls gain about 16 cm height. The spurt is followed by a rapid slowing of growth. Indian girls reach 98 per cent of their final height on an average by the age of 16.5 years, whereas boys reach the same stage at the age of about 17.75 years.

By the end of the first year, the birth weight is approximately trippled. By the end of the second year, it gets quadrupled. After the second year, the increase is steady at the rate of about 2.25 to 2.75 kg a year until the adolescent spurt occurs. During the adolescent spurt, boys gain 20 kg and girls 16 kg weight respectively. Table I shows the heights and weights of Indian girls and boys from the first year of life till 18 years.

The heights and weights of girls are slightly lower than those of boys at all ages, except from the tenth to thirteenth year during which the adolescent spurt occurs in girls. During this period of three years, girls are ahead of boys in height and weight, but show a low rate of growth thereafter.

Birth-Weight :

Although there is not much difference in height at birth, the weights of Indian babies at birth and their subsequent growth pattern from birth to adolescence, are lower than that of their Western counterparts. The American children are taller and heavier than the Indian children of the same age group.

ADEQUATE NUTRIENTS

Sufficiency of food and nutrients is essential for normal growth and prevention of malnutrition. Indian girls who are well-fed grow taller and heavier than those who are poorly fed.

Records of heights and weights should be kept regularly to help parents and teachers to assess the growth of children. As a large section of the population will not have facilities at home to record the weight of children the records should be kept in the school.

Mid-day meals or nutritious snacks in schools improve the growth of children of the school-going age. Apart from the formal education the children get in the schools, nutrition education and supplementary feeding programmes should be conducted in order to improve the growth of undernourished children.

Until recently, girls were married immediately after the attainment of puberty or before, which imposed a strain on their growth pattern. The census data of 1961 showed that the marriage age of girls was 12.5 years in 1891 and 15.5 in 1961. Many of the girls are likely to become mothers when they are still in the adolescent age which shows there is an extra nutritional demand on the adolescent girl. A food habit survey conducted in Tamil Nadu shows that only 74 per cent calories and 92.97 per cent protein needs of adolescent girls are met, while the extent of fulfilment for the other age groups was higher. Table II shows the calorie, protein requirements and intake of females.

An intake of 600 to 630 IU of vitamin A, 300 to 515 mg of calcium and 26—31 mg of iron by adolescent girls was also recorded in this study.

Adolescent girls :

The weak link in the segment of life-cycle appears to be the adolescent girl, in spite of the fact that it is the health and proper nutrition of this part of population, that will upgrade the quality of future children and adults. A weakened, undergrown, ill-nourished young woman at marriage is already at a disadvantage for producing the kind of children that are desired. Conversely, a strong well-nourished girl will be much better able to withstand the effects of subsequent nutritional stresses she may encounter. Hence attention should be concentrated on this particular age group to prevent infant and maternal

mortality and to improve maternal and child health as malnutrition has a definite impact on fertility and reproduction. The studies of the National Institute of Nutrition have shown that 16—19 per cent of pregnancies among poor lead to wastages which are also common in women belonging to the low socio-economic groups subsisting on 1850 calories and 44 g protein daily.

Preferential Treatment :

Unfortunately in the tradition bound societies in India, preferential treatment with regard to diet is always given to the man of the house and the sons, as they are the "wage earners," "more valuable economically" and bear the burden of the family. As soon as a baby boy is born, great importance is given to him and he gets great attention from all the family members. The educational and medical facilities given to boys are also better than what the girls get. That is the reason why boys outnumber girls in schools. The girls are needed at home to perform household work and to look after the younger children, while the boys are sent to school for education. Thus from childhood, women are trained to serve the family and make sacrifices throughout their life-time. These discriminations are reflected in the life expectancy of females in India. According to the Planning Commission's Projections for the period 1971—76, it is 49.6 years for females and 51.3 years for males, and for 1976—81 it is expected to be 52.6 years and 53.8 years respectively.

This is the opposite of what is prevailing in other developing countries, where the life expectation is more favourable towards women. The female life expectation relative to male, expressed in percentage is 97 for India and ranges for 100 to 111 in all other developed and developing countries.

The reasons expressed are the intra-family distribution of nutrition and the incidence of maternal diseases and deaths which are higher in India than in other countries. Female undernutrition in general and maternal deaths from infections, and unhygienic conditions, adapted during child-birth and other diseases are strongly linked with poverty. Some of the bias in the intra-family distribution arises from deliberate self-deprivation by women because they tend to believe that the earning members are more valuable than those who do domestic work and child rearing which they consider is devoid of economic value. Even when a family is not poor and its food supply adequate, the women may still suffer from nutritional deficiency on account of customs, wrong beliefs, undesirable food preparation practices and restrictions in the amount, composition and number of meals on certain days.

All these practices influence the nutritional status of Indian girls and young women. It is indispensable that women are educated on all these aspects. This will help them change their attitudes to bring about a normal growth pattern among Indian girls and boys of adolescent age.

TABLE I

Heights and Weights of Indian Boys and Girls from 1 to 18 Years

Age in Years	*Height in cm.*		*Weight in kg.*	
	Boys	*Girls*	*Boys*	*Girls*
(1)	(2)	(3)	(4)	(5)
1	72.5	72.5	8.5	7.5
2	87.5	86.6	12.6	12.3
3	96.2	95.7	14.6	14.4
4	103.4	103.2	16.5	16.4
5	108.7	109.1	18.4	18.4
6	118.9	117.3	22.1	21.4
7	123.3	122.7	24.5	24.8
8	127.9	126.8	26.4	26.1
9	133.6	132.3	30.0	29.7
10	138.5	138.5	32.4	33.5
11	143.4	144.1	35.3	36.5
12	143.4	144.1	35.3	36.5
13	148.9	150.3	38.8	42.6
14	154.9	153.0	42.9	44.4
15	161.7	155.1	48.3	46.7
16	165.3	155.3	52.2	48.2
17	168.4	155.4	55.5	49.8
18	168.9	156.4	59.0	49.9
	169.9	156.8	61.1	50.1

Ref : ICMR 1968.

TABLE II

Calorie, Protein requirements and intake of females per day per Individual

Age Group	*Calories*			*Protein (g)*		
	Need	*Intake*	*Need met %*	*Need*	*Intake*	*Need met %*
1	2	3	4	5	6	7
MONTHS—						
0— 6	530	445	88	8.5	8.1	95
7—18	980	635	65	12.0	10.3	86
19—30	1,100	790	72	13.0	13.1	10
31—59	1,230	945	77	15.0	15.9	106
YEARS—						
5— 9	1,530	1,225	80	20.0	21.8	109
10—14	2,150	1,615	75	30.0	29.1	97
15—19	2,560	1,895	74	38.0	35.0	92
20—24	2,400	1,920	80	38.0	36.9	97
25—29	2,255	1,985	88	38.0	37.2	100
30—39	2,120	1,885	39	38.0	37.2	98
40—49	2,010	1,910	95	38.0	38.0	100
50—64	1,890	1,795	95	39.0	36.1	95
65—	1,770	1,715	96	38.0	35.0	92

THE CHALLENGES FACED BY WOMEN TO SUCCEED IN THEIR CHOSEN CAREERS

'SARASIJA'

A COMPARATIVE STUDY OF, CAREER WOMEN IN INDIA & ABROAD

All over the world, women, today are entering various professional areanas, even those considered to be virtually male preserves. This becoming increasingly evident, even in the so-called backward areas and the ill or poorly developed nations. In India, this trend has become marked, after Independence, especially, after the adoption of the constitution which provides for equality of sexes in all things including job opportunities. The reasons for such an entry are not too far to seek.

The main reason which is perhaps true the world over, is monetary. Women have taken to work not as a result of any compulsory inherent need but rather as a necessity. Given a chance most women would perhaps choose to remain at home, making every effort to run a happy home. It is only less than 10% of the women who would like to take up a job as a career. The rest of the women in various professions are there as a result of a variety of reasons the chief amongst which is the need for substantiating the family income. Faced by the ever-spiralling rise in prices of most commodities essential for every day life, and the ever shrinking value of money, women from all walks of life are forced to lend a hand to supplement the family budget. In a large percentage of cases, women are found to act as the bread-winner as well. This is becoming increasingly true in a number of countries and equally true in a country like the U.S.A. where the girls and boys opt to live away from their parents even at such as early age as 18 years, when it becomes a necessity to find a job for a living.

If one sets monetary considerations aside one is appalled to find that hardly 10% of women really desire to take up a profession. This applies to women both in India as well as other countries. In India the percentage of working women to the total working population is appxoimately 19% and most of these are in agriculture and other unskilled jobs. Considering the vast potential of women power available in India and the State of Tamil Nadu *i.e.*, 49% and 49.4% respectively this amounts to a huge national waste of enormous material of value-controlled harnessing of such powers could certainly lead to more prosperity and better growth of the nation. In contrast the literacy and employment rates are very much higher in the countries abroad. Lack of motivation appears to be the main factor responsible for this state of affairs.

Brain-washed into Marriage

Lack of motivation in its turn due to various factors such as upbringing, false values, misleading impressions, differences in education and the existing social patterns of life and human behaviour. Only 2.3% of all educated women are employed as against 18.72% of illiterates. Thus both in India and abroad, almost all girls are brought up with the idea that marraige is their goal in human life, all other things being secondary. Even talented young girls with enthusiasm, interest and driving ambitions are brain washed into believing that a career is only of secondary importance. Thus we find that few students go on to take up any important profession.

If we now turn to the type of professions taken by women, in India, this can be divided easily into professions of major importance and others. The work of the rural women and the industrial women have been already considered at length by the Altrusans from Nagpur and Bombay. (The major professions would include such as that of Doctors, Lawyers, Executives in the Administrative service, Industries, etc.) I will come to this presently.

The different types of careers available to the woman in the U.S., are too many to enumerate and yet there are certain striking features which merit mention. One of the most impressive difference is the paucity of women in the higher professions such as either Doctors, Engineers, Administrators etc. Most women act as Stenographers, Secretarial Assistants, Sales Girls, Telephone Operators, Receptionists, Shop Assistants etc. Teaching and Nursing attract a dedicated lot of women and one finds few women in senior executive professions. The reason for these are not too difficult to understand the major reason being the fact that even in the U.S., women are expected to marry and have a home with the associated responsibilities. As a matter of fact, the mental outlook of women is completely moulded in such a fashion that they are expected and required to get married before the age of 30, so that, the working woman who is unmarried, is looked upon as someone who is not mainly interested in her job but as a person who is marking time, till her time of mariage.

The Big Impediment

Though this is true in more than 70% of women, the other 30% who would like to have a career are also made to believe that a career apart from home life is un-

Indian Society gives Better Scope to Women for some Professions.

necessary and at best can only be considered to be something of secondary importance in the life of a woman. This attitude is present even in such an enlightened country as the U.S.A. Such being the case the women who still wish to take up a job as a career are at a very big disadvantage. The entire mental outlook is completely changed and the man in the office also regards her as a potential candidate for deserting the office any time after marriage.

As far as the medical profession is concerned, I can speak with confidence regarding this unequal treatment given to women in the U.S. If a lady doctor wishes to be a Surgeon and applies for a Surgical residency in the U.S., even in this englightened year, more questions are asked of her rather than of her male colleagues and she is made to feel that it is too difficult for a mere woman to train as a surgeon and practice surgery. Rather than face such gruelling questions and the hard time given to them, the girls opt for other openings conceded to them. **Thus we find that choice of a particular type of profession also depends upon a number of variables. Similar attitudes prevail in India, and choice of profession by women. However, surprisingly, certain professions attract and absorb more women in India than in the U.S. ; for example the professions of Doctors, and Lawyers. Here again it is not perhaps the Indian woman's eagerness to be a Doctor or a Lawyer that matters, rather, that, the Indian Society tolerates even permits and recognizes the need for women Doctors and thus does not make it difficult for her.**

One Swallow does not make A Summer

Though, when it comes to the higher specailities such as Medicine and Surgery one finds that women are discouraged from such careers and thus we find women Doctors permitted to be Obstetrician, Gynaecologist and Paediatricians. However if a woman feels strongly motivated and inclined to spealise in a particular speciality, she not only does very well, but manages to outshine others. I am not here referring to exceptions and Nobel Laurettes like Madame Curies but to the doctors at present in India. Dr. Padmavathi is a case in point, as a result of her own efforts, she has now become a renowned Cardiologist not only in India but abroad as well. Dr. Padmavathi has just been elected to the Indian Academy of Medical Sciences. Sister professions such as Chemistry boast of the eminent services of Dr. (Mrs.) Ashima Chatterjee, President of the Prestigious Indian Science Congress for the past year.

The academic world as a matter of fact can easily boost of the presence of a large number of women on its rolls. In India, alone there are over 20,000 doctors, lawyers, architects, engineers, writers, artists and sculptors. In addition there are nearly 23,450 women teachers in the Universities and graduate women teachers in schools, account for 94,200.

The Indian Administrative Services have had an increasing number of women in the recent years and women candidates have been seen to top the lists of compeitive examinations held in the country.

We have women in the Armed Forces, — a contingent of Parachute jumpers is a recent addition ; — in the Police and even in the constabulary. Women in executive positions are found in Broadcasting and T.V. and various women have lead or taken a large part in the U.N. Delegations. Women Ambassadors, Prime Ministers and Chief Ministers may be few, but they have been and are in India.

Only 2.3% educated women are employed

Though the various different professions enumerated above appear to yield a satisfactory picture, the number of women so employed is woefully small. If one recalls the statistics, I will reiterate once again that it is only less 2.3% of educated women in India who are employed as opposed to 70—80% in countries abroad.

If we now turn to the impact of a professional woman in society and the nation, we will have to logically consider it under several heads.

The woman in profession while carrying out her duties, at the same time raises problems, faces problems, and also causes changes in herself, her home, office, in her community, society and ultimately to the nation. These are of varying magnitudes, depending necessarily upon the type of profession, the number of women in such profession, the intensity with which she performs her various jobs and the restraining or constraining influences of herself, her family, her neighbouring community, social attitudes and other factors.

If we consider the married women, the married woman in the office has certain problems to face. No doubt she resorts to more frequent leave taking than the unmarried woman but these leave takings are viewed very kindly — the general attitude being that one cannot expect anything better from women, especiallyif, they are married.

She exerts more to prove herself

Though the woman might be talented in her work, the fact that she is married, is taken into consideration and she is usually disqualified from hard work or work demanding much precision , and regularity. This might be true to a certain extent in a small percent of cases, yet these leave the working woman with an ambition, at a disadvantage, so that in order to prove herself to be capable of good work, she has to exert herself more than her male colleague. Additional worries and responsibilities at home, problems faced regarding up-bringing of children and tending to the wants of a husband and other elders in the family, are all part of the life of a working woman. This of course is common to the working women in the rest of the world but in countries like India working women have help in two ways. One, the presence of elderly relatives at home which a joint family system, ensures in a country such as ours and secondly the availability of service. The working women in the U.S.A. cannot afford service. Indeed servants are a rarity and the entire responsibility of running a home falls on the woman whether she has a career or not. Secondly there is no joint family system in the U.S.A. It is only extremely rarely that father and son and their families live together. When a boy or girl is 18 years of age, they prefer to deal with all matters themselves, rather than depending upon their parents. This is true of, over 95% of families in the U.S.A., under such circumstances, it is important to obtain any help they can muster, from any source. **Therefore the working woman in the U.S.A. is at a far greater disadvantage than the working woman in a country like India.**

JOINT FAMILY GIVES INDIAN WORKING WOMAN A BETTER DEAL THAN HER COUNTERPART IN ADVANCED COUNTRIES

The working woman in the U.S. has to maintain her apartment in addition to cooking, cleaning dishes, doing her laundry (for there is no dhobi in the U.S.A.). In addition she has to go to the markets for groceries and vegetables and to look after the various needs of the children, and the husband in the family. Her husband probably would help but this may not be adequate. By the time she has finished all this work and resorts to official work, she is no longer interested in maintaining any ambition regarding success, promotions etc. in her career as a working woman.

Promotions :

One other problem confronted by the working woman is the fact that people in general are more likely to consider her on the merit of her sex rather than on her abilities. However smart, brilliant and talented a woman is, the minute she comes forward to work in any capacity as a wage earner, the fact remains that the first impact she produces is as a result of her being a woman and her talents and merits are only secondary. This is a statement which is true trhoughout the world even in such an enlightened society as in the U.S.A. This leads to various problems and a number of impossible situations. One example is seen when promotion lists are being considered, in a given department, it has been the experience of a number of women to find that given equal chances and equal qualifications it is always the man who is preferred rather than the woman. The woman has to be at least twice more efficient to prove her worth before she can obtain a promotion. This is an incongruous situation and yet it is true for a number of jobs especially in the higher categories. As it is, it is difficult as a general rule for a woman to be either appointed to these jobs or even be considered worthy for these jobs. For however ambitious and couragenous a woman is, she is still considered too delicate, for certain jobs.

BUT ALL OVER THE WORLD WORKING WOMEN HAVE TO STRUGGLE HARD FOR RECOGNITION

Generally the married working woman is found living in the outskirts of the city as living here, is much less expensive than living in the heart of the city, the house rent is cheaper and the prices of various groceries is much cheaper. The disadvantage here is the distance and transport is a problem. Therefore in these cases, the car which is needed by the family is taken by the head of the family and the working woman is to resort to the tube or bus. Naturally this ~~adds to~~ the stress of modern living, since travel in these modes of transport in New York and other big cities is extremely tiresome because of the crowd and because of the non-availability of service in time. This naturally results in some delay which is taken as an expression of inefficiency in work and lack of interest and enthusiasm and as such women are not considered suitable for important and responsible work.

More women work in the U.S.A. compared to India, perhaps because job opportunities are greater. Life is set at a brisk pace and people, (women not being an exception) work harder. Perhaps the women are happier, because the majority do not have such vital problems as we in India face — food, clothing and education for the children. They are certainly more independent.

At the intellectual level however, working women all over the world face the same problems—struggling for recognition against many odds—the most significant being the male 'ego.'

The Professional women therefore while facing a number of problems at the same time earnestly contributes to the betterment of humanity and therefore one can assume that with the entry of increasing number of such professional women, the nation undoubtedly stands to benefit from their services.

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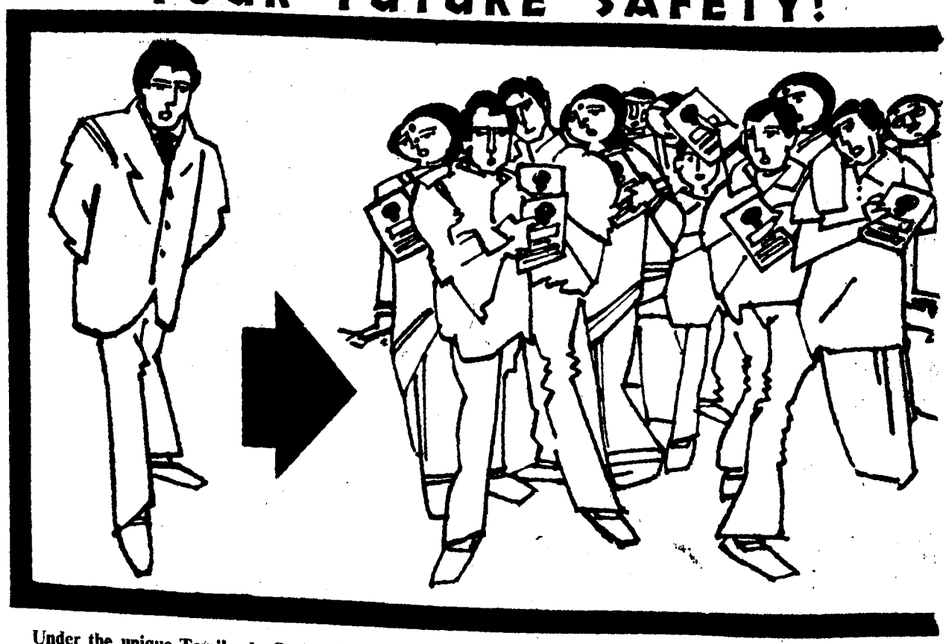

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Subscription period (Years)	10	15	20	25	20	15	10
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Lumpsum at the end (Rupees)	1500	2500	4000	5500	8000	8000	9500

Subscription can be paid into sub-treasuries or participating banks.

The Director,
Social Security Scheme, Government of Tamilnadu,
4th Floor, Kuralagam,
MADRAS—600 001

Top: Award - Winning Gramasevak The Country's Best Panchayat of 73—74 Competition A. Mallapuram is shown along side, while the members of the Panchayat are to be seen in front of the Panchayat Office in the picture above.

TAMIL NADU GRAMSEVAK BECOMES COUNTRY'S BEST

Thiru A.P. Subramaniam of Palacode Panchayat Union, Dharmapuri District was adjudged the best Grama Sevak for the whole of India for the year 1973—74. The Prize has been awarded after a country-wide assessment of the work turned by Gramasevaks.

The first prize winner Thiru A.P. Subramaniam has put in 13 years service as Grama Sevak. He has been working in Marandahalli area of Dharmapuri District for the last 2 1/2 years. This circle covers 26 villages spread over an area of 8,006 hectares and has a population of 43,815.

Before taking the job of Grama Sevak in 1962, Thiru Subramaniam was a School Teacher. He gave up that job to become a Grama Sevak as he felt it gave him wider scope to serve the people. **Perhaps his will to work for the welfare of people takes him to 4 villages in a day and to block office twice a week.**

Activities like popularising family planning and small saving, helping the people keeping the villages clean and helping the farmers in getting loans from the co-operatives keep him busy. **He is specially interested in serving the Harijan Community.**

Prize Winning Village

The village A. Mallapuram in Palacode Block of Dharmapuri district was adjudged the best village at the National Level for 1973—74 and awarded a prize of Rs. 7,000/-.

Spread over an area of 1,601 hectares, this village has a population of 8,194. Out of the 896 households in the village, 563 are engaged in farming. Gross cultivated area during 1973—74 was 1,500 hectares out of which 950 hectares were irrigated. Another 112 hectares were brought under irrigation during the year.

All the households engaged in farming took up HYVP in both Kharif and Rabi. Gross area under improved seeds was 986 hectares and under double or triple cropping, 1,543 hectares. Production of compost was 7,250 tonnes, and 950 quintals of fertilisers were distributed in the village.

Of the 896 households in the village, 543 were covered by co-operatives, 542 adopted family planning methods while 114 sterilisations were done. 430 particpated in people's contributions amounting to Rs.860/-. During the year of competition 173 pucca houses were constructed, 178 houses had smokeless chullahs, and three new drinking water wells and hand pumps were provided. 15 kms. of new katcha roads were constructed and 30 sq. meters of lanes were paved. 1,213 children were in school and 364 adults were made literates.

complete the academic courses and makes it possible to keep co-operative jobs filled on a year-round basis by pairs of alternating students.

(*c*) **Advantages** : The following are some of the major advantages of a co-operative programme of education :

(1) By co-ordinating work-experience with campus education, theory and practice are closely related.

(2) Work experience brings greater sense of responsibility and a greater dependence upon the student's own judgment.

(3) Students of this programme develop greater human-relations skills because their work experience involves them with co-workers coming from a variety of backgrounds.

(4) Co-operative education gives the student contacts which are useful in later occupational placement.

(5) A number of firms would find that the programmes help maintain a steady flow of trained personnel.

(6) It gives many students a head start in salary and position when they go into full-time jobs.

The co-operative education is thus highly valuable not only for the students, but also for the employers, institutions and the society at large.

Details of the Institute :

(*a*) **Management and Finances** :

The Institute is financed by the Government of Tamil Nadu, and to ensure speedy development, the administration and management of the affairs and finances of the Institute have been entrusted to an autonomous Governing Council, registered under the Society Registration Act, with the Minister for Education, Dr. Navalar V.R. Nedunchezhian as Chairman, the Collector of Tiruchirapalli Thiru M. Vaithialingam as Deputy Chairman and Prof. P. S. Mani Sundaram (Principal, Regional Engineering College, Tiruchirapalli), Thiru V. R. Deenadayalu (General Manager, Bharat Heavy Electricals Ltd., Tiruchirapalli), Thiru S. Vaiyapuri (Additional Director of Technical Education, Madras), Thiru T. N. Narayanasamy Pillai (Former Vice-Chancellor of Annamalai University, Chidambaram) and Dr. K. P. Jacob, (Professor of Physics, Regional Engineering College, Tiruchirapalli) as members.

(*b*) **Location**: The State Institute of Co-operative Vocational Education is at present located at the Regional Engineering College, Tiruchirapalli. Detailed plans for the development of a separate campus for the Institute are being worked out.

(*c*) **Courses Offered** : To start with, the Institute offers the following courses from the academic year 1975—76 and the number of students to be admitted in each course will be 20.

(*i*) Architecture and Interior Design.

(*ii*) Electrical Appliances and Systems.

(*iii*) Textiles and FashionDesign

All these courses are of 3 1/2 years or 42 months (14 quarters) duration. The courses are designed so that all the students will receive 24 months (8 quarters) of institutional training and 18 months (6 quarters) of work experience in the fields for which they are preparing.

(*d*) **Admission requirements** : (1) Candidates must have passed the Pre-University Examination of the Madras University with Mathematics and Physics or Physics and Chemistry or Commerce and Mathematics as two of the subjects under Part III or an examination of some other University/Board accepted as equivalent thereto and must have obtained not less than 50% of the marks in the concerned subjects.

(2) Candidates who have passed B.Sc. or B.Com., with Mathematics, Physics, Chemistry or Commerce of a recognised University are also eligible for admission.

(3) Seats are reserved for the candidates who belong to backward class, Scheduled Caste and Scheduled Tribes, as per rules.

(4) The selection of candidates will be on the basis of their marks in the qualifying examinations and an aptitude test and their performance in an interview.

The establishment of this State Institute of Co-operative Vocational Education will not only be a milestone in the history of the development of education in the State of Tamil Nadu but also serve as an example for the other States in the Country to emulate.

PUBLIC HOLIDAYS IN TAMIL NADU DURING 1976

The Government of Tamil Nadu have declared that in addition to 'Sundays' expressly defined as Public Holidays in the 'Explanation', to section 25 of the Negotiable Instruments Act, 1881, the following days shall be Public Holidays during the year 1976 :—

Thursday, the 1st January, 1976	— New Year's Day
Tuesday, the 13th January, 1976	— Muharam
Wednesday, the 14th January, 1976	— Bhogi
Thursday, the 15th January, 1976	— Pongal
Friday, the 16th January, 1976	— Thiruvalluvar Day
Monday, the 26th January, 1976	— Republic Day
Monday, the 15th March, 1976	— Meelad-un-Nabi
Wednesday, the 31st March, 1976	— Telugu New Year's Day
Tuesday, the 13th April, 1976	— Tamil New Year's Day
Friday, the 16th April, 1976	— Good Friday
Saturday, the 1st May, 1976	— May Day
Wednesday, the 30th June, 1976	— Half Yearly closing of Bank Accounts
Saturday, the 28th August, 1976	— Vinayaka Chathurthi
Saturday, the 25th September, 1976	— Ramzan
Friday, the 1st October, 1976	— Ayudha Pooja
Saturday, the 2nd October, 1976	— Mahatma Gandhi's Birth Day
Friday, the 22nd October, 1976	— Deepavali
Friday, the 3rd December, 1976	— Bakrid
Saturday, the 25th December, 1976	— Christmas
Friday, the 31st December, 1976	— Annual Closing of Bank Accounts

As Independence Day falls on Sunday and one holiday for Ayudha Pooja which falls on Mahatma Gandhi's Birthday they have not been shown in the above list of holidays.

Government have also directed that all offices under the control of Government of Tamil Nadu will be closed on all Second Saturdays in the year 1976 and holidays mentioned above except Wednesday the 30th June, 1976 and Friday, the 31st December, 1976.

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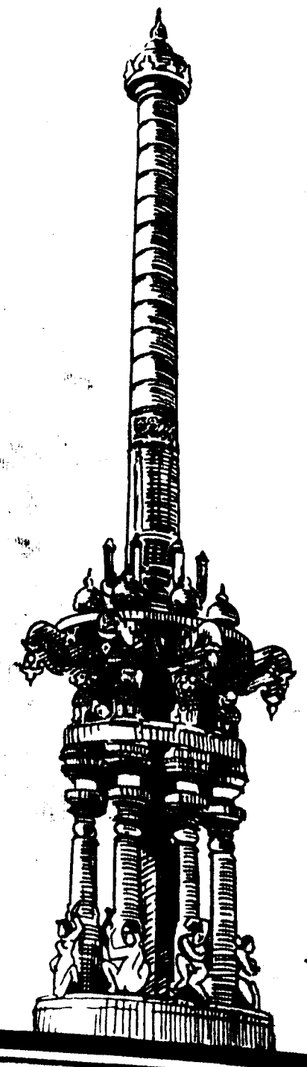

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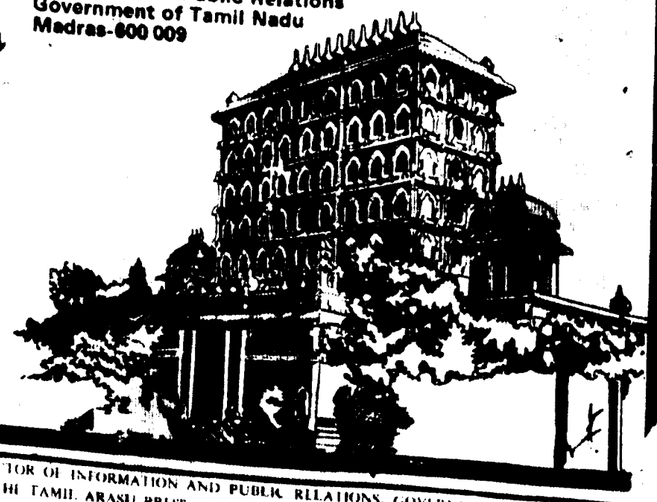

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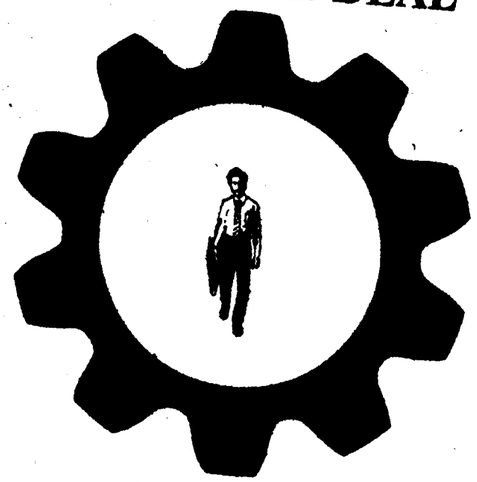

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A New Trend in Education Launched

Institute of Co-operative Education Tiruchi

The State Institute of Co-operative Vocational Education, Tiruchirapalli is yet another example of the progressive policies of the Government of Tamil Nadu in the field of education. Our revered Chief Minister who has already set an example to other States by bringing about a number of progressive programmes to better the socio-economic-conditions of the people of the State has added yet one more by approving the scheme submitted by Thiru M. Vaithialingam, Collector of Tiruchirapalli for the establishment of this Institute at Tiruchirapalli for the promotion of Co-operative Programmes of Education. Dr. Navalar Nedunchezhian is the Chairman of the Governing Council of this newly established Institute.

Why Co-operative Education ?

It is widely accepted and acknowledged by all these days that the central problem of our present day system of education is its lack of relevance to the rapidly changing socio-economic needs of the society. What is urgently needed today is to reorganise our system of education and reorient it so as to make it more responsive and responsible to the changed and continually changing society with all its scientific, technological, industrial, economic and social implications. This can be achieved only by exposing the students of our colleges and universities to the various activities of the society by providing them with ample opportunities to gain direct experience and better understanding of the adult world into which they will enter at the end of their studies. In other words, their class-room education should be linked meaningfully with the activities of the society in which they will live and work after their formal education. Co-operative programmes of education aim at achieving this end and well-designed co-operative vocational programmes of education meet this purpose most eminently.

What is Co-operative Education :

(*a*) **Philosophy :** Co-operative education is a plan of education that integrates class-room study with planned and supervised work experience. It is called co-operative education because it is dependent upon the co-operation of outside agencies and educators in combining to produce a superior total educational programme for the students. The students participate in such programmes because they wish to acquire qualification for a pre-determined area of competitive employment.

The following factors are to be adhered to as closely as possible in all programmes of co-operative education :

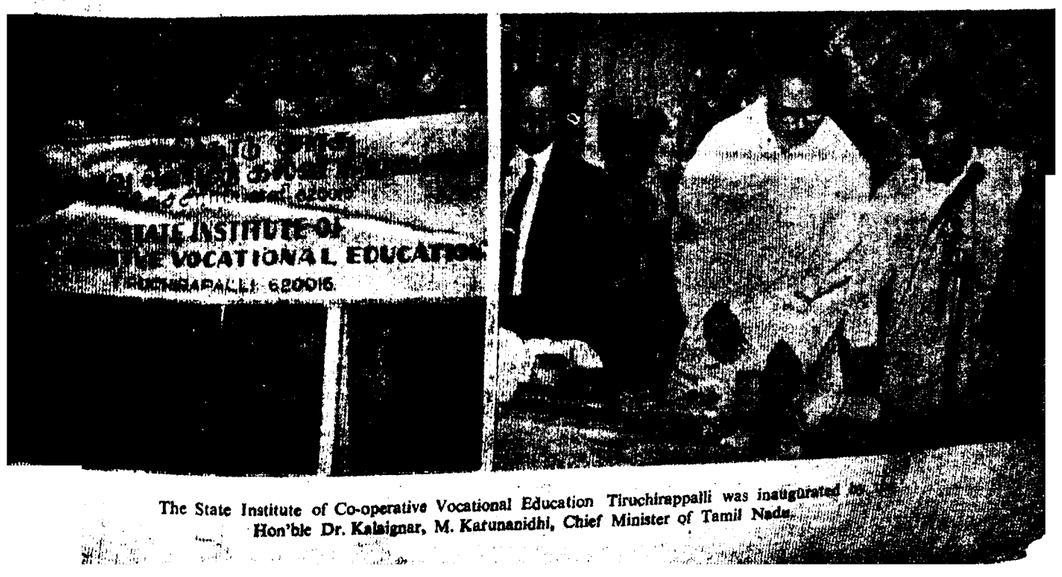
(1) The student's off-campus experience should be related as closely as possible to his field of study and individual interest within the field.

(2) The employment must be a regular, continuing and essential element in the educational process.

(3) Some minimum amount of employment and minimum standard of performance must be included in the requirement for the degree or certificate presented by the Institution.

(4) The working experience will ideally increase in difficulty and responsbility as the student progresses through the academic curriculum and, in general, shall parallel as closely as possible his progress through the academic phase.

(b) **Calendar Patterns :** Programmes of co-operative education can be developed around a number of different calendar patterns. Usually students alternate periods of study with periods of employment on the quarter, trimester, or semester calendar of the institution. Under this plan of alternation, the summer is also used for study or work. The utilization of a twelvemonth calendar for both work and study reduces the extension of the total time to



The State Institute of Co-operative Vocational Education Tiruchirappalli was inaugurated by the Hon'ble Dr. Kalaignar, M. Karunanidhi, Chief Minister of Tamil Nadu.

Tamil Arasu

OCTOBER 1975 50 Ps.

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THE TALL TREE FALLS

At the all-Party Public meeting to mourn the demise of Thiru K. Kamaraj held on 5–10–1975 the Tamil Nadu Chief Minister announced several memorials to perpetuate the memory of the late lamented leader, chief of them being the erection of a Mandapam of dimensions equal to those for Gandhi and Rajaji in Guindy.

Tamil Arasu

VOL: VI OCTOBER, 1975 ISSUE: 4

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GREAT MOMENTS IN A GREAT LIFE

Picture on the opposite page and this page depict Thiru K. Kamaraj during the many years of his useful life in the Service of the Country. Above with Hellen Keller during a reception in Madras.

THE BEACON OF SACRIFICE IS EXTINCT

CONDOLENCE MESSAGES OF P. M. & C. M.

The Prime Minister Thirumathi Indira Gandhi, in a condolence message, said the passing away of Kamaraj "removes from our midst a remarkable personality who wielded considerable influence and commanded the respect of all sections."

"Starting life as an ordinary volunteer in the struggle for freedom, he rose to the highest positions in the Congress, the administration and in national life through sheer organisational ability and sturdy common sense."

"He was a man of the masses with wide experience of problems at the field and was dedicated to the cause of the poor and the weak. The manner in which he overcame all difficulties is a tribute to his inmate qualities and to the strength of our democratic system", concluded the Prime Minister.

The Chief Minister, Thiru M. Karunanidhi, in his condolence message said : "The beacon of sacrifice is extinct. We have lost a leader, who had secured an abiding abode in the hearts of Tamilians, and one who had completely dedicated his life for the State's progress and for the nurturing of the democratic way of life in the country."

TAMIL NADU GOVERNMENT GAZETTE

EXTRAORDINARY

PUBLISHED BY AUTHORITY

No. 328 MADRAS, THURSDAY, OCTOBER 2, 1975

[PURATTASI 16, IRATCHASA (2006 THIRUVALLUVAR ANDU)]

DEMISE OF Thiru K. KAMARAJ, FORMER CHIEF MINISTER OF TAMIL NADU

AN IRREPARABLE LOSS TO COUNTRY

The Government of Tamil Nadu announce with profound regret the demise of the former Chief Minister of Tamil Nadu, Thiru. K Kamaraj, at 3-15 p. m. on Thursday, the 2nd October 1975.

Born in 1903, Thiru K. Kamaraj, started his life as a Freedom Fighter and while occupying many responsible positions in the Congress party, he lived up to the highest traditions of Gandhian ideals. A great leader, he rendered yeoman service to the masses as the Chief Minister of Tamil Nadu from 1954 to 1963. The death of Thiru K. Kamaraj is an irreparable loss to the country in general and Tamil Nadu in particular.

(By order of the Governor)

P. SABANAYAGAM,
Chief Secretary.

We Will Bring Back Gandhian Enthusiasm To Our Economics

—:o:—

Tamil Nadu Schemes Show it is easy of Achievement

EXCERPTS FROM SPEECH
By
THIRU. K. K. SHAH,
Governor of Tamil Nadu.

Year after year, as Gandhi Jayanthi is celebrated, I get convinced, more than ever before, that there is an ever-increasing awareness in the minds of the people of India about the need to follow Gandhiji in strengthening the fibre of democracy and in building up a solid base for accelerated economic growth. **The unforgettable scenes of enthusiasm that I witness during Gandhi Jayanthi Celebrations at Gandhi Mandapam, Guindy, further convince me that the Government and that people of Tamil Nadu are entirely in tune with Gandhian philosophy in shaping an approach to social, economic and political issues.** The massive demonstration of faith in Gandhiji's philosophy, will, I am sure, herald a new era of understanding and prosperity.

The 20-Point Economic Programme announced by the Prime Minister is not only a reaffirmation of our faith in Gandhian approach but our determination to adopt it completely. Gandhiji's extreme concern for the common man was the talisman for ensuring equality, contentment and peace. Finding that the common man has not so far received a fair deal in spite of the implementation of Five Year Plans and other developmental programmes, the Prime Minister is now making determined efforts to look after the poor, the down-trodden, the backward classes, Scheduled Castes and Scheduled Tribes who constitute a large segment of our population. All these endeavours represent the quintessence of the ideals propounded by Gandhiji, the vision and far-sightedness of Pandit Jawaharlal Nehru and the dynamism of our illustrious Prime Minister Thirumathi Indira Gandhi. The steps taken so far, have yielded satisfactory results and the success achieved so far encourages us to look forward to the future with hope and confidence.

Last year, we entertained a fond hope of undertaking a pilot project for reconstruction of village economy. We now feel confident that it won't take long before the project gets under way. **We have selected a group of ten villages with the help of the Government and active assistance of Gandhigram and preparations are afoot to collect statistics. We are about to draw up plans to ensure that every family becomes economically viable.** We feel that the State and the Central Governments have announced sufficient measures to make our task lighter. If we can take advantage of the Government's anxiety to take industries, especially small scale industries, to backward areas, the task will not be heavy. We are happy that intellectuals and service institutions like Lions Clubs are eager to assist us. We propose to train a cadre of dedicated workers who after initial training and imbued with Gandhian ideals of service and sacrifice, will study conditions in villages and prepare a blue print for self-sufficiency and self-reliance. We propose to utilise the energy and idealism of our younger generation and build up future leadership inspired by Gandhian ideals.

Never before there was greater necessity than today to rembmer that non-violence and truth alone can convert the present trying times into 'Anushashan Parv' as respected Vinobaji has righly observed. Discipline alone can ensure settled conditions for ensuring economic growth and informed electorate. Freedom of speech and action will then cease to be a slogan and everybody's freedom of speech and action will become compatible with the freedom of speech and action of others ; we will then think of responsibilities first and rights later on. As Gandhiji said : "All rights to be deserved and preserved come from duty well done", and right means should be adopted to secure right ends. These basic tenets are woven into the very texture of our culture and civilisation. Those foreign powers who criticise us to-day will realise in no time that had it not been for the promptness with which the situation was handled, truth and non-violence would have been a heavy casualty.

This year, the Government of Tamil Nadu have been good enough to participate in the celebrations by running an eye camp and initiating slum clearance programme. The Government are also providing a Library-cum-Museum Building at Gandhi Mandapam so that the large number of visitors to Gandhi Mandapam can draw inspiration and the younger generation can be nearer to Gandhiji.

We are taking up important aspects of Gandhiji's programme for discussion. We propose to emphasise that Prohibition can succeed if people understand the benefit of Prohibition and adopt it as a creed. Let us remember what Mahatmaji said — "Prohibition means a type of adult education of nation and not merely a closing down of wine shops." **The Government of Tamil Nadu have given the lead by introducing complete Prohibition as a vital economic programme. Let us pledge ourselves to make it a success** They have also taken several measure to eradicate the scourge of untouchability. They have to be supplemented by the active participation of the people. We propose to highlight the point that the cause of women's emancipation can succeed only if the vast masses of women in rural area are made literate and aware of their rightful status in society.

These celebrations will have no meaning if they do not sustain the enthusiasm of the people to back these programmes which were nearer to Gandhiji's heart. To remember Gandhiji is to rededicate ourselves to his ideals and to recapture the imagination of the masses by reviving his constructive activities. Let us pledge ourselves to be his worthy followers.

Vanakkam.

Dedication Anew

The Birthday of Anna is a land-mark in Tamil Nadu. For the Chief Minister and his Cabinet Colleagues the day begins with dedicating themselves to service of the State by formally garlanding the Anna Statue on Anna Salai, Madras. Most of the programmes aimed at promoting the welfare of the people are formally given a start on the day. This year saw the complete eradication of the State run raffle, thus putting an end to all forms of gambling in the State. This measure has evoked widespread respect for the State in all parts of the country. Gallantry Awards to Police personnel are also presented each year at a ceremonial parade. The awards have been instituted in memory of the Late Chief Minister Dr. C.N. Annadurai.

Picture alongside shows the Chief Minister Dr. M. Karunanidhi Dr. V. R. Nedunchezhian and Thiru K. Anbazhagan, Health Minister near the Anna Statue on 15-9-1975. Picture below shows the Chief Minister, arriving for the ceremonial parade for presentation of the Tamil Nadu Chief Minister's Police Medal for Outstanding Service/Gallantry on 14—9—75 at the Police Parade Grounds, Vellore.

Police Medal in Memory of Anna

AWARD OF TAMIL NADU CHIEF MINISTER'S POLICE MEDAL FOR OUTSTANDING SERVICE/GALLANTRY.

The following members of the State Police Service and Subordinate services of the Tamil Nadu Police and the members of the Tamil Nadu Fire Service have been awarded the Tamil Nadu Chief Minister's Police Medal for outstanding service/gallantry on 14th September, 1975 by the Governor of Tamil Nadu and the recipients are eligible to draw lump-sum grants at the rates noted against each :

Names	*Lump-sum grant*
1. Thiru V.G. Manoharan, offg. Superintendent of Police, Directorate of Vigilance & Anti-corruption, Madras.	No grant
2. Thiru C.V. Chandrasekaran, Deputy Commandant, Tamil Nadu Special Police II Battalion, Avadi.	No grant
3. Thiru R. Subbarayan, Deputy Superintendent of Police, (Category II) and Asst. Commissioner of Police, Headquarters, Madras.	Rs. 3,000/- (Rs. Three thousand only)
4. Thiru S. Motha, Deputy Superintendent of Police, (Category III) Tamil Nadu Special Police, I Battalion, Tiruchirapalli.	Rs. 3,000/- (Rs. Three thousand only)
5. Thiru M.M. Vasudevayya, Deputy Superintendent of Police and Asst. Commissioner of Police Madras.	Rs. 3,000/- (Rs. Three thousand only).
6. Thiru V. Natarajan, Deputy Superintendent of Police, Directorate of Vigilance & Anti-corruption, Madurai.	Rs. 3,000/- (Rs. Three thousand only)
7. Thiru S. Vellingiri, Deputy Superintendent of Police, Prohibition Enforcement, Coimbatore.	Rs. 3,000/- (Rs. Three thousand only)
8. Thiru G.K. Srinivasan, Divisional Fire Officer.	Rs. 3,000/- (Rs. Three thousand only)
9. Thiru S. Myilswamy, Inspector of Police, Directorate of Vigilance & Anti-corruption, Salem.	Rs. 2,000/- (Rs. Two thousand only)
10. Thiru K.K. Ashokan, Inspector of Police, Vigilance Cell, High Court Coimbatore.	Rs. 2,000/- (Rs. Two thousand only)
11. Thiru C. Muniyandi, Inspector of Police, Madras City.	Rs. 2,000/- (Rs. Two thousand only)
12. Thiru K. Ganesan, Inspector of Police, Food Cell, C.I.D., Cuddalore.	Rs. 2,000/- (Rs. Two thousand only)
13. Thiru K. Ramadoss, Inspector of Police, Special Branch, Chingleput.	Rs. 2,000/- (Rs. Two thousand only)
14. Thiru V. Jayaraj, Inspector of Police, Aruppukkottai.	Rs. 2,000/- (Rs. Two thousand only)
15. Thiru C.R. Natanam, Deputy Inspector of Police, Thanjavur West.	Rs. 2,000/- (Rs. Two thousand only)
16. Thiru A. M. Ghouse, Reserve Sub Inspector, Tiruchirappalli.	Rs. 2,000/- (Rs. Two thousand only)
17. Thiru M. Manivelu, Asst. Sub-Inspector of Police, North Arcot District.	Rs. 2,000/- (Rs. Two thousand only)
18. Thiru S.M. Nagulan, Head Constables 282, Food Cell, C.I.D., Madras.	Rs. 1,000/- (Rs. One thousand only)
19. Thiru M. Natarajan, Head Constable 1657, High Court Vigilance Cell, Madras.	Rs. 1,000/- (Rs. One thousand only)
20. Thiru M. Muniswami. Fireman Driver 554.	Rs. 1,000/- (Rs. One thousand only)
21. Thiru S. Raman Pillai, Police Constable 1768, Directorate of Vigilance & Anti-Corruption, Tirunelveli.	Rs. 1,000/- (Rs One thousand only)
22. Thiru C.N. Subbarayalu, Police Constable 1754, Traffic, Madras City.	Rs. 1,000/- (Rs. One thousand only)
For Gallantry (Or other Distinguished Services) :	
23. Thiru C.I.P. Dhanaraj, Dy. Superintendent of Police, Crime Branch, C.I.D. Madras	Rs. 3,000/- (Rs. Three thousand only)
24. Thiru R. Daksinamurthy, Sub Inspector of Police, Crime Branch, C.I.D. Madras	Rs. 3,000/- (Rs. Three thousand only)
25. Thiru C. Pola Reddy, Police Constable 1706, Tamil Nadu Special Police, Vth Battalion, Avadi.	Rs. 3,000/- (Rs. Three thousand only)

The Chief Minister Dr. Kalaignar M. Karunanidhi presented the awards at a special Police Parade held at Vellore on 14-9-1975.

The Tamil Nadu Chief Minister's Police Medal was instituted in 1969 in memory of the late Chief Minister Dr. C.N. Annadurai.

ABOVE 2 GROUNDS TAXABLE

A follow up of PM's Economic Programme

Tamil Nadu.

To restrict the holdings of urban land, the urban land tax raised so as to lay the basis for URBAN CEILING — a step towards the socialistic society.

- Classification has been made as *residential* and *non-residential*
- Rates of taxes have been revised.
- Exemptions given already reviewed

The broadest shoulders should bear the heaviest burden

A helping hand to weavers in woe

Rs. 16.5 crores worth of yarn given to weavers by Co-optex and Tamil Nadu Handloom Finance Corporation.

Rs. 15. 8 crores worth of stagnant handloom cloth was taken over by Government and marketing done by Government agencies.

A unique scheme to provide security benefits to handloom weavers is being introduced. If a subscriber to this scheme dies before the age of 55, his family will get the amount paid by him towards this scheme plus a sum from the Government along with interest. Also an amount equal to this sum will be paid by LIC.

Tenancy laws and house-sites for Agricultural Labour

- Registered tenancies-3,99,350
- Total area covered-6,03,898 acres.
- 7.19 lakh acres of cultivable lands assigned to 3.6 lakhs of landless poor.
- Ownership rights to house-sites conferred on 1.74 lakhs of people—major beneficiaries being harijans and backward classes.
- Government lands for house-sites so far given to five lakhs of persons.
- Amount spent to acquire 2.36 lakh house-sites for harijans — Rs. 4.42 crores.
- Amount spent during last 8 years for acquiring 83, 968 house-sites — Rs. 2.03 crores.

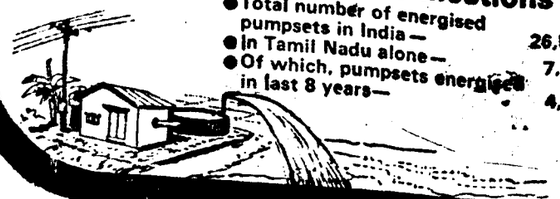
DEBT

Moratorium to weaker sections

- In 1972 debt relief given to all agriculturists ryots and tenants, labourers, wage-earners.
- In 1975 January, debt relief given to all agriculturists. No creditor can institute a suit in a court of law. Payment of interest postponed.
- In 1975 July, debt relief given to non-agriculturists also. No interest will accrue for debts incurred on 22nd July 1975—from 22nd July to 15th January 1976. Pawnbrokers cannot sell the goods pledged. Interest is waived for six months. Millions of poor have thus been saved from tyranny of indebtedness.

Unique record of 7 lakh energised pump-set connections

- Total number of energised pumpsets in India — 26,50,889
- In Tamil Nadu alone — 7,13,312
- Of which, pumpsets energised in last 8 years — 4,23,409



Electricity in every village

Up to 1967 only 20,250 villages and 4,354 harijan colonies had received electric supply.

In the last 8 years alone:
- 40,985 towns & villages and
- 19,574 harijan colonies

have received electric supply.

HOW TO RECOGNISE THE POISONOUS WEED PARTHENIUM

Parthenium (*Parthenium hysterophoru*) a pernicious weed variously known as 'Congress grass', 'Gajara grass' (Carrot grass), 'Chatak Chandani' (Star flowered) and 'Phendarphuli' (white flowered) is considered to be a dangerous plant causing health hazards to human beings besides being detrimental to growing of crops.

Skin Specialists have reported eczema caused by the weed are beyond medical cure and it might damage lungs, eyes and nose etc. The first symptom is itching sensation around the eyes, spreading to the joint of elbows, the back of the knees and front neck leaving the broken skin to let in germs causing complications. Ultimately it leads to the death of human lives. The pollen grains of the weed which floats in the air are reported to have caused several allergic type of diseases like dermatities fever and asthma.

Parthenium (*Parthenium hysterophorus*) belonging to the family 'Compositae' is an erect erect herb, having white cap like flowers growing to a height of 1 to 1.5 meters, resembling the carrot crop.

Scientists and farmers have reported the presence of the fast spreading weed in several places like Poona Bangalore, Jammu and Kashmir. This has now spread to Coimbatore particularly within the city limits and around.

Parthenium (*Parthenium hysterophorus*) can easily be eradicated by burning, removal by digging and destroying etc. It can also be controlled by spraying either 2, 4-D or MCPA at the rate of 2 kg. a. i/ha dissolved in 900 litres of water. For fully matured plants a mixture of 2, 4-D and Paraquat at a 2 kg. a. i/ha each, will be more effective for the control of the weed. All the chemicals are available in the market

For effective control of this dangerous weed, (*Perthenium hysterophorus*) control campaigns in the affected areas are to be organised creating social consciousness among the public. Health Departments, Universities and all public departments should work together chalking out programmes to prevent the killer weed. The Tamil Nadu Agricultural University will be happy to render necessary facilities in identifying, the weed and in demonstrating control measures. For further particulars kindly address the Director of Extension Education, Tamil Nadu Agricultural University, Coimbatore -3.

GETTING RID OF UNWANTED SHRUBS

TIRUPATHI BOTANISTS SHOW THE WAY

By

Bhaskaran Thomas

Semi-arid climatic conditions prevail over a third of India's land area. In these regions, there is scanty rainfall and the vegetation is unproductive, sparsely grown thorny shrubs.

Botanists at the Sri Venkateswara University in Tirupati, are presently looking for ways to eradicate these unproductive plant species. By doing so they hope that more productive crops and grass can be grown on the cleared land.

At the head of the five-year research endeavour is Dr. V. S. Rama Das, Professor and Head of the Department of Botany at the Sri Venkateswara University. The United States Government is supporting the study with a grant of Rs. 253,000 from PL-480 funds.

For their experiments, the Tirupati botanists have taken up a vast area at the foot of the nearby Thirumala Hills where there are as many as fifteen species of woody and thorny shrubs.

Dr. Rama Das says that mechanical means like use of bulldozers, were tried and found ineffective for clearing these plants. There was re-growth within a year after clearance and this was due to the fact that these woody shrubs have deep roots which could not be destroyed by bulldozing, he points out.

Hence Dr. Rama Das notes, one of the alternatives found by his research team for eradicating these shrubs was use of chemicals. "We have tried ten different chemicals and found that two are the most effective on a majority of the species we have here in Tirupati," he says. One of them is called 2, 4 5-T (Weed-one) and the other is Paraquat (Gramoxone).

Dr. Rama Das says that these chemicals have been successfully used in the defoliation of the woody shrubs. In the case of a few species, re-sprouting did occur after four-five months. "However," he notes, "after repeated applications it is possible to exhaust the organic reserves in the plants which are stored in the stems and roots and effect their eradication."

According to this professor, the arid zone plants have special characteristics like thick outer covering, short leaves, thorns and also a thick coating of waxy material on the outer skin which help the plants to adapt easily to the weather conditions prevailing in these areas.

Physiologically, Dr. Rama Das states, the tiny openings (stomata) in the leaves of several of these plants — unlike other kinds of vegetation — generally open during nights for intake of carbondioxide. This helps to prevent loss of water through evaporation during the day from the scorching heat of the sun.

"Now," Dr. Rama Das says, "we want to nullify some of the adaptive characteristics of the thorny bushes as a method for their eradication." This, he adds, can be done by using chemicals to control the leaf openings.

The Sri Venkateswara University scientists have found that 2, 4, 5-T and Paraquat (Gramoxone) help to control the leaf openings. Actually, Dr. Rama Das says, these chemicals enhance the size of the leaf openings. This helps to increase the transpiration rates and thus cause loss of water in the plants leadings to their death, he adds.

Their studies have also shown that certain other chemicals can be used for preventing the formation of the waxy outer covering of these woody shrubs. These chemicals too, Dr. Rama Das observes, can cause severe loss of water in plants.

As far as the replacement of the woody shrubs with more productive grass varieties is concerned, Dr. Rama Das says that work is still at a conceptual level. His research team has already observed one aromatic grass growing interspersed with the thorny shrubs. When this was grown at the university's botanical gardens, it was found to have profuse growth. "Therefore we feel that we can perhaps replace the woody species by this grass," he adds.

He further states that this grass, when tender, can be used as fodder for livestock and as thatching material for hutments. Several other kinds of millets can also be grown in the arid areas after eradicating the woody shrubs because millets require less water. "This would go a long way in improving the rural economy of this area and other semi-arid lands," the Tirupati botanist predicts.

Read

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AIMS OF OUR FAMILY PLANNING PROGRAMME

GOVERNOR'S MESSAGE FOR FAMILY PLANNING FORTNIGHT

The necessity for preventing population explosion has been recognised the world over, but our country was the first officially to introduce a massive family planning programme. In view of large population comparatively meagre resources, low standard of living and tardy economic development, uncontrolled population growth has a severely crippling effect on our development. If this population growth rate, popularly known as "population explosion", were to continue any longer, there is very little scope or hope of improving the present low standards of living. Whatever savings and capital formation are possible under the circumstances, will be consumed by millions of additional mouths that are added every year. The Government of India therefore wisely embarked on a national family planning policy and a population control programme, twentyfour years ago, as an integral part of our development plans.

Our family planning programme aims at reducing the birth rate. We must remember there is a sharp decline in the death rate, on account of better medical facilities, control of communicable diseases, introduction of preventive public health measures and the wide use of anti-bacterial drugs. The programme, being a voluntary one without any element of coercion, provides enough option for adopting any one of the approved and tested methods according to one's aptitude.

Even an ordinary man with common sense will agree that within the limited means available, vast masses of our people cannot look after more than two children. Modern ways of living have luckily created a psychology of making no distinction between son and daughter. A contained family is a continual feast. An unbridled growth of the family leads ultimately to a generation of malcontents who would pull down the fabric of society and all that we have been striking to build over the years since our attainment of independence.

The State Government has launched many incentive schemes of Social Security and other welfare measures which are meant to improve the quality of life of the people and safeguard their future. These programmes are not likely to have any impact unless growth of population is arrested simultaneously.

With a view to promoting effectively this national programme, the Government of India have introduced a package of health services which include nutrition, prophylaxis against Anaemia, blindness, Immunisation against Diphtheria, Tetanus and Pertussis (Whooping cough), B.C.G., Small Pox etc. to create confidence in parents that adequate measures are taken to ensure longevity and good health of their limited family and especially the children. This programme is calculated to prevent diseases and promote health among mothers and their children. Every mother who has become an active acceptor of family planning programme is provided with the aforesaid health package from the nearest Maternity Centre. I would like the importance and easy accessibility of this package of health made known to all the people through active and sustained propaganda in Children's clinics, private nursing homes, public and private sector hospitals, Primary Health Centres, Social Service Organisations, Madhar and Magalir Manrams and the like. The Lions and Rotary Clubs and other similar social service organisations could help in achieving the aim of limited family. I am told that the children and mothers who receive supplementary feeding at the centres run by the Social Welfare Department receive also the benefit of this health package programme.

Family Planning programme has now become a target-oriented programme and every year the Government of India fix a target for different methods of Family Planning. Tamil Nadu has been able to exceed the sterilisation target during the past 3 years consecutively. Monetary incentives have played a large part in promoting the sterilisation programme in this State. They have also assisted special intensive Family Planning drives which have involved all departments under the leadership of the Collectors. The Government of India have accepted time-bound programme to reduce the birth rate to 25 per thousand by the end of the 6th Plan. As a result, the birth rate for 1974—75 is estimated to be 28.5 per 1,000 population as against 30.7 per 1,000 population during 1971.

The twenty-point economic plan which our Prime Minitser has recently placed before the Nation has created a new enthusiasm amongst the masses and has revitalised their faith in the destiny of India and confidence in their ability to shape it. The best scientific talents in the country will, I am sure, help develop expertise and achieve a break-through in reproductive biology and contraceptive technology. Similarly I hope the private and public Sector undertakings will put their shoulders to the wheel and help create an atmosphere among their employees and their families for their wholehearted and willing co-operation. It is imperative that a systematic effort is made by educational institutions to attune the minds of the growing generation to the merits of the 'limited family.'

The Cine field has not lagged behind in assisting this national venture. I would, however, welcome the producers and directors to participate in a larger measure in this national effort and produce films and documentaries which would emphasize and highlight the advantages of a limited family. Other voluntary agencies can also extend their co-operation.

As you all are aware, this year is celebrated as the International Women's Year. The women play a pivotal role in creating healthy conventions and in imparting sense of urgency to every deserving cause. A limited family of two children would enable the mother to concentrate effectively on bringing them up and grooming them to be useful citizens of tomorrow. I am sure every woman in this country would realise how a large and unwieldy family not only affects the mental and physical well-being of the mother but also incapacitates her. Once she is incapacitated, the family loses its moorings. I therefore earnesly appeal to every woman of child-bearing age to participate wholeheartedly and cheerfully in this national programme. The success of the vasectomy camps held, for instance in Thanjavur district and Madras City, is so encouraging that we may plan such camps periodically in every district. I have no doubt that Tamil Nadu will set an example to the rest of the country.

EQUAL PAY TO MEN AND WOMEN WORKERS

ORDINANCE ISSUED

An Ordinance ensuring " equal pay to men and women workers for the same work or work of similar nature," was issued to-day by President Fakhruddin Ali Ahmed.

Under the Ordinance no employer shall pay to any worker remuneration at rates lesser than those paid by him to workers of the opposite sex for performing the same work or work of a similar nature.

Where prior to the commencement of this Ordinance, different rates of remuneration were payable for men and women workers doing the same work or work of a similar nature, the higher or highest of such rates shall be the rate at which remuneration shall be payable, to all such workers on or from the appointed date.

To ensure that enforcement of equal pay for men and women workers does not lead to discrimination against recruitment of women, the Ordinance provides that no employer shall, while making recruitment to the same work or work of a similar nature, make any discrimination against women except where the employment of women in such work is prohibited or restricted by or under any law.

The proviso to this clause ensures that certain priorities/reservations in the matter of employment as for example, in the case of Scheduled Castes, Scheduled Tribes, ex-servicemen and retrenched employees, which have been accepted as a matter of public policy ,are not whittled down.

To promote employment opportunities for women, the Ordinance provides for the setting up of an advisory committees by the appropriate Government. The committee shall consist of 10 persons of which one-half shall be women.

It seeks to appoint officers to look into complaints of non-observance of the provisions and to decide disputes relating to similarities or otherwise of jobs.

Where an offence is committed by a company, every person who was incharge of and was responsible to the company for the conduct of the business of the company, as well as the company shall be deemed to be guilty of the offence.

Equality of opportunity and remuneration for women has proved a difficult target to achieve not only in the developing countries but also in the developed countries. India has made significant and sustained progress in promoting the interest of women. More and more avenues of employment, at all levels of skill and responsibility, many of them hitherto inaccessible, have been created for women. Their working conditions have steadily improved. These developments have not only resulted in increase in women's participation in economic activity but also bringing about a diversified pattern of participation. There is, however, still a wide gap in the opportunities and facilities available in general to women as compared to men.

One of the reasons for women being paid less than men is that most of the women are either unskilled or their vocational training is inferior to that of men, therefore, vocational guidance and training facilities need to be provided. It has been aptly said that in order to play their due role in the modern world women's education and training programmes should be so designed as not to confine them to feminine jobs but to give them equal opportunity with men in all fields. **The laws are on women's side but prejudices, hostilities and resistance still hold them back.** Therefore, it is necessary to set up an effective machinery for the implementation and enforcement of labour laws. The report of the 'Committee on the Status of Women in India,' submitted recently, has recommended that a unit should be set up in each State to attend to matters concerning women's welfare and that the work of such units should be coordinated by a body at the Centre, Women have to organise to exercise their right to equality and mobilise public opinion. Last, but not the least, is the need for self-help. To quote a U.N.O. publication, " ..... Neither laws nor collective agreements nor other methods are automatically self enforcing. All require constant interest and supervision by those responsible for their enforcement and by those concerned with their enforcement. In particular, women themselves must be prepared and be alert to take full advantage of their economic rights as defined by law and contract. In the field of practical application, the trade unions have a particular important task, to perform. In many countries, they have carried out this task with skill and realism. The women's organisations chiefly concerned have also a highly important part to play."

The first modern organisation of women was started in 1917 by the great pioneering woman, Mrs. Margaret Cousins, in Madras under the inspiration and leadership of Mrs. Annie Besant and her Home Rule Movement, which was then a dynamic stream giving expression to the people's restless urge for freedom. Mrs. Besant was interned by the British Indian Government as a result of this agitation.

TheWomen's Indian Association, though functioning mainly in the South, became from its very inception a rallying point for women for action on an all India plane. One of its first ventures was to lead a women's deputation to Mr. Montague, then Secretary of State for India, touring this country in 1919 to formulate political reforms to meet the rising demands of India. The first world war then raging had lent urgency to the situation. Indian women demanded the franchise and the right to participate in the political life of the country. The deputation was led by Sarojini Naidu. In the 1926 elections women participated, but on restricted franchise.

Before long the Women's Indian Association took the initiative in launching the All India Women's Conference, the first mass Indian women's organisation to come into being. At first it sought to concentrate its attention largely on the question of education, but the field gradually widened.

INDEPENDENCE WOULD BE INCOMPLETE WITHOUT THE CO-OPERATION OF WOMEN

—GANDHI.

Gandhi held absolutely the view that men and women are equal. He felt that each is complementary to the other and one cannot live without the other's active help. He gave his earnest support to Indian women's movement. He made a sterner protest against child marriage and child widowhood. He deplored the criminal indifference of parents who kept their daughters utterly ignorant and illiterate and brought them up only for the purpose of marrying them off to some young man of means. Gandhi pleaded for women votes and for their equal legal status with men.

Gandhi said that " men have considered themselves to be lords and masters of women, instead of considering women as their friends and co-workers. Wives should not be dolls and objects of indulgence, but should be treated as honoured comrades in common service. To this end, those who have not received a liberal education should receive such instruction as is possible from their husbands."

The dowry system has to go. Marriage must cease to be a matter of arrangement made by parents for money. The only honourable terms in marriage are mutual love and consent.

Widow re-marriage is no sin, if it be, it is as much a sin as the marriage of a widower. All widowhood is not holy. It is an adornment to her who can observe it.

In a plan of life based on non-violence, woman has much right to shape her own destiny as man has to shape his. Independence would be incomplete without the co-operation of women."

The resources of women power remained untapped for hundred years. He made them secure equality with men before law and politics. Gandhi had played a notable role in the emancipation of women. He brought women straight out of the social barricades. During the civil disobedience movement, women, some of whom had till that day never ventured outside their households, could be seen sitting openly on stools outside liquor shops or foreign cloth shops, quietly, composedly plying their little hand-spinning wheels. Such was the potency of Gandhi's appeal to the hearts of Indian women that scores responded to his call.

In a political awakening brought about by satyagraha, women had been largely emancipated and bore their due share in the national life of India.

Writing about women Gandhi said, " women are special custodians of all that is pure and religious life. Conservative by nature, if they are slow to shed superstitious habits, they are also slow to give up all that is pure and noble in life.

Dear sisters, the future of India lies on your knees, for you will nurture the future generation. You can bring up the children of India to become simple, God fearing and brave men and women or you can coddle them to be weaklings, unfit to brave storms of life and used to foreign fineries which they would find it difficult in afterlife to discard."

To be short, at Gandhi's clarion call Indian women left their sheltered hearts and homes in thousands to take part in the freedom struggle. Shoulder to shoulder with their men folk, they picketed liquor and foreign cloth shops, braved the police brutalities and courted heavy jail sentence. Since independence women enjoy the same freedom and opportunities in public life as men do and they are eligible for the highest office in the country...

" Faith is the function of the heart. It must be enforced by reason. The two are not antagonistic as some think. The more intense one's faith is, the more it whet one's reason. When faith becomes blind, it dies ", declared Gandhi.

—*From the Book "Thy will be done" by Dr. E. K. Swamy*

Women's Rights under the Constitution

With the advent of independance, a new impetus was given to social reforms for women. The constitution granted them equality of status and opportunity and the fact that there should be no discrimination on grounds of sex is enshrined in the Fundamental Rights. The Directive Principles of State Policy empowered the state to make special provisions for the progress of women. There are, in fact, a wide range of constitutional and legal provisions to protect and safeguard the interests of women from exploitation. Legal disabilities with regard to marriage, divorce, inheritance, guardianship, adoption, etc., have also been removed by the enactment of laws such as Special Marriage Act of 1954, the Hindu Marriage Act 1955, the Hindu Succession, Adoptation and Maintenance Act of 1956, Abolition of Dowry Act of 1961, etc.

In the past two decades, the country has made spectacular strides in promoting the interests of women. There is today for example no profession or academic body in India where women have not entered and have not made a mark ; Women have held outstanding positions. In civic bodies eminent women have been elected as Mayors in metropolitan cities. There are women ministers, legislators, judges, lawyers, engineers, architects, sculptors, writers and artists. Women have increasingly started venturing into new venues of public and private employment, such as the Indian Administrative Services, the Indian Police Services, as mountaineers, pilots, etc. There are women in the armed forces including even a contingent of parachute jumpers trained in medical relief. In broadcasting and television, several women find themselves in executive positions Thus, women are beginning to influence the functioning of the mechanism of the state in several spheres, very rightly fulfilling the prophecy of Gandhi.

From times immemorial, women in India have been working in the active economic field and at homes

though not in the strict sense of earning wages. 'The traditional village community in India consisted of the cultivators, the artisan, and those performing menial services. In each of these, the women played a distinctive and accepted role in the process of earning a livlihood for the family putting in sometimes more, sometimes less but often an equal amount of labour in both production and marketing of products of agriculture and handicrafts." In the early days of industrialisation women-folk belonging to the lower strata of the society sought employment in the plantations, mines and factories which had a strong rural base. In agriculture, women have been traditionally working shoulder to shoulder with men. With the planned economic development and spread of industrualisation in the post-independence era, the participation of women in economic activity was quite marked. Articles 16 (1) and 16 (2) of the constitution grant the right of equal opportunities in regard to employment to women along with men without any distinction. The constitutional and legal measures have been taken not only to protect women from exploitation, but also to secure their increasing participation in different fields.

EMPLOYMENT.

According to 1971 census, the total female working population was 31.3 million or about 17 per cent. of the total working force of 180.4 million. The bulk of the women workers (25.1 million or slightly over 80 per cent.) was employed in agriculture. Of the rest, 7 per cent. were engaged in industry (household industry 4.4 per cent, and other than household industry 2.6 per cent.) 3 per cent. in plantations, orchards, fishing, hunting and allied activities and mining and quarrying, 7 per cent. in services and 3 per cent. in other spheres such as construction trade and commerce and transport and communication.

The percentage distribution of women workers by industry divisions during the 1961 and 1971 censuses is shown in Table I.

The tables shows that about 80 per cent of women workers in both the census years were engaged in agriculture and only about 20 per cent. in non-agricultural pursuits. While the percentage of women in

TABLE I

Sl. No.	Industry Division	Percentage Distribution 1961	1971
1.	Agriculture (cultivators and agricultural labourers)	80.0	80.0
2.	Industry :		
	(a) Household	7.7	4.4
	(b) Manufacturing other than households ..	1.3	2.6
3.	Plantations, orchards, fishing, hunting and allied activities mining and quarrying ..	2.0	3.0
4.	Services	7.0	7.0
5.	Others (construction, trade and commerce, transport and communication)	2.0	3.0
	TOTAL	100.0	100.0

ONE CANNOT EXIST WITHOUT THE OTHER ; SO THE RIGHTS SHOULD BE ENJOYED EQUALLY BY BOTH MEN AND WOMEN

household industry declined sharply from 7.7 per cent. in 1961 to 4.4 per cent in 1971, it improved in other industries.

The highest number of women employees in the organised sector are found in Tamil Nadu, next only to Maharashtra and Kerala. As on 31-3-74 there were 2.41 lakh women employees in Tamil Nadu Constituting 14.7 per cent of the total workers in the State against 11.3 per cent for All India Compared to the previous year, the number of women employed in the organised sector registered an increase of 2,659 persons.

These are certain occupations which attract female workers most. About 75 per cent. of the urban female workers are engaged in the following 19 occupations which is shown in table II.

The occupation which attracts the maximum number of urban female workers is teaching followed by the category of labourers. Barring the categories of teachers, clerks and nurses, all other occupations are such as do not have any educational pre-requisite. In the decade 1961-71, female employment rose in the first 9 occupants, but fell in the remaining 10. Increase of women workers has been the highest in clerical jobs followed by teaching and nursing Women in these white-collared occupations, however, constituted less than 3 percent of the total women workers, in 1971. **It is also noticeable that women folk are losing interest in those occupations which require manual labour and that their entry into occupations which have certain educational standards as pre-requisite has shown a rising trend.** Women teachers in Universities and colleges have shown tremendous growth followed by high school teachers. Women have also started entering high positions in increasing number. The number of women administrators and executives at the centre rose from 1,811 in 1961 to an estimated 3,100 in 1971 ; physicians and surgeons from 5,600 to 41,100 ; dental surgeon from 200 to 500 ; lawyers from 450 to 1,300 ; and accountants and auditors from 650 to 2,100.

The Public sector offered the maximum number of employment to women in Madras City (22,518) while the private sector offered the maximum number of employment to women (29,308) followed by the Nilgiris (22,137). The trend discloses the conclusion that in urban sector the learned occupations and in the rural sector, the plantations and textile industry offered more scope for women employment.

TABLE II

Occupations popular with female workers, their percentage to total and percentage growth

Sl. No.	Occupation	Percentage to total urban female workers (1971)	Percentage increase (+), decrease (—) during 1961– 1971
(1)	(2)	(3)	(4)
1.	Clerk, general	2.89	+ 146.48
2.	Teachers	14.91	+ 93.55
3.	Nurses	2.45	+ 55.90
4.	Ayahas, Nurse-maids	1.07	+ 44.33
5.	Well diggers and construction labourers ..	1.73	+ 41.39
7.	Plantation Labourers	1.39	+ 21.03
8.	Cook and cook-bearers	2.74	+13.40
9.	Bidi makers	5.23	+ 5.47
10.	Sweepers, cleaners, water-women ..	5.35	— 1.56
11.	Merchant and shopkeepers—retail ..	5.51	— 7.73
12.	Tailors and dress makers ..	1.40	— 22.92
13.	Weavers and related workers ..	4.75	— 24.51
14.	Butlers, bearers, waitress and domestic servants ..	6.82	— 27.61
15.	Street vendors, canvassors and news-vendors ..	1.38	— 36.31
16.	Laundrywomen, washer-women and dhobie ..	1.83	— 44.29
17.	Basket weavers and brush makers ..	1.41	— 45.66
18.	Labourers	8.81	— 57.59
19.	Spinners and winders	3.31	58.74

Of the total female workers 65.9 per cent are illiterate. Of the literates, per centage of those who have attained the matriculation standard is the highest i.e., 33.13. The percentage of those working women who have educational levels below graduation is 82.75 ; only 17.25 per cent are graduate and above.

Organised and Unorganised Sectors :

The organized sector accounts for employment of 6 per cent of all women workers. Of these, a little more than half (3.3%) or 10.9 lakh women are employed in factories.

In the factory industries, under the Factories Act, 1948, a falling trend has, by and large, been observed in the decade 1963-72 in respect of women employment which came down from 4,00,364 in 1963 to 3,90,269 in 1972, bringing down the per centage of women to total factory workers from 10.37 to 8.73 per cent. During the decade about 88% of the women workers in the Factory Sector were employed only in 7 states, namely, Andhra Pradesh, Gujarat, Karnataka, Kerala, Maharashtra, Tamil Nadu and West Bengal, while in terms of industry groups only 3, namely, 'Food except beverages', 'Cotton textiles' and

Gandhi said that "The wife is not husbands' bond slave, but his companion and his help mate and an equal partner in all all his joys and sorrows - as free as the husband to choose her own path".

'Tobacco including beverages' were responsible for maximum number of women workers during this period.

Next in importance to factory industries are the plantations, covered under Plantations Labour Act, 1951, which provide considerable employment to women in the country. However, women employment in plnatations also declined over the years from 3,87,899 in 1968 to 3,80,085 in 1972. During this period (1968-1972) women employment rose in coffee, rubber and other plantations, but fell in tea plantations. Of the 3,80,085 women plantation workers in 1972, as many as 88.3% were in tea plantations ; 6.8% in coffee plantations ; 3.6% in rubber plantations ; and the remaining 1.3% in other plantations. In that year the maximum number of women workers in tea plantations was employed in the states of Assam (1,76,858 i.e., 52.7%) and West Bengal (87,600 i.e., 26.1%) In coffee plantations the bulk of women employment was in Karnataka (11.861 i.e., 45.9%). In rubber plantations, Kerala was responsible for maximum number of women workers (12,860 i.e., 93% In other plantations also bulk of women workers were in Kerala (3,248 i.e., 68.8%).

While plantation, forestry, etc., manufacturing and services divisions taken together as well as individually covered a large chunk of women employed in private sector, in public sector the service division alone claimed bulk of women employment. **In both the sectors, Southern Zone employed the largest number of women employees in 1974 (42% in private sector and 30% in public sector). Of the women employees in the public sector. Central Government employed 8.2%;; State Governments 42% Quasi-Government establishments 15-5% and Local bodies 34.3%. While primary and middle school teachers and professional, technical and related workers are largely concentrated in the public sector, there is predominance of craftsmen and production process workers and unskilled workers in the private sector.**

TAMIL NADU LEGISLATIVE ASSEMBLY CONSTITUENCIES 1975 FURTHER INCLUSION OF NAMES IN THE ELECTORAL ROLLS

The Electoral Rolls for all the 234 newly delimited Assembly Constituencies in Tamil Nadu were revised with reference to 1—1—1975 as the qualifying date and were finally published on 28th February, 1975. The Electoral Rolls so published have come into force from the date of this publication. The Final Integrated Electoral Rolls of 1975 are available for the convenience of the public in villages, panchayats, municipalities and other places for inspection.

They are open to inspection by the public at the offices of the Electoral Registration Officers concerned, *viz.*, the Revenue Divisional Officers, Personal Assistant (General) to the Collector of the Nilgiris, Commissioner, Corporation of Madurai, Commissioners of Salem, Coimbatore and Tiruchirapalli Municipalities so far as districts are concerned and the Revenue Officer, Corporation of Madras for the Madras City. Full particulars regarding the electoral rolls, can be obtained from the Office of the Electoral Registration Officer.

All attempts have been made to ensure that correct particulars are entered in the electoral rolls in respect of the voters. However, it is just possible that in a few cases, some errors or omissions may have crept in, in respect of some voters. In order to remove such defects in the rolls, the public are requested to inspect the rolls and apply under Sections 22 or 23 of the Representation of People Act, 1950 to the Electoral Registration Officers for the correction of the incorrect entry or for transposition of entry in the rolls or for inclusion of name in the rolls, in the appropriate forms, details of which can be had from the Electoral Registration Officers.

The prescribed fee for preferring in application is 10 paise in the case of applications to the Electoral Registration Officer and Rupee one for appeals to the Chief Electoral Officer against an order of the Electoral Registration Officer under Section 22 or 23 of the Representation of People Act, 1950. The fee shall be remitted into the Treasury or the Reserve Bank of India or its agents under the head of account "065. Other Administrative Services-*b*. Elections C.Other Receipts—Union." The challan should be enclosed with the application in proof of the fee having been deposited. The fee can also be paid in cash to the Electoral Registration Officer or to the Assistant Secretary to Government Public (Elections) Department, Fort St. George, Madras—600009, in case of appeal.

Tips To Women—For Those Over Forty

For women over forty, in addition to the ordinary routine, special exercises are recommended for strengthening and envigorating the facial muscles, intensifying the blood circulation, and consequently improving the complexion.

These exercises must be done every day after the usual daily dozen. Make yourself comfortable in a chair in front of your dressing table. The skin has to be well cleansed first, and a hot compress would be very good — with water or with an infusion of herbs. Once the exercises are done, wash your face lightly with cold water and put on some cold cream. Repeat the exercises two or three times the first few days, then gradually increase to ten times. Here are some of the simplest and most useful exercises :

For the eyes :

(1) Close your eyes tightly, count to three and open them wide.

(2) Shut your eyes tightly and open them wide, holding the outer corners down with the tips of your forefinger and middle finger.

(3) Slowly roll your eyes, first left then right.

For the double chin :

(1) Put your elbow on the table and cup your chin in your hands. Now press down on your hands with the whole weight of your head.

(2) Put a pencil in your mouth, thrust out your chin and draw circles in the air with the pencil, first clockwise then counter-clockwise.

(3) Thrust out your chin and make a semicircular motion with your head from one shoulder to the other (the shoulders must not be raised).

For the neck :

(1) Turn you head from right to left, then from left to right.

(2) Keeping your mouth closed, press your tongue hard to the roof of your mouth, then relax the pressure.

(3) Sit up. Turn your head as far right as you can, face front, turn it to the left in the same manner.

The older the woman, of course, the more painstaking the care she must take of her skin. And it must be done under the constant supervision of a beauty-parlour physician. In extreme cases, when the process of ageing continues despite conventional treatment, surgery may be resorted to.

Many will ask, if it isn't too late to start worrying about one's face at that age ? No, it is never too late. And please remember that in preventing premature ageing and preserving the freshness and attractiveness of the face and body a lot depends on yourself.

—*Courtesy* : 'SOVIET UNION'

By

Yelena Ryzhkova

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HOW TO SAVE BARREN MARRIAGES

ADVICE AVAILABLE IN GOVERNMENT ROYEPETTAH HOSPITAL

The striking advance in the Family Planning Programme in Tamil Nadu is often attributed to the very vigorous implementation of the Maternity And Child Health Programme ; evidently the small family idea has caught on simply because the very agency which advocates the small family is also taking such good care in ensuring the health and well-being of the children of parents who have contained their family size. This apart the Government which projects the idea that " the small family is a happy family ", is also alive to the fact that a childless family cannot be happy. Childlessness or infertility can be due to male or female factor. Infertility due to the female factor is easily dealt with in the Gynaecology departments of all hospitals ; infertility due to the male factor however needs a specific clinic. One such clinic has been running in the Government Royapettah Hospital, Madras. Some of the conclusions arrived at in the clinic are given below :

A society is composed of many families—the social and psychological welfare of a family is a sacred as society itself. It is common knowledge that the childless couple develop a complex in society and waste a lot of their time and energy in superstitions and fell a prey to all beliefs and quick treatments. It is to avoid this that the Government Infertility Clinic has been established.

Need for Investigation of Male partner:

Over long years in all cases of infertile marriage, the wife bore the burden of blame and she was despised, hated and maltreated for the " offence " of not bearing children. In over 400 cases studied by us at least 35 men got remarried for want of a child and in about 22 of them, they were found to be partly or solely responsible for the barren marriage. Hence it is necessary that in the year of women's liberation these unfortunate women, victims of such unnecessary second marriages could be spared. Hence it is necessary that the possible male factor in barrenness should spread to the masses so that more of them could resort to thorough investigations before resorting to remarriage. **However there seems to be a general awareness among the urban population in that 60% of males invrtigated by us have come within 5 years after marriage to assess their possible role.** From a figure given by one of the maternity hospitals in city at least one sixth of men who were advised investigation for their possible role in sterility refused to get investigated.

Though Genito-Urinary Surgeons by their training experience and technical facilities are capable of investigating the male factors, the first such organised effort was made by starting an exclusive clinic for this purpose in July 1974 at Genito-Urinary Surgery Department of Government Royapettah Hospital. Over 400 males have been investigated who were referred from the maternity Hospitals and private Medical Practitioners. This clinical study involves thorough examination of the husband, semen analysis, Testicular Biopsy endocrine investigations and genetic studies. This clinical research programme is being carried out with the co-operation of the Department of Endocrinology and Dept of Genetics, University of Madras and Department of Pathology, Kilpauk Medical College. At present all the possible investigations for this study could be made at Madras itself.

Possible Male Factor Infertility:

In about 50% of them some clinical problem could be detected to account for Infertility a figure comparable with other western countries.

Preventable Causes :

Small Pox:—Thanks to the energetic measures taken eradication of small pox from our country has been achieved However the sequell of small pox in early life could produce infertility in men.

Mumpy : —(Swelling of the salivary glands due to a virus) occurring during adult hood produce inflammation of testis and unless promptly treated result in severe damage to the sperm producing tissues and result in Infertility *Venereal problems (Gonorrhoea and Syphilis)* and Tuberculosis affect the Testes and other sperm conduction channels and produce Infertility.

Undescended Testies. —For normal functioning of the tetis they should lie in the scrotom. Due to some reason, they fail to descend and remain intra abdominal with elevation of temperature and it affects spermatogenesia. **Thanks to the organised efforts by the Government of Tamil Nadu, through the school Health programme more children could be detected with this anomaly and corrected which if carried to adulthood would certainly produce Infertility.** We had 2.5% Incidence of such cases in married males to whom no treatment could be offered. The possible role of filariasis and Hydrocele common in our parts, are being studied.

Treatable Causes of Infertility in Male:

Varicocele (Tortuous engorged veins of the testis that depress the sperm production) can be operated successfully and it improves the results, It is possible to correct the endocrine *deficiencies* with proper assessment by hormone studies. Indudicious use of hormones to be avoided.

Impotency Problems :

The problems of erection and ejaculation and the accompanying disorders do come within the scope of this study. In about 90% of cases they were found to be psychologically oriented. However a thorough investigation could be made to rule out any possible organic causes.

Artificial Insemination of Husband Semen.:

Though certain western countries have used artificial insemination of donor semen, they cannot be accepted in our country due to our social conditions. In those cases with substandard semen or mechanical disturbances. Artificial insemination of husband semen offers to be of success.

Dr. A. RAJASEKARAN

Genito Urinary Surgeon & Medical Officer, Male infertility clinic.

MEDICAL RESEARCH PROVES WEEK-END HOLIDAY DISASTROUS

When we in India are thinking of the 7-day work week in the context of the Emergency and labour unions are giving due consideration to the idea, authoritative support is put forward by one of the toughest critics of customary working hours and holiday arrangements in industrial countries, Professor Wolf Muller Limmroth, specialist in industrial medicine at the Munich University of Technology.

His demand for a revolution, in working hours at least, is based on recent studies by labour physiologists — the specialists who study man's performance graph. Even a two-day weekend wreaks havoc with the body's biological clock, they claim. By Sunday people are so far removed from the daily grind that Monday really comes as a jolt ; they have their work cut out getting back into the swing and output accordingly suffers.

It stands to reason that a three day weekend would upset the biological clock even more thoroughly. Countries thinking in terms of introducing a longer weekend would be well advised to shorten the working day substantially instead, the Professor claims.

Tests conducted with laboratory animals in Munich indicate that breaches of the biological rhythm or later harm health. After ten or fifteen years of strain caused in this way the heart and circulation begin to feel the worse for wear.

This damage is irreparable. Professor Muller-Limmroth is by no means surprised that " despite shorter working hours and longer holidays the number of people pensioned off early for health reasons is steadily increasing in industrialised countries."

Scientists have long known how this clock works. The body is at its most productive in the late morning, then backslides between one and two before peaking once more between four and six in the afternoon. " This second peak should be spent in relaxation at home or at a hobby rather than in battling one's way through the rush hour, which is what at present normally happens."

The Munich industrial doctor would thus prefer the work rhythm to resemble school, which in Germany starts first thing in the morning but for the most part ends at lunchtime — but which to the horror of the Anglo-Saxons has also a Saturday forenoon session. " When you work half-days six or seven days a week you can spend some time every day with the family ' Professor Muller-Limmroth says.

The Professor also takes a dim view of short holidays (" two holidays of at least three weeks would be preferable "), but this ideas have yet to catch on with either employers or unions in Western Europe. Regardless of medical research, the two sides of industry are still thinking more in terms of a longer weekend. But India would find unexpected support from these medical researches.

BONE MEAL MEANS MORE GRAINS

Bone meal is an important organic manure rich in phosphoric acid. Bones consist of calcium, Phosphate and some organic matter consisting mainly of fats and proteins. Hence, they are a good source of lime, phosphorus and nitrogen. Bone meal is available to farmers in two forms, namely, raw bone meal and steamed bone meal.

Raw Bone Meal :

Raw bone meal consists of crushed, unsteamed raw bones. Its nitrogen content varies from 3.5 to 4.5 per cent. It contains about 7.9 per cent phosphoric acid and about 28.32 per cent lime. The percentage of phosphoric acid and nitrogen varies with the quality of bones and age of animal from which these are obtained. Normally, the bones of grown up animals contain more phosphoric acid and less nitrogen than those of the young ones.

Steamed Bone Meal :

Bones along with calcium phosphate also contain fats and proteins. The fat hinders decomposition. Therefore, bones are sometimes first treated with steam to remove fat before they are crushed. Steamed bones are more brittle and easy to crash, and at the same time they decompose more readily than the raw bones. Hence, steamed bone meal is generally preferred to raw bone meal. It contains 25 to 30 per cent phosphoric acid and one to two per cent nitrogen.

Steaming, however, removes a small proportion of nitrogen and, thus reduces the nitrogen content of the treated product. At the same time it increases its phosphoric aicd and lime content.

How to apply :

When applied to the soil, the bone meal decomposes, releasing phosphoric acid and nitrogen gradually for the crops. The bones should be ground fine, for it is only then that they decompose rapidly. Particles smaller than 2.3 mm in size are considered suitable for use as manure.

Bone meal is ideal for all types of soils. However, best results are obtained in acidic soils. It gives good results in light, well drained soils with good aeration. It is less effective on heavy clay and calcareous soils. It has particularly notable effects in soils which are well supplied with organic matter.

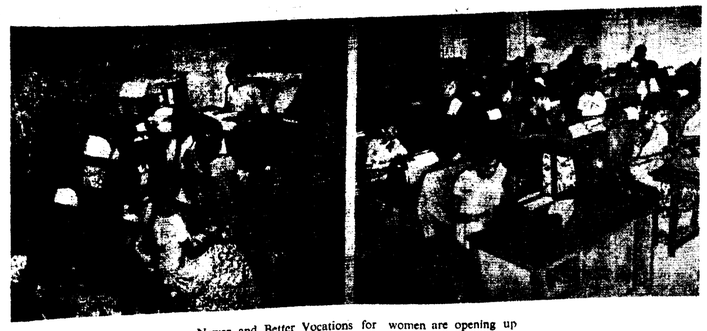
The lime in bone meal helps reduce the acidity of the soil. It is suitable for application to all crops. Being mainly a phosphoric fertilizer, it should be used in combination with nitrogenous manures and fertilizers.

Though it can be used for all crops. paddy, wheat and other cereals respond well to bone meal, particularly in acidic soils. Sugarcane, vegetables and fruit crops also respond to bone meal. You can also apply it to leguminous crops, pastures and grasses.

Time of application and Dosage :

It is best applied at the time of sowing or planting the crop. It should not be used as top dressing. It may be either drilled or broadcast into the soil.

The dosage will vary from crop to crop. Usually 100 to 200 kg. per hectare of bone meal is sufficient for most cereal crops. For vegetables and fruit crops a higher dose of 500 kg is needed. Always use bone meal with bulky organic manures like farmyard manure or compost. The nitrogen requirements of the soil should be met with oil cake or ammonium sulphate.



Newer and Better Vocations for women are opening up

EQUAL STATUS MAY BE A FAR CRY FOR WOMEN

But Government's Employment And Training Efforts Bridge The Gap

WORK OF EMPLOYMENT EXCHANGES

With a view to promoting the employment of women, the National Employment Service under the Directorate General of Employment and Training with its net-work of 535 employment exchanges and University Employment Information and Guidance Bureau offers placement services to women job-seekers and provides special assistance to them. Most of the employment exchanges have special section for women registrants and separate Live Register. Names of women applicants are submitted not only for jobs notified specially for women applicants but are also considered for other vacancies from the general pool. Employment officers visit the training institutions for women to give occupational information with regard to available employment opportunities. Heads of training institutions of women are supplied with Employment Market Information. Career Pamphlets and other occupational literature for the benefit of women candidates are brought out periodically. Special care is taken to give career talks in schools for both men and women specially at the delta stage which is a point of diversification of courses. Vocational Guidance and Career Counselling Facilities are available to women at a number of Employment Exchange and University Employment Information and Guidance Bureaux.

The number of women job-seekers on the Live Register of employment exchanges has been steadily rising and went up from 5,83,177 in 1971 to 9,73,066 in 1974. *i.e.*, by 67% which means more women are now entering the labour market. However, it may be pointed out that in 1974 women registrants were only 11.54% of total registration. The percentage of placement to registration in case of women in 1974 was 9.3 which compared favourably with the over all percentage (for men and women combined) of 7.7 per cent. Comparatively low educational attainments and that too in the traditional streams were to a large extent responsible for low percentage of placements in the case of women. Of the 9,73,066 women registrants in 1974 as many as 38.6% were either illiterate or below matriculates, 47.7% were matriculates and undergraduates, while 13.7% were graduates and post-graduates. Of these registrants, as many as two-thirds were without any professional or vocational training or work experience. Most of the women graduates and post-graduates belonged to Arts group and only very few had obtained their degrees in professional or technical subjects like engineering, medicine, law, etc. Some of the popular occupations in which women seek employment assistance are teachers, typists, general clerks, mid-wives, general nurses, etc. Besides employment of the unemployed, employment service has taken upon itself the task of imparting vocational guidance and employment counselling.

During the year 1974, the number of vacancies notified exclusively for women was 31,808, but only 28,044 could be filled and a large number of vacancies had to be cancelled even though sufficiently large number of vacancies had to be cancelled even though sufficiently

large number of candidates were available for the concerned occupations on the Live Register of the employment exchanges. This was due to non-availability of suitable persons and various other factors such as lack of mobility, socio-economic difficulties, lack of housing facilities, physical, cultural, sociological and technical patterns, family obstacles, etc.

Although women have occupied themselves with traditional jobs like teaching, nursing, social work, plantations, etc., yet with the beginning of professional consciousness women are now seeking various positions in the occupational hierearchy which only a few of their predecessors had attempted. There has been gradual switch-over of employment of women from traditional occupations to more remunerative and higher status jobs. They are now taking up professions of administrators, educationists, doctors, engineers, architects, town-planners, nuclear physicists, journalists, officers in community development projects and in many other professions. It is indeed a happy trend that educated women in India today aspire for a professional career. The increased opportunities for training and education have enhanced their employability. However, the opportunities for entering an occupation and progressing in it have not increased proportionately. In the absence of wage-paid employment, women have, in the recent past, sought self-employment in the form of domestic industries such as knitting and embroidery, tailoring, pickles and spice making. In addition, they have also engaged themselves in jobs like freelance journalism, translators, interpreters, commercial artists, fine artists, cartoonists and also some unconventional fields like hair dressers, beauticians, masscuse, tourist guides, etc. These jobs are becoming popular in bigger cities and metropolitan towns.

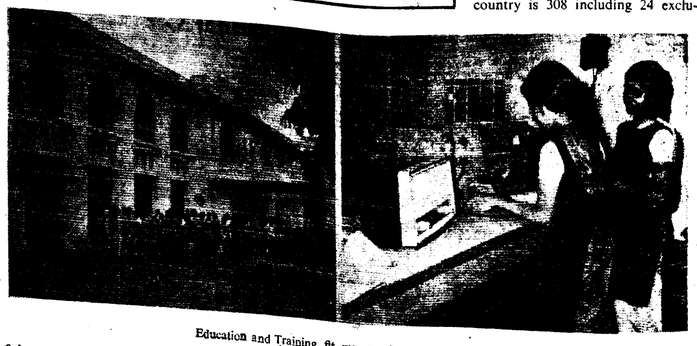
WOMEN IN SPECIALISED JOBS

The proportion of women employed in the organised Sector in 1971 was 6 per cent of the total women workers in the country with 2.7 per cent in industry and 3.3 per cent in the tertiary sector. The occupational classification of selected categories of women workers based on the 1971 census reveals that there were 55,000 administrative and executive officers, 23,800 physicians and surgeons, 16,000 social scientists and related workers ; 5,300 working proprietors, directors and managers, 2,500 engineering technicians, 1,700 jurists, 500 elected and lelislative officers, 300 aircraft and ships officers. The urban educated middle and upper class working women are emerging as a new social group. This, in itself is an indicator of the significant socio-economic changes taking place in India.

While the need for the women from lower middle class families to earn is basically to supplement their family income, the women from higher income groups have been entering various professions with a view to utilising leisure time or attaining social prestige and status. However, much has to be achieved so far as working women's role in society and their total fulfilment as professional individuals is concerned.

Vocational Training :

The extent of unemployment among the educated men and women with purely academic back-ground is high. It is obvious, therefore, that unless education for women is vocationalised we shall be adding to the mass of educated unemployed. For this purpose Government launched the Vocational Training Programme on a modest scale soon after independence. Since then there has been a steady growth of training centres all over the country. The number of Industrial Training Institutes (I.T.Is) including those exclusively meant for women has increased from 166 in 1961 to 357 in 1974. These provide training in engineering engineeringand non-trades. There are at present. 54 (32 engineering and 22 non-engineering) trades in which training is being provided. There has also been a steady increase in the number of Polytechnics and Technical Schools which provides technical education at school and post-school level. The number of polytechnics in the country is 308 including 24 exclusively meant for women. There are 160 other institutions, of which 80 are meant exclusively for women, which provide training in vocation trades. The actual out-turn of women trainees at various I.T.Is. in 1973 was 4,782 in non-engineering trades and 304 in engineering trades. It is proposed to enlarge and diversify the training facilities at these Institutes during the 5th Five-Year Plan, the primary object being to add new trades for which there is an increasing demand and to abolish the ones which have outlived their utility. Under the Apprenticeship Training Scheme training facilities are available to both men and women in 61 engineering and non-engineering trades in as many as 201 industries. Unfortunately very few women have availed these facilities and their number was just 104 as on 31st March, 1974. However, it is proposed to increase the number of trades from 61 to 150 during the 5th Five-Year Plan period.



Education and Training fit women for challenging tasks

Unorganised Sector :

As many as 94% of the women workers are engaged in the unorganised sector of the economy, 80% in agriculture and the rest in non-agricultural occupations. Next to agriculture the largest number of women, about 4 million are employed in various industries, trades and services including handloom, khadi and village industries, sericulture, coir and cashew industry. Workers in this sector include a varied assortment — unpaid family workers, attached, casual and contract labour, workers in fields, homes and workshops, self-employed, agents, wage workers etc. There is, however, a virtual absence of any reliable data —about number of workers, trends in employment, working conditions and prospects of recruitment training and development — relating to this sector.

Wages :

While steps are being taken to increase the employment of women and their employability in different spheres, simultaneous efforts are being made to bring the wages of women at par with their male counterparts. The equal pay principle has been enshrined in the Constitution of India as a Directive Principle to State Policy. The Government of India have also ratified I.L.O. Convention No. 100 regarding equal remuneration for men and women for work of equal value. The various Wage Boards, Industrial Tribunals and Wage Fixing Authorities under the Minimum Wages Act, 1948 kept it as a guiding principle while recommending wage scales. Various measures taken in this direction have no doubt fairly reduced the wage differentials but there are still disparities in various fields. In this context, mention may be made of the data thrown up by the Second Occupational Wage Survey, 1963—65 conducted by Labour Bureau in occupations in which men and women workers were employed in fairly large proportions The survey has revealed that the average earnings per day paid for in respect of men workers was relatively higher than for women workers in all the three important sectors of industrial activity, *viz.*, manufacturing, plantations and mining. Disparity was the highest in the manufacturing industries, with 'match factories' topping the list where men earned about four and a half times more than women on an average. However, there were a few instances like that of the 'fine chemical industry' where average earnings of women workers were reported to be higher than those of their male counterparts. In mines and plantations, men were earning consistently more than women but the dispartiy was considerably less in 'tea plantations' while it was the highest in 'Iron Ore Mines.' Under the Minimum Wages Act, 1948, which empowers the appropriate Government (Central or State) to fix and revise the minimum wage rates of workers in the scheduled employments, the wages fixed/revised generally do not make a distinction between men and women workers but still there are some cases of differentiation between men and women in some employments. It will be of importance to mention that Government of India have appointed so far 22 Wage BorWage Boards (including Wage Board each for Cotton, Sugar, and Cement Industries) which ,excepting for Tea, Coffee, and Rubber Plantation, did not make any distinction between the wages of men and women workers. The Boards for these Plantations had narrowed down the disparities while recommending different wages for men and women workers.

Data on wages of women workers belonging to agricultural albour households in agricultural and non-agricultural occupations are available from the Agricultural Rural Labour Enquiries' conducted by Labour Bureau. According to the date of these Enquiries, average daily earnings of women in non-agricultural occupations have increased from Rs. 0.62 in 1956—57 to Rs. 0.92 in 1964—65 *i.e.*, by about 48 per cent. The average daily earnings

Plantations and Agriculture still offer the maximum job opportunities for women

in agricultural occupation increased from Re. 0.59 in 1956—57 to Re.0.95 in 1964—65. The actual average daily earnings of an adult agricultural women worker in agricultural operations remained below the lowest rate of minimum wages in the States of Uttar Pradesh, Madhya Pradesh, Kerala and West Bengal during 1956—57. But the position improved in the States of Assam, Gujarat, Maharashtra, Punjab and Tamil Nadu in 1964—65 when the earnings of womenagricultural labourers were above the statutory minimum rates of wages. But for a number of States like Uttar Pradesh, Madhya Pradesh, Bihar, Mysore and Orissa, it is observed from the results of the Rural Labour Enquiry (1964—65) that while the men's average earnings were within the range of minimum wages fixed, the womens' average earnings were less than the lowest minimum wages.

According to the observations of 'the Committee on the Status of Women in India' "..... differences in wage rates between men and women were present in both minimum and maximum rates for most occupations in different industries. There are, however, a few instances where the gaps have narrowed considerably or even become favourable to women at the level of minimum rates (jute-residual occupations, wool-darners, electrical machinery—industriess examiners Grade II, Machine Tool, Machinist (Gracde I). Even in such cases, the maximum rates for women are lower, leading to lower average earnings. The difference in wages rates of unskilled labourers or mazdoors and semiskilled worker like packer, loaders, unloaders, etc., support our view that prejudices, rather than skill or productivity differentials determine wage-difference between the sexes. In the plantations, the margin of difference is much smaller than in factories and there are cases where the average earnings of women exceed that of men. These are, however, exceptions. The other significant trend is in the case of electrical and engineering industry where women are found in a few operations of highly skilled type."

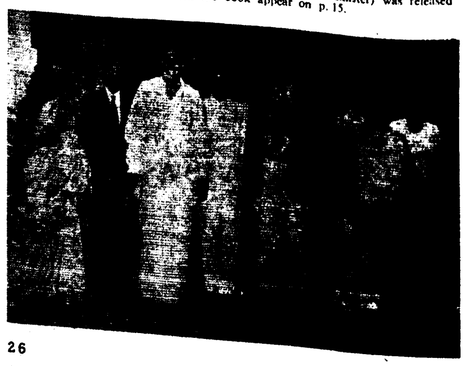
Working Conditions and Welfare :

Women workers require special treatment as they need more protection than men in their working environment in view of their tenderness, sensitiveness and their functions at home and specially the bringing up of future generations of the country. In India, positive steps had been taken from time to time and are being taken through appropriate labour legislation to provide healthy and congenial conditions to women workers at work places. The main inspiration for such legislation had been provided by the pasic standards formulated by the International Labour Organisation. The basic enactments regulating the working conditions, etc., of women workers employed in different sections of the economy are the Factories Act, 1948, the Mines Act, 1952, Plantations Labour Act, 1951 and Maternity Benefit Acts (State as well as Central). Besides ensuring certain minimum welfare facilities exclusively for women worworkers, the Acts safeguard them against such evils as night work, excessive hours of work, under ground work in mines, maximum permissible load to be carried, employment during maternity and immediately after confinement, etc. They are not allowed to clean, lubricate or adjust heavy machinery while it is in motion nor are they allowed to handle excessively heavy weights. Further, the most valued and significant of the protective measures adopted for women employees in India, as elsewhere, are those dealing with maternity leave and other allied benefits. In addition, women workers enjoy certain other facilities/amenities such as medical, educational facilities, vocational training, etc., provided by the State Governments, Employers' Associations, Workers' Organisations and Special Welfare Funds for certain mines constituted by the Government of India, *e.g.*, Coal Mines Labour Welfare Fund, Mica Mines Labour Welfare Fund and Iron Ore Mines Labour Welfare Fund.

Women and Trade Unions :

Women workers, initially had not shown any particular enthusiasm in joining trade unions, interalia, due to social factors but their participation increased in the late fifties. On the basis of latest information available from the registered trade Union (workers' and Employees') which were submitting returns, the membership of women was 4,21,067 (8.2%) out of a total of 51,21,011 for the year 1968. Amongst the workers' unions States which normally accounted for sufficient number of female trade unionists (40,000 or above) during the same year, were Andhra Pradesh, Assam, Keralu, Maharashtra and West Bengal. Amongst workers' unions, the industry-groups which normally accounted for sufficient number (30,000 or, more) of female trade unionists during 1968 were 'Manufacturing,' 'Agriculture,' 'Forestry,' 'Fishing,' etc., 'Mining and Quarrying' and 'Services,' It is ,however necessary that women workers should come forward in greater numbes to join trade unions and then only, these organisations can look after and fight for their interests in a more effective way.

Photo taken when Thiru K. Rajaram Minister for Transport released the Book, "Thy will be done" by Dr. E. K. Swamy (seen next to Minister) was released Excerpts from the book appear on p. 15.



THE MANY FORMS OF TAMIL NADU BRONZES

By

K. LAKSHMINARAYANAN

Government Museum, Madras.

Chola Period Nataraja Bonze at Govt. Museum, Madras

Of the many contributions of Tamilnadu to the art world her bronzes occupy an important place. Bronzes of Tamilnadu can be studied under the three classifications : Primitive, Folk and Classical. Though primitive and folk bronzes are not collected and exhibited in the Museums as much as that of classical bronzes, there are bronzes in primitive and folk styles in Tamilnadu. The existence of folk bronzes from the time of Sangam period can be inferred from literary sources. Some primitive bronzes of prehistoric period have been obtained in Tamilnadu.

The term primitive bronze here stands for the bronzes made by the people who have or had primitive or tribal life. As the result of excavations conducted in Adichchanallur, a place near Tirunelveli, on the South bank of river Tamiravaruni, some primitive bronzes have been obtained. They are of birds, animals, and one small female figure. Cocks, Goats, Antelopes, tigers and elephants in bronze had been made by the pre-historic people of Adichchanallur for burial ceremonies. The features of the small female bronzes make us to consider her as mother goddess. A number of bronze terminals with branches containing small figures of birds and animals were also unearthed from this site. Some of these bronzes are kept in the pre-history gallery of Madras Museum.

Folk Bronzes are made by villagers and common folks who do not know much about the technical sophistications and religious canons. So, naturally they are simple in style and workmanship and resemble the styles of the folk terracottas of their period. They have lesser ornaments and represent styles of ordinary masses. They are not made with the usual five metals blend (ஐம்பொன்) the usual metal-blend of classical bronzes. Generally they have been made in "Lost-wax" process. Most of them are bronzes of village deities.

Amman, Ellaikkali of Pidari with her six sisters Kannagi, Ayyanar, Karuppan, Madurai Viran and Muvadiyan are some of the important village deities worshipped in Tamilnadu. Amman is worshipped throughout Tamilnadu in various names. They are represented only by their head portion. So, the Amman bronzes are found only as godess head. The head is either crowned by a conical head-dress or designed with fire flames.

Ellaikkali or Pidari, Ayyanar and Karuppan are guardian deities of villages and towns. The former is called by different names in different places. Often she is called by the name of the village or town in which she has temple as in the case of Samayapurathal of Samayapuram, a village near Trichy. Pechi Amman of Pudukkottai and Ramnad Dists, Vattapparai Amman of Thiruothiyur and Thiru Amathur, Villupuram, Nadi Amman of Pattukottai, Kon Amman of Coimbatore and Veiyali Ukanda Amman of Tirunelveli all belong to Ellaikkali Group. Bronzes for them are made both in standing and sitting poses. They are portrayed with weapons similar

to the classical Kali bronzes. They are represented with two or more hands. In the case of two hand figures one hand holds sula or flower while the other carries a kapala or nose or simply let down.

Karuppan and Madurai Viran are attendants of Ellaikkali ; we have bronzes for Karuppan and Madurai viran. Karuppan has many forms and names such as Sappani Karuppan, Sankili Karuppan and Nondikkaruppan. Bronzes of Karuppan are made in standing pose with two hands. He holds a sickle in one hand while the other hand is either kept on his hip or hangs loosely. Sankili Karuppan holds a chain. The chain may be symbolic of his authority to catch and tie the evil doers for punishment. Madurai viran bronzes are made in

Chola Patronage Perfected Bronze Styles

Madurai Viran Bronze — Madras Museum

standing pose with a pair of hands. He has sword, bow and arrow and dagger or any one or both of them.

Murugan and Ayyanar are made both in folk and classical bronzes. Ganesa with his elephant head, paunch stomach and stumpy legs is always a very favourite subject of village artisans. They make stuccos and bronzes for him. Ganesa has four hands. He is represented with all appurtenances that are found in classical bronzes. Ayyanar bronzes are made either in standing or sitting poses. He is also represented in the equestrian pose riding a horse or mounted on an elephant. He has only two hands. Murugan bronzes are made either as Dhandayuthapani, with a mace or as Palaniyandi with a stick. In both forms he is naked except his loin cloth.

Though Devaram and other Thirumuraikal, do contain references to classical bronzes we have bronzes which could be dotable only from 8—9th century A.D. They can be classified into styles such as Pallava, Early Chola, Later Chola, Pre and Post Vijayanagara and Modern. They are classified into these styles and dated on the basis of their ornamentation and styles. The bronzes which have been got with epigraphical evidences and the sculptures of dated monuments help the students of this art to have a standard by which he fixes the dates of bronzes. **Classical Bronzes of Tamilnadu are solid and are made by 'Lost-wax' process.**

The art of bronze making was nurtured by the powerful Devotional Movement started in Tamilnadu about 4th or 5th century A.D. and reached its zenith under the good patronage of imperial Cholas. Agamas teach four paths to salvation to be followed step by step. They are charya pada, Kriya pada, Yoga Pada and Jnana Pada. Of them Kriya Pada gives the details of temple constructions and image makings. Though these portions of Agamas are not equal to the works of Mayamata and Silparatna in technical matters like iconography and iconometry, they reveal theological prescriptions for the bronzes and temple structures.

Bronzes for Siva, Vishnu, their family members and great Baktas and their various forms and incarnations were made by Saivites and vaishnavites. Jains and Buddhists who enjoyed greater influence in Tamil Nadu till the advent of the Bhakti Cult, also made bronzes for their deities. The bronzes collected from Nagapattinam, Tanjore District and kept in the Bronze gallery, Madras Museum, represent the Tamil Nadu Buddhist bronzes. The Gomatisvara bronze obtained from Sravanabelgola and kept in the Prince of Wales Museum, Bombay is a nice example for Chola period Jain Bronzes.

Since the iconography of the above bronzes are almost the same as their counter-parts in other parts of India except some regional influences, iconography description for them is not necessary. But forms of the gods which originally emerged from Tamil Nadu and the bronzes of Alvars and Nayanmars whose

The God Form Bronzes Are a Fusion of Different Arts Into a Dynamic Whole of Eternal Beauty

A Trident with half goddess in Siva Figure.

bronzes can be seen only in Tamilnadu are available in detail.

The skill of ancient Indian Bronze artisan can bear exhibition in any international art gallery by two masterpieces. One is the Saranath or Mathura Buddha of Gupta period and the other is the Nataraja bronze of Chola period. In this bronze different arts fuse together and make us to feel ecstasy through their aesthetic exelences. The lord dances upon a dwarf Muyalagan, personification of evil and ignorance. The matted hair flies like a liberated sprite, but in tune with the dance motions. His head is decorated with flowers such as adukku kondrai, Pulinagak Kondrai and Umattai. Tender vilva leaves and soft egret's feathers adorn. The crescent moon maintains the balanced distribution of these ornaments. The upper right hand sounds the Drum (உடுக்கை) and in the palm of upper left hand is fire. The lower left hand is in assuring pose and the left is kept like elephant trunk, pointing the raised left foot, the place of eternal bliss. Wrist, forearms and legs are decorated by snakes. The elemental force through which the universe is created maintained and destroyed is designed in this bronze.

If dancing Nataraja represents kinetic energy and tireless activity, potential energy and tranquility are very aptly designed in the form of Dakshinamurthy, the Gods of South (தென்னாடுடைய சிவனே). In this form he is depicted as spiritual teacher. He has four hands. The upper right and left hands hold axe and antelope or snake and fire or trident and rosary. The lower left-hand holds palm leaves containing holy scriptures in some bronzes. The right hand is in teaching pose, has index finger touching the thumb, symbolising the union of God and soul. Though we find Dakshinamurthy in stone sculptures in almost all the Siva temples in Tamilnadu, Dakshinamurthy bronzes are very rare. The Dakshinamurthy in the Paris Museum is remarakable. It is O. 11 m in size and is of 16th century A.D. as is fixed by the Museum authorities. It is gilted bronze. Muyalagan is placed under his right foot. The upper left hand holds fire stick.

Bronzes of the twelve Vaishnavite Alwars can be seen in Vishnu temples. Of the twelve alvars, Poikai Alvar Budhadalvar and Perialvar are called as "Mudhal Alvars" as they are predecessors to other Alvars. Bronzes for them are usually

Post -Vijayanagar Period Dakshinamoorthy Bornze at Pudukottai Museum

made in sitting pose, in a group of three. Most of the Alvar and Nayanmar bronzes are made, with folded hands, in worshipping pose. Thirumazhisai Alvar is made in sitting pose in worshipping attitude. A bronze of a chera King, Kulasekara Alvar is also made in worshipping pose with royal dresses and crown. Thirumangai Alvar a Chieftain under Chola king is made in standing pose with sword and shield. Bronzes of Tondaradipodi Alvar and perialvar are made in standing, worshipping attitude with flower baskets as they were used to gather flowers for the lord's Pujai. Thiruppanalvar, as a good musician is depicted with musical instruments such as cymbals, pipe or vina, Nammalwar and Mathurakavi Alvar bronzes are made in sitting, worshipping attitudes. Andal is made in in standing pose bronzes. In a nice feminine pose comprising three-bends of her body, she holds a flower in one hand, while the other hangs

Chola Period Kannappa Nayanar
Govt. Museum, Madras.

THE UNIQUE FEATURES OF THE SAINT BRONZES

down. Her hair is beautifully collected and banded on one side of the head. The style in which the hair band is arranged is very famous in Tamil Nadu and is called as Andal Kondai. This Andal Kondai, a long garland that hugs her up to the knee and the hand in the pose of holding flower are special features for Andal bronzes.

Of the sixty three Saivite Nayanmars, Sambandar, Appar, Sundarar, and Manickavasakar are the famous four Nayanmars, Sambandar bronzes are made either in dancing or standing with cymbals. In the dancing pose his right index finger points towards the sky where Siva with Parvati gave appearance to Sivapada Hirudaya Sambandar's father. This and the absence of Srivatsa help us to distinguish Sambandar bronzes from those of dancing Subramanya and Krishna. Appar bronzes are made with broom stick by which he cleaned temple vicinities. Manicka vasakar is shown with palm leaves containing Thiruvasakam in left hand. His right hand is in teaching pose. Sundarar is made in standing pose sometimes with a stick and some others holding a flower in one hand and resting the other hand upon a thandam.

Chandikesvara is made either in sitting or standing pose with axe. Arivattaya Nayanar is made with a sickle by which he cut paddy Sheaths. Kungaliya Nayanar bronzes are made with incense—burner. Nilakanda Yaipana Nayanar is made with sakotayal. He is described in Periya Puranam as the Master of Sakotayai.

Kannappa Nayanar bronzes are made in standing pose with folded hands. They are in hunter dress. His bronzes have bow quiver with arrows, dagger and sword or any two or three of them. Karaikkal Ammayar images are made either in standing or sitting pose with symbals. As she had got devil's appearance at her request, she is made with canine teeth and her skeletons visible. This often mislead scholars who are not conversant with Saiva Thirumuraigal to identify her wrongly as Kali. Like this two more bronzes of Nayanmars will deceive the scholars if they have not studied Thirumuraigal. They are the bronzes of Thirunalaippovar and Anayanar. Thirunalaippovar bronzes are made with a plough, which is also a symbol for Balarama, one of the ten incarnations of Vishnu. Anayanar bronzes are made exactly like that of Venugopala, as playing flute.

Cheraman perumal, Kocehenkat Chola, Pukai chola, Nedumarar, Iadikal Kadavarkon, Kayarsinga Nayanar and Narasinga Munairaiyar were kings who in later life became saints. Their bronzes are made with swords and crowns. And they kept their swords in kiggly manner.

Enadi Nayanar, Kotpuli Nayanar and Munai Aduvar were great warriors and their bronzes are made with swords and shields.

Later Chola Period
Thirumangai Alwar.

How to Improve the Quality of Sugarcane

AN INTENSIVE RESEARCH IN TAMIL NADU

Sugarcane in Tamil Nadu is planted in different months.

Accordingly the seasons are broadly divided into main season and special season.

Main season consists of the early season (December-January), mid season (February—March) and late season (April—May).

The special season planting is from July to September.

Whatever the season, there are quite a few improved cane varieties you can choose from.

They are Co. 658 and Co. 62174 for early season, Co. 449 and Co. 6304 for mid season and Co. 419 and Co. 853 for late season. For special season select Co. 658 or Co. 853.

Early season (December — January) planting is found to be more ideal for getting highest yields. Pests and diseases will also be lower in this season. In late season (April —May) plantings, pest attack is at its peak.

Among the varieties released so far, Co. 6304 has appealed to the farmers mainly due to its high yields, thickness and non-lodging habit. It is an average sugared variety. Some of the high sugared varieties with good yield to cater to the needs of farmers as well as sugar industry, such as Co-N 68075 (mid. & late), Co. A 71-1 (mid. & late) and Co. C. 6787 (early) are under final test.

Preparing the Land :

Ploughing the land deep with iron mould board plough 4 to 6 times, breaking the clods with junior hoe and levelling with buck scraper were found to be quite paying.

Opening trenches at 20 cms. depth with Victory plough, giving 80 to 90 cms. spacing, is also recommended.

Seeds and Sowing :

Seed material obtained from a well manured sugarcane nursery (sugarcane short crop aged 6 to 8 months), is more healthy and free from pests and diseases. It also germinates well. A hectare of nursery will supply seed cane for planting about ten hectares. Therefore, using short crop seed material is better than setts from sugarcane tops.

Dipping ends of setts in organo mercuric compounds like Aretan (0.25%) and Agallol (0.05%) promotes good germination and controls pine apple disease.

About 45,000 three-budded setts per hectare are required for getting maximum yields.

Manuring :

The following manurial schedule is recommended for the crop.

Apply 25 tonnes of farmyard manure or compost or press mud per hectare and 75 kg. phosphoric acid as superphosphate as basal dose.

As top dressing apply 250 kg of nitrogen per hectare in two split doses on 45th day and 90th day after planting by placement in the form of urea or ammonium sulphate.

Supplement it with 100 kg. of potash per hectare at 45th and 90th day along with nitrogen in the form of muriate of potash.

Ratoon crops are given an extra dose of 100 kg. nitrogen per hectare.

Irrigation :

Give irrigation 5—7 days after planting followed by irrigation once in 7 to 10 days at germination, tillering and growth phase. Irrigate once in 12—15 days at harvest stage.

Digging and turning the soil with a spade 2 to 3 times every month followed by hand hoeing is effective and economical. But instead of spade digging working bullock drawn Junior hoe is more profitable. Application of herbicide, 2, 4-D sodium salt at 3 kg. (*a.i.*) per hectare as pre-emergence spray and the same chemical repeated on 25th day after planting as post-emergence spray also will control the weeds.

Mulching trash in a thing layer of 6 to 8 cms. in between the cane rows, 2 to 3 days after planting, conserves soil moisture, suppresses weed growth and controls early shoot borer. This way you can get an yield of 5—6 tonnes more per hectare.

Partial earthing up on 90th day after planting on completion of second dose of manure and high level final earthing up between 120th to 150th day prevents the crop from lodging.

Trashing in the 5th month helps clean cultivation and eradicates egg masses of pests. Trash twist propping by single line in the 5th month and by double line in the 7th month supports the canes from lodging. This helps check deterioration of juice quality and reduction of cane yield.

The cane crop attains its peak maturity during February—March in Tamil Nadu, irrespective of varieties and the time of planting during the main season. However, the crop is ready for harvest in the 12th month from the time of planting. Ratoons can be harvested one month earlier.

RURAL BANKS TO OFFER FULL MONEY SUPPORT TO FARMERS

LOW INVESTMENT AND LOW OUTPUT PATTERN TO BE BROKEN

The recent decision of the Government of India to set up a chain of Regional Rural Banks constitutes a significant milestone in our quest for a rural credit structure appropriate to the country's needs. The objectives of rural credit policy in this country are familiar enough. In brief, policy has aimed at widening and deepening the institutional coverage of rural credit needs.

Co-operative Credit Structure :

For several years, State policy in this regard laid emphasis on the development of the co-operative credit structure as the major instrument of building up a wide and viable rural credit system. And with State support, progress has been made. In 1951—52 short and medium term co-operative credit was no more than Rs. 24 crores. By 1971—72 the figure had gone up to Rs. 608 crores. This progress, significant as it is, conceals considerable regional unevenness. Even in areas where the co-operatives have had notable success there is reason to believe that the benefits have not extended to all strata of cultivators. In particular, the small the and marginal farmer does not appear to have received his due share. The very fact the Reserve Bank was compelled not so long ago to suggest that co-operatives should aim at providing atleast 20 per cent of their total credit for this class of farmers shows the relative neglect, if one may use a strong expression, of their needs. The figures also support this view. At the end of June, 1973 though primary co-operative societies were supposed to cover 95 per cent of villages the average membership in the 158,000 societies was no more than 253. Even amongst the membership, the proportion of borrowing members to total members was no more than 40 per cent. The reasons for the inadequate performance of co-operatives have been gone into on several occasions among others, by the Reserve Bank whose study of the overdues in the co-operative system pointed to the weaknesses in the structure emanating from the managerial deficiencies and ineffective post credit supervision and loan recovery. Co-operatives have also not been able to mobilise adequate resources as seen in their continuing and large dependence on the Reserve Bank for re-finance.

Commercial Banks

A development of significance in the rural credit field in recent years has been the increasing participation of commercial banks in providing agricultural credit. This has been largely a post-nationalisation development and from a figure of Rs. 54 crores in June, 1969, commercial bank direct credit to agriculture had risen to Rs. 540 crores in December, 1974. This is, by any reckoning, a significant achievement but it is a chastening thought that this figure still represents no more than 6 per cent of total commercial bank credit. It shows the magnitude of the job yet to be done. The main instrument to bring about an expanding role of commercial bank credit to agriculture has been the branch expansion in the rural areas. In fact, about half of the total number of bank branches opened since 1969 have been in the rural areas. Even as in the case of co-operatives, there are considerable regional disparities in commercial banks' rural credit operations. A large part of the credit has gone only to a few areas. Several parts of the country remain underbanked and underfinanced.

The Big Gap :

Altogether, the share of institutional credit today is estimated at somewhat over a third of total rural credit needs. This indicates the very large gap that remains. The gap has assumed added significance now both in view of the quantitative increase in credit demand, and, perhaps, more importantly, in the light of the profound qualitative change in the character of that demand that has followed the effort at modernisation of agriculture and inducting into it the new technology. Agriculture has now shown its demonstrable capacity to break out of the vicious circle of low output and low investment. The new technology is the key to this process. The modern techniques which are centred around assured water and wider application of fertiliser and increased adoption of high yielding seeds — all call for more financial support. If the State has provided the infrastructural facilities by extending irrigation and power, if adequate fertiliser is available and better seeds are waiting to to be applied, it would be unfortunate if the farmer were unable to take advantage of this because he lacks finance as it is finance which could translate the translate the input technology into additional production. In other words, what is physically possible, technically feasible and economically viable should not falter because finance is not available.

An important aspect of the new technology is that it is, by and large, divisible and this divisibility helps even the small farmer to adopt the new techniques. Yet the small farmer needs to be persuaded to adopt the new methods and financed to do so. In fact, it is only the adoption of the new techniques that could make for viability and efficiency of his operations. It is this class of farmers that is numerically the largest and together with landless labour and the petty artisan constitutes a significant proportion of the rural poor and it is to his needs that special attention needs to be paid.

A legitimate question could be raised as to whether a restructuring or refashioning of the existing credit institutions would not enable us to achieve the objects we have in mind. More specifically, if we are in a position to identify the weaknesses of the co-operative system whether organisational, managerial or financial could we not think in terms of improving them ? Attention certainly has been given to this aspect of the matter. The major problem is to strengthen the co-operative credit system at the base level and to universalise its membership. It is for this purpose that Government have taken the decision that Farmers Service Societies should be set up at the base level of the rural credit structure. This is a process which in its very nature will take time. Meanwhile, there is urgent need for filling the credit gap.

Similarly, the limitations of the commercial banking system in extending its rural credit coverage stem from the high cost of its operations and the attitudinal problems that arise from its basic urban orientation. The high cost of operations, in turn, reflects the salary structure, staffing pattern and high establishment costs. Commercial banks have found, wedded as they are to their present procedures and systems, that servicing rural business is expensive and many rural branches uneconomic. Most of the rural branches of the commercial banks are today what are called deposit centres, in other words, branches whose credit deposit ratios are well below the national average. Consequently, the commercial banking system has effectively, though perhaps not intentionally, become an instrument of transmission of funds from the weaker rural aras to the more affluent urban sectors. This trend must be reversed and it is essential that, given the credit needs in the rural areas, the first step should be to see that the funds mobilised there are also deployed there. The question of reducing banking costs has been considered several times. There have been proposals such as having a separate rural cadre of bank staff and the like but these have not succeeded. The attitudinal aspect is no less important. If commercial banks are to make an effective thrust in rural banking, their systems and procedures, training and orientation have to be adapted to the rural environment. With the institutional set up of banks today, this is not likely to be either a quick or easy process.

Rural Banking

We therefore need an institution which would combine the rural touch and local feel, a familiarity with rural problems and attitudinal identification with the rural economy which the co-operative possess in large degree, with the modern business organisation, commercial discipline, ability to mobilise resources and access to the central money markets which the commercial banks have — in other words an institution which is locally based, rurally oriented and commercially organised. This is the rationale for the regional rural bank.

The role of the new institution as presently envisaged is that it should supplement and not replace the other institutional agencies in the field. Integral to the idea of the rural bank is that it should have a two-way relationship both with the commercial banks on the one hand and a strengthened primary level society such as the Farmers Service Societies on the other. The rural banks would thus be in a position to draw on the sponsoring commercial bank for resources and also at least in the initial stages, for some organisational support while their lending activities would, to the extent possible, be through the Farmers Service Societies.

Coordination :

One of the important aspects, during the actual operation of the bank, would be to bring about coordination between the various credit agencies now in the field. It would clearly be wasteful if the various credit agencies were to cut into each others' operations. Overlapping of functions is a luxury which we cannot afford and mechanisms would need to be devised to ensure proper coordination.

The share capital of the rural bank is to be subscribed by the Government of India, the State Government and a sponsor bank which would be a public sector bank in the ratio of 50 per cent, 15 per cent and 35 per cent respectively. The association of the State Government would ensure continuing coordination with the State agencies concerned with rural developmental activities while the association of the sponsor bank would provide the linkage to the wider commercial banking network.

Operational Cost :

The other aspect of the bank's working is to keep a strict control on their cost of operations. It is now proposed that the salary structure of the employees of the regional banks should be based on the scales prevailing in the relative State Governments. This will, at one stroke, make their salary bill much less than that of commercial banks today. At the same time it would be necessary to keep down other costs as well and to pattern the organisational hierarchy, behavioural pattern, business procedures and systems of the rural banks not in the image of the commercial banks as they are now organised but on a basis more appropriate to their functioning. In a word the culture of the rural banks has to be distinct and different.

Staff Pattern :

This leads me on to the question of the personnel of the banks. If the banks have to cater to the rural population, understand their problems and have an affinity with the areas they seek to solve, it is essential that they draw their staff from those with a rural background and orientation. The staff will also need to be specially trained and the training programmes, particularly of the executives of the rural banks would need to be devised with a great deal of care and attention so that the object of the exercise is fully reflected in the attitudes of the personnel.

An important question that is under consideration is the location of these banks. It is proposed that the banks should be set up in areas which are comparatively backward and where the coverage at present by the commercial and co-operative banks is relatively poor. They should also be areas which have potential for development and which can effectively absorb productive credit. At the same time, the special features of States in the North-East and States like Jammu and Kashmir will also have to be taken into account.

These are all organisational aspects which currently are under examination and on which decisions may be expected soon. A Steering Committee is at present engaged in this task and it is the endeavour to set up 15 banks by October 2, 1975 and in any event, by the end of the year. Over a phased programme extending upto April, 1977, it is hoped to set up, subject to the constraints of manpower, as many as 50 banks.

—Courtesy : A.I.R.

By

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GRAPE DISEASES IN THE SOUTH

Grape growers in the south faced with quite a few diseases. Some of them are quite damaging reducing the yields and doing permanent damage to the vineyards. Downy mildew, anthracnose, powdery mildew and rust are the Blue most destructive diseases in the south. Anab-e-shahi, Thompson Seedless, Fakdi, Bhokri, Selection-7 and Kali Sahebi are highly susceptible to the first three diseases. Rust! is confined to Bangalore commercially grown in the South.

Here are the symptoms of the diseases and their control.

MAJOR DISEASES

Downy Mildew :

This disease appears on leaves, flowers and fruits. In the initial stage, yellow oily spots appear first on the leaves and later on, on the under-surface of the leaves, a downy growth of the fungas appears. The fungus spreads rapidly in cool, moist weather.

With the dry weather, the spots turn brown and the affected leaves shrivel. As a result the leaves drop. In severe cases the vine may even be completely defoliated.

The shoots and tendrils are attacked early in the season and they become stunted. Affected fruits show large, oily blotches with a dark margin. They then wither and fall easily.

Control :

Infection can be reduced if all prunings, fallen leaves and inefcted fruits are burnt or buried well.

Trials conducted at the Indian Institute of Horticultural Research have shown that the disease is effectively controlled by giving about eight prophylactic sprays with any one of the copper fungicides (Bordeaux 1%), Blud Copper (0.5%), Fycol 8E (1.0%), Kocide (0.2%), Blitox (0.5%). Start spraying when the shoots are 15 to 20 cm. long. This gives a good coverage of the fungicide on the foliage. Additional sprays are usually necessary under prolonged moist weather conditions. Avoid spraying when the grapes are in flower and also when the berries ripe.

Anthracnose :

Anthracnose is a serious disease and attacks all young parts of the vine, especially new shoots and fruits. On leaves infection appears first as small and very dark brown spots. Later the spots grow in size. Distortion is common if there are many spots. The most serious symptoms are observed on the shoots. On the stem and young shoots irregular black spots develop.

If fruit stalks are attacked, the fruits usually do not develop. The affected youngberries develop sunken spot known as 'bird's eye spot.'

Control :

Prune diseased canes and burn of bury prunings, fallen leaves and diseased fruits. Complete control of the disease has been achieved at the Indian Institute of Horticultural Research by spraying the crop three to four times with Defoliatian (0.3 per cent).

Powdery Mildew :

The powdery mildew affects the leaves, stems, flowers and fruits and is by far the most destructive.

In severe cases the canes do not mature and fail to give good bunches after pruning for fruits.

rape berries affected by this disease in the initial stage, show a powdery fungal growth which leaves a scar on the berries. In severe cases of attack the berries crack thereby greatly affecting the market value and yield of the crop. The disease occurs more during the drier months when warm sultry conditions prevail. Thorough dusting or spraying the foliage, canes and fruits with sulphur helps in checking the disease. When the fully grown berries are attacked it is necessary to dip the bunches in wettable sulphur (0.2%).

Rust :

Rust appears usually during the colder months (October—February). The fungus produces numerous orange coloured sori on the lower surface of leaves. In severe cases of infection the entire leaf surface is covered by sori resulting in defoliation.

Control :

Sulphur dusting or spraying keeps the disease under control.

Black rot :

The fruits are usually infected. The symptoms are usually observed when the berries are half ripe as circular spots. The infected berries shrivel and dry. The pathogen is active during hot, moist weather.

Control :

Spray with any one of the copper fungicides suggested against downy mildew.

Fruit rot :

Grey mould or Botryis rot : In the initial stages, small circular, less defined spots appear on the berries. When rubbed, the skin under these spots slips from the berry exposing the pulp. Later, the berries shrivel, crack and rot.

Control :

Fungicidal dips with captan 0.2 per cent or dithane Z-78 (0.2 per cent) are found to be effective in checking the infection. However, fungicidal treatments should be discontinued before harvest.

Brown leaf spot :

The pathogen produces numerous dark brown spots on the leaves and shoots. In severe cases of infection defoliation is common and young shoots dry up.

Control :

Various copper fungicides recommended for the control of the downy mildew disease are also effective against this disease.

Damping off :

The collapse and death of young seedlings is sometimes observed in seed pans. Soil borne fungi have been found to be regularly associated and can cause damping off seedlings. The disease is particularly severe under water-logged conditions.

Control :

Drenching the soil with Bordeaux mixture (1 per cent) or Brassocol (0.2 per cent) 16 is considered useful in reducing the disease incidence. Improved cultural practices go a long way in controlling this disorder.

T. S. SRIDHAR and H. S. SOHI.
Indian Institute of Horticultural Research,
BANGALORE.

Dr. Mu. Varadarajanar

HIS CONTRIBUTION TO EDUCATION AND TAMIL CULTURE

Dr. Mu. Varadarajan is well known to the World as a great writer in Tamil. He has enriched Tamil in every sphere.

He was my revered Guru who had shaped many of us as ardent students of Tamilology. Two decades ago, I had the opportunity of sitting at his feet to learn Tamil, not only Tamil language and literature but also the salient features of Tamil Culture. We the students of Dr. Mu. Va. admired him as a savant of Tamil scholarship and an embodiment of Tamil culture who used to inculcate in us the great ideals of ancient Tamils and who at the same time never failed to infuse new ideas to the traditional scholarship for the realisation of a better new world order !

His was the clarion call for the Renaissance of Tamil Literature in our country. His pleasing manners, polished behaviour and polite attitude have endeared him to many. He was a friend philosopher, and guide not only to his students and friends, but also to his numerous admirers and avid readers.

We, the students of Tamil used to admire him and also have attempted to follow the foot-steps of this revered Professor in all walks of life. There is an old saying about Tiruvalluvar,

'He is the Poet !
He is the Scholar !
He is the Savant of Tamil!'

Dr. Mu. Va. answered this description more aptly than any one of the innumerable literary luminaries of this century.

By

Prof. K. D. Thirunavukkarasu,
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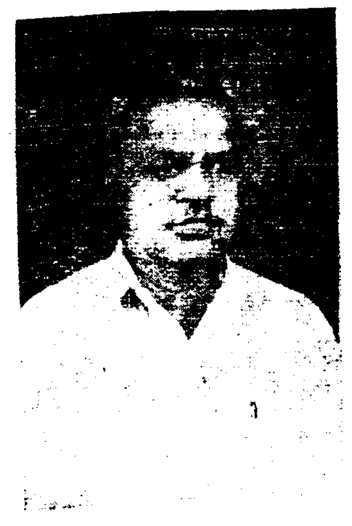
We are all well aware of the fact that he had devoted his time and energy to enhance the status of Tamil and the Tamils. Once he quoted a line addressed by a Sangam Poet to his patron as 'என் நெஞ்சம் திறப்போர் நிற்காண்குவரே' i.e., 'This who can open my heart can see you there !' and with a slight alteration of a single word, our Professor expressed: என் நெஞ்சம் திறப்போர் தமிழைக் காண்குவரே' i.e. 'Those who can open my heart can find Tamil !' which includes the human factor as well !



Prof. K. D. Thirunavukkarasu
recepient of Sahitya Academy Award for his Thirukkural Studies.

He never claimed himself as a great educationist. But his views on education have given a new form and shape to good old ideals of education. First, we must not forget that he was a traditional scholar in Tamil with radical views. He was never the guardian of conservatism. He was a living refutation of Anna's scathing attack on Tamil Pandits delivered in 1948. Referring to the Pandits of that era Anna had said 'பழமைப் பாசறையின் காவலர்களே தமிழ்ப் பண்டிதர்கள்' i.e. 'Tamil Pandits are but the custodians of conservatism.' Dr.Mu.Va. strived his best to regenerate and rejuvenate the teachers of Tamil to become the torch bearers of traditional wisdom with modern outlook.

Dr. Mu. Va.'s views on education are very simple, dynamic and at the same time pragmatic. He believed that "education should give its benefits either directly or indirectly to humanity." He wanted to implement radical changes to the benefit of student community. He observes that "Education should serve as a means for earning the daily bread of man as well as it must induce him to develop his personality. Every educational institution should always have as its aim that the young man leave it as a harmonious personality. The development of general ability for independent thinking and judgment should always be placed foremost, not the acquisition of special knowledge. It is essential that the student acquire an understanding of and a lively feeling for values."

To achieve these goals, he preferred the medium of mother tongue which would serve as an effective instrument and avoid the colossal waste of time and energy of our people.

As Professor of Tamil language and literature, Dr. Mu. Va. made earnest attempts to propagate the ideas and ideals embedded in ancient Tamil classics among the mass which were actually sealed books to the common man. He gave new orientation to the study of Sangam classics through his writings such as "*Virunthus* and *Celvam*" He unfolded new vistas for the study of Tamil. He was responsible for the introduction of B.O.L. (Hons) Degree course in Tamil Nadu. When (the then) Madras Public Service Commission declined to recognise the B.O.L. (Hons)

THE EARLIEST PROPONENT OF CONTINUING EDUCATION

HAD A SOFT CORNER FOR PRIVATE STUDY CANDIDATES

Degree holders on par with other Hons. Degree holders, Dr. Mu. Va. spared no pains to take necessary steps to make the concerned authorities to realise the problem and for a quick solution for it. Because of his strenuous efforts, the University of Madras announced that B.O.L. (Hons.) Degree is on par with other Honours Degrees, allowed the B.O.L. (Hons.) Degree Holders to convert that Degree into M.A. and introduced a B.A. (Hons.) Degree Course for Tamil in its curriculumn.

He was the earliest propenent of and encouraged the method of "continuing education" through private study. **He had a soft corner for the candidates who appear privately for the examinations. This sympathy for the private study induced him to introduce correspondence course at Madurai University.** He expressed great delight at the success of his experiments in implementing the correspondence courses. He said that he had received encouragement from all quarters of our country as well as all strata of our society for introducing correspondence course even at the Post-graduate level.

In the sphere of higher education, especially in the field of research he favoured comparative study. When he was the Professor of Tamil at the University of Madras, I had the opportunity to serve under him as a lecturer in Tirukkural research department established at Madras University; he advised me to make a comparative study of Tirukkural with other great didactic works of the Classical languages of the world. I tried my best to fulfil his ambitious plan as best as I could though I could not claim to be a well-equipped scholar for this task. Now that the work has earned for me the Sahitya Akademi prize, the demise of the person who inspired me to undertake the work, some weeks before this announcement, leaves me all the more depressed. Perhaps he would have goaded and guilded me into more such rewarding endeavours. !

Tamil Culture

If I say that Dr. Mu. Va. was the embodiment of Tamil culture, I believe that nobody can dispute this statement. He believed that "cultural development of a nation depends on a balance of body, mind and spirit in its people, measured on a scale only less human than divine. To survive, we must keep this balance. To progress we must improve it." With these basic views on culture, we can trace his contribution to Tamil culture.

He very often excoriated the Tamils that they have no real love either for their language or for their fellow beings, though their social behaviour with aliens is always free and frank.

This clearly brings out that he was anxious to eradicate from the Tamil society these basic evils that hampered their progress in all walks of life. The supreme expression of the Tamilian wordly ideal is the portrait of Canror. (சான்றோர்) This term visualises the 'Perfect Man.' Those who are perfect in learning and moral conduct are known as *Canror*. **They are noble** in thought, speech and action. This was **the cherished ideal fo the** ancient Tamils. We can cite a number of references such as,

"My magnificent duty as Mother
is to bringforth and to bring up
To make perfect man (*Canron*) is
the father's duty"
(Puram: 312)

"The mother who hears her son being called '*Canron*' will rejoice more than she did at his birth." (Tirukkural 69)

He contributed his mite for shaping a new world in which the individuality of each and every man should be safeguarded. He came to the rescue of modern Tamil society with a philosophy of life that is neither otherworldly, nor fatalistic in its approach but practical in the true sense of the term. His philosophy of life laid stress on socialism, but it is universal in its outlook and pragmatic in its approach. He never failed to remind us of the higher values of human life and thus inculcated the ideal of golden mean in the pursuit of pleasures i.e. 'Nothing too much' is the watchword (slogan) of his philosophy of life "எதிலும் நன்மை, தீமை உண்டு. அளவோடு எதையும் பயன்படுத்த வேண்டும். அளவு மீறினால் எதுவும் தீமையே"

ADVOCATED THE GOLDEN MEAN IN PURSUIT OF PLEASURES

Dr. Mu. Va. started his life as an assistant, and a school master, then he gradually rose to the highest level of a Vice-Chancellor. In his writings, one can trace the course of his mental development which reached its acme in the fifties itself.

Poet Bharathi AND October Revolution

Many a literary critic has preferred to name Shelley as "the child of the French Revolution." Likewise, Subramanya Bharathi, the great national poet of Tamilnadu, can also be justifiably called the "child of the Russian Revolution of 1905". Bharathi himself came to the limelight of patriotic poetry and political journalism in those turbulent years of militant Indian nationalism which followed in the wake of the Russian Revolution of 1905. This revolution opened the floodgates of national liberation struggles of the countries of the East, including India.

Poet Bharathi who was in his prime of youth at that time adopted Tilak as his political leader and turned himself into a bard of the awakened nation. He resigned his job as sub-editor in the moderate newspaper SWADESAMITRAN, and started a progressive journal of his own.

Undaunted

Bharathi's political weekly *India* published from Madras under the motto of "Liberty, Equality and Fraternity" began emitting fire and fury against the alien rulers and their exploitation, that brought it soon to the notice of the British government. Bharathi, who got secret information about his impending arrest, decided to move with his associates into Pondicherry which was then under the French rule and to continue publication of his journal from there. Tirumal Acharya, his colleague and publisher of *India* who accompanied him to Pondicherry, went abroad from there, to join the Indian revolutionaries in Europe. It is no wonder that this young man was one among those who founded the Indian Communist Party in Tashkent.

Bharathi was compelled to live as a political emigrant in Pondicherry for nearly a decade. But the iron hand of the British fell upon the journal soon and it was banned in Tamilnadu. Undaunted, Bharathi began to voice his opinions through other journals.

It should be noted here that Bharathi was one among the few in those days who had developed an international and revolutionary outlook and believed that only along with economic and social emancipation, political freedom could become meaningful and complete.

Reverence

As a keen observer of the developments in Russia, Bharati wrote an article soon after February Revolution of 1917 in which he said that the "Russian political revolution is a good omen to the golden age of mankind which is fast approaching." When the October Socialist Revolution succeeded, he was the first Indian poet to hail that Revolution in his magnificant poem "New Russia."

He has called the October Revolution "Yuga Puratchi" meaning "the revolution which had ushered in a new era, had brought about a new historical period of world importance."

In an article on "wealth" written shortly after the October Revolution of 1917, Bharathi begins it with the sentence, "it seems that the socialists in Russia could almost achieve their ends" and goes on to explain what socialism is. "The socialist doctrine, he continued, "is gaining more and more strength. In the Republic of Russia, established under the leadership of 'Sriman Lenin'."

Bharathi held Lenin in high esteem and always mentioned him with the Tamil reverential epithet of "Sriman." All the arable lands and other riches of the country have become the common property of all the people....This doctrine has transcended from Russia into Asia too." He expressed the confidence that "only after this doctrine gains complete victory all over the world and becomes the normal way of life, the mankind will achieve real civilization."

Evidence

When the Civil War broke out in Russia and the young Republic was threatened by the armed intervention of so many foreign powers, Bharathi was much disturbed, and had spent many sleepless nights. In a skit named "The Devils" which tells about the bloody atrocities committed by the counter-revolutionary brigades and the foreign interventionalists in Russia, he wrote: "I wanted to forget all about that and to go to sleep, but I could not sleep. I could not forget that. Then the thought of Lenin came to my mind. A mortar gets hit from only one side. A drum gets beating from both the sides. But ah! Lenin is being attacked from a million sides!"

It can be said that Bharathi had closely followed the events which were happening in Russian after the Revolution and had supported many of the reforms carried out there under the leadership of Lenin. At the same time, he had never failed to repudiate and expose the vile and false propaganda of the Western press, directed against the young Republic and its radical measures. Many of his articles stand evidence to this. For example, one of his articles "on the marriage laws of New Russia" he wrote: "When the Bolsheviks came to power persons, who were throwing mud over them, slandered that the Bolsheviks have even made women a common property. But even a clever liar will stand exposed in a few days! How could anyone go on telling lies for ever about a mighty nation?"

By
T. M. C. Raghunathan

TANSITTING PRETTY!

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Furniture. Leather goods
and leather footwear.
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rest assured. sometime
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TAMIL AS PRIMA DONNA

KEY NOTE OF CONVOCATION ADDRESS

It gives me great pride to have this opportunity to convey my greetings and felicitations to a senior University at a point of time when it is preparing to function with the vigour and briskness of youthfulness ; and I am immensely pleased to meet the new Graduates who are the rays of knowledge emanating from this Centre of Learning.

The entire world knows that the Madras University is the place where the priceless treasures that are the thoughts and ideas of intellectual stalwarts took shape and grew up in splendour. There is a history for this University and that history has a greatness. All good hearts are enormously gladdened to view the grandeur of the march of the University, laden with garlands of renown proffered by regions many. Marking a turning point in the page of this history, the Convocation Address today is being delivered in Tamil.

Oh, do see the distress on account of the degree of astonishment in which the annoncement has to be made that the mother-tongue it is which is the language of the Convocation Address ! It is not as if I can read out the Convocation Address only in Tamil. I could read it out in English too, although I might not be able to speak extemporaneously in that language. What is required now, however, is not personal explanation. *The point I am seeking to stress is that if we oursevles hesitate to enthrone Tamil, which is a rich and fertile language native to our soil, then would not our attitude be the equivalent of disregarding and heaping humiliation on one's own mother* ? That is why I pay obeisance to my Tamil and proceed to inaugurate this turning-point festival.

First Place For Tamil

It is said that even more than 2000 or 3000 years ago—in that ancient age when the people in many regions of the globe were conversing with one another only through gestures and wordless howlings—our sweet Tamil was a language that could boast of a highly-evolved Grammar. Any number of examples could be cited in support of this contention. Such is the extent of perfection of our sweet language ; and the yearning of all those who have Tamil at heart is that Tamil should be accorded pride of place everywhere on the Tamil soil. We are striving to fulfil that desire speedily ; and I invite you, the new Graduates, to participate in that exciting endeavour.

Hapless time was when to speak and write in Tamil was considered *infra dig*. In those days it was thought to be an honour only to display proficiency in an alien language. It would not be wrong to interpret that what that Poet of Resurgence, Bharatidasan said :

" The jack-fruit that has ripened
on the root itself
is left in the agony
of callous neglect, alas !,"

was in reference not merely to the misery of young widows but could be taken to apply with equal force to the lot of Tamil too. To argue that Tamil lacks the means to relay and relate the wonders of Science in a world where the frontiers of knowledge are ever-expanding, could only be characterised as a ruse to slip out of the duty to Tamil work for the development of the people and the Tamil language !

REGARD FOR MOTHER

When Subramania Bharati thundered,

" Spread out to the directions eight
and return
with all the treasures of Art !, "

what indeed was the category of treasures he referred to ? Was it solid gold or diamonds or rubies or pearls ? No, what that Poet with the defiant turban had in mind was the effort to import in Tamil the everlasting treasure of the light of knowledge which could put to instant flight all the silver and gold and gems precious !

Only because there happen to be those who climb on the mother's shoulders so as to fetch fruit from the branches of the tree for the sweetheart, the atrocity occurs here, of Tamil being trampled upon for the purpose of reaching up to an alien language. A second language is no doubt necessary as a means or medium to communicate with the outside world ; and there is certainly no harm in English playing that role. For that, however, to forget even thinking in the mother-tongue —is it not a monstrous injustice ?

What should be pondered is that if a Grammar could be evolved more than 3000 years ago, how rich and fertile indeed the language should have become, even prior to that stage in time ? Tamil was born and it grew up during the preceding many centuries ; and is it not from this that we are able to glean the glory of the Tamils ?

The Classics proclaim that the monarchs of the *Sangam* Age did not merely patronise outstanding Educationists and Poets but actually administered the affairs of the State on the sage advice of those intellectuals. The anthology *Puranaanooru* describes how a certain ruler looked after his subjects, just as a tiger would tend its cub. Another King of the same era, Pandya Nedunchezhian, wrote a poem—which is also to be found in *Puranaanooru*—by way of impressing on the minds of his people the importance of acquiring knowledge through Education :

" The good that flows from Learning
is of such merit indeed
that one should extend any aid
or even part with much wealth
and unmindful of the expense,
pursue the path of knowledge.
A mother to whom the children
are equal in all aspects
would herself be charmed more
by the offspring accomplished ;
and even the monarch of the land
would overlook seniority
when he seeks the guidance
of one who is bright and
learned "

This would go to show the devotion which the Tamil community of those times had towards learning.

Are we not amazed when we go through the details in our classics as to how the Government should conduct itself ! The code for Government was drafted, not a mere 200 or 300 years back, but more than 2000 or 3000 years ago, as we could see for ourselves in the literary works belonging to the *Sangam* Age. However powerful a monarch might be, in terms of Armed Forces, his rule was based only on *aram* or dharma. The ruler of those times took care not to show any favouritism ; on the other hand, he was scrupulously impartial, treating even his own relatives on a par with other citizens.

Dr. Anna On Ideals

The moment I mention about ideals what comes to my mind is the Convocation Address delivered by the then Chief Minister Dr. Anna at the Graduation Ceremony of the Madurai University in the year 1967. I am quoting a few lines from that address as they are eminently relevant to the present occasion :

" The ideals before us are those that we could realise through hard work alone. But in the same row are placed attractively made-up and intoxicating speeches, which are also labelled ' objectives '. The position should be analysed and assessed in a clear manner. We want unity in the country—this is an objective, acceptable to all ; and it is the duty of the student-fraternity to strive towards this goal. No-one with intelligence would acquiesce in the theory that, for the sake of the country's unity, he should consent to the destruction of his language and traditions and accept the domination of an alien language. Everyone with self-respect has got to oppose this. To describe such perverse thinking as ideal or plan is calculated to bring discredit to the very structure of the term ' ideal '.

" ' The common wealth of the country should grow ; and we should work for that '—this is an ideal that deserves to be accepted by all. On the contrary to say, ' Let the wealth of the country grow ; and do not bother even if it were to be concentrated in the hands of five or six individuals '—this would not be an ideal but making a mockery of the same.

" ' To come together and live in cooperation would yield innumerable benefits '—this is a sweet and simple ideal. To evolve a scheme for cooperation on the basis that each one would keep what he has to himself, would certainly not come under the tenets of real co-operation.

" We have to tell the seekers after ' unity ' that they should not conduct themselves in the manner of the wolf which devoured the lamb and proceeded to claim, ' The lamb has now merged in me and from now onwards we two shall be as two brothers ! "

If only we have a clear grasp of the precious pronouncement made by Dr. Anna, would there be the slightest room for any confusion in regard to ideals ?

In case those outside come forward to extent appropriate help to the students receiving education and training in College, the anxiety of many of the youths regarding job-opportunity would vanish. Arrangements are in vogue in many countries, under which big Industrial Houses, in proportion to their own requirements, provide for education and training to students and also undertake to bear the expenses of apprenticeship. In our country, however, the Industrial Houses spend very little on this account. Apart from sharing the responsibility for providing to the students technical education and Science education and the training programmes associated with the same, the Industrial Houses should also come forward to bear a part of the expenditure involved. Such a method would afford a definite opportunity for students to go through their period of learning with hope and confidence in the future.

Remodel System

Discarding old methods, the system of Education should not only be remodelled to suit scientific knowledge and the requirements of the human society, but also an environment would have to be brought about in which there is a positive link between that Education and day-to-day life. I would like to point out here what the Kothari Commission has said in regard to the importance of Science :

" Science has radically transformed man's material environment. In the technologically advanced countries the average span of human life has increased by more than a third over the last hundred years. Science *is* universal and so *can* be its benefits. Its material benefits are immense and far-reaching — industrialisation of agriculture and release of nuclear energy, to mention two examples—but even more profound is its contribution to culture. Science is liberating and enriching of the mind and enlarging of the human spirit. Its fundamental characteristic has turned out to be the possibility of unlimited growth Every advance in Science deepens our understanding of Nature. But it also heightens the sense of ignorance. *Nature is inexhaustibly knowable*. Nothing comparable to the scientific revolution in its impact on man's development and outlook has happened since the Neolithic times.

MORE UNIVERSITIES WILL BE OPENED UP TO LESSEN THE ADMINISTRATIVE BURDEN

During recent years, the number of Colleges has gone up, as also the number of students ; and it is necessary that the standard of Education too is rendered appropriate to this quantitative increase. Not only that a perspective Educational plan would have to be drawn up now itself, keeping in view the expanding population. The scheme to confer Autonomy on Colleges with a view to improving the quality of Education has also been accepted in principle. It would help to step up the potentialities of Colleges, if they were to function autonomously under the supervisory control of the Universities. Colleges that have the requisite qualification for this are to receive the benefit of Autonomy in the near future.

For reasons of administrative facility in view of the increase in the number of Colleges and so as to bestow special attention on the Colleges, we are earnestly attempting to establish two more Universities, one in Tiruchirappalli and the other in Madurai, and also to set up in Madras a separate University for Science and Technical Education.

You are seeing how, in the assurance that steady and sustained support of Graduates such as yourselves would be available in ample measure, the Government, the Universities and those in the field of Education are formulating schemes so as to ensure that the students of the present are able to pursue their studies in security and self-confidence and so that their future may be filled with radiance.

Towards The Future

Just as Shivaji's mother Jija Bai made her son a redoubtable warrior, the teaching fraternity should concentrate attention in order to enable students to grow up into citizens of prowess. In tune with the maxim that it is the duty of the father to equip the son to become a man of grace and nobility, the preceptors should take the place of the father and train the students accordingly.

There is countrywide talk of discipline today. That order and discipline are very, very necessary for the younger generation and that duty-consciousness and dignity should be safeguarded from erosion have been continuously emphasised by men of light and leading. Rather than cultivate the feeling that law alone could keep them in check, the youths should, if their own accord, come into a self-discipline which would have as much sanction as the law outside. I am aware that youth is that stage in life which throbs which energy. I would also not deny that it is that stage in life

Selvi Meenakshi Sabanayagam (Daughter of Chief Secretary) receiving her degree at the hands of Governor Thiru K. K. Shah.

when the mind is lured by song and dance. I do not have the slightest intention of stopping all that. But is it not also a sober fact that it is during this stage in life that one should establish—and also initiate plans for the subsequent expansion of—a Knowledge Savings Bank which should contain assets to last a period of 40 to 50 years ? If this stage is let go, then how much of strain and suffering has one to undergo for the purpose of seeking that wealth ? This is something that could be forgotten only at one's peril.

A large volume of concessions is being offered to provide education to, quench the thirst for knowledge of and accord upliftment to those who, for want of the ladder of Education, could not raise themselves in society but remained depressed and thrust behind. The system of communal representation and the policy to provide concessions are purely for the purpose of extending a helping hand to those who are flung in the abyss ; and they are certainly not for enthusing those who seek to nurture controversies on the basis of caste-divisions. Educational institutions should serve to make us men and citizens of this country and they should certainly not be allowed to deteriorate into arenas of caste-warfare.

Let us now listen to the actual lines in Purananooru portraying in robust music the character of the Tamils :

" O Pandya Monarch
towering over
all other kings
of the land !
Your Defence Forces
are composed of
angry elephants
that are trained killers ;

frisking horses
that are fleet of foot ;
chariots myriad
with challenging flags
and fearless warriors
thirsting for action.
And these do speak
of your greatness ;
but the strength of governance
is rectitude first.

Hence,

Your sceptre should not bend
in favour of your kin
nor should it strike down
those other than kin,
in arrogant disregard
of their virtuous qualities..! "

The object of my listing a few instances to illustrate the greatness of the Tamil race in the ancient world is not to place a history-book in your hands but only because I happen to know that you have the capability in you to rewrite the history which the passage of time has dimmed. I am only reminding you of this.

If you learn Tamil, you would be able to understand the ancient history ; and if you learn in Tamil, you would be enabled to write the modern history of competition with the new world.

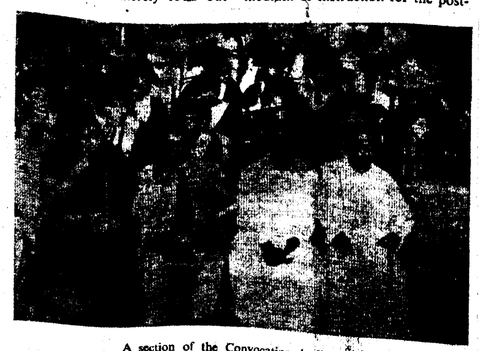
Tamil is Capable

Even ten years back, the determination arose that " Tamil is capable " ; and the effort also blossomed. And seven years back we took the pledge to carry to completion the matter of making Tamil the medium of instruction. But what was the result ? The " language of the stomach " was kindled in order to counter the fervour for the language of instruction.

Would not Tamil provide food ? Would it be sunk in lethargy ? Tamil would bring not merely food but self-respect too, we said and proceeded to marshal evidence for that ; but all that went to waste—like water flowing in the direction of weeds, like moonlight squandered on the jungle-top. Because Strike-activities and agitations, worked up by kindling the emotions of students, resulted in drawing a curtain over a peaceful background in which alone could proper explanation have been received, the plan for the medium of instruction paused somewhat. Students who are to create the future and their preceptors should strive to dispel this hesitation totally and to accord first place to thought of the mother-tongue.

I would not accept the general argument that they who are proficient in English would be opposed to the principle of making Tamil the medium of instruction. Have we not seen for ourselves that even vegetarians could cook and serve meat to others ? Therefore I do believe that English-learned intellectuals would accord concrete shape to our feelings in expanding the scope of Tamil as the medium of instruction and taking the scheme to success. And in that faith I would like to make an announcement and may it be the first stage for total sucdess :

In the present system of University curriculum, Tamil is available as the medium of instruction for only the Pre-University Class and the initial Degree Courses (like B.A., and B. Sc.). Tamil is not the medium of instruction for the post-



A section of the Convocation Audience

GOVT. HELP FOR P.G. STUDIES IN TAMIL MEDIUM ASSURED

graduate courses ; and as a result, they who have graduated in the Tamil medium do not have the opportunity to continue their post-graduate studies in the same medium. *Therefore, if the University authorities would evolve and implement a scheme to make Tamil the medium of instruction for post-graduate studies also, then the Government would welcome that with immeasurable pleasure and extend all necessary aid in this regard.*

CUT YOUR LEARNING TEETH ON TOUGH SUBJECTS

So many explanations and ideas have had to be given out for the question itself as to which language should be the medium of instruction. Next, is it not an important question to be answered, as to *what* is to be studied ?

Thiruvalluvar who said, "Learn thoroughly," proceeded to emphasise, " thereafter, may your conduct be worthy of the learning ". A first reading of the emphasis would not yield the correct meaning. One should be clear in one's mind at the outset itself as to what should be learnt. That one should learn thoroughly is in the nature of general advice. Specialised counsel would be to the effect that one should, in the first instance, decide what all is to be learnt and then commence the task of learning. On that basis, it is my view that if those studying Arts subjects alone were to compulsorily learn one of the Science subjects in addition and if, similarly, those studying Science subjects were to compulsorily learn an Arts subject, then it would go to afford fuller and comprehensive capacity. Combined knowledge of Science and Arts is indispensable for the Students and I would like to point out that it would be appropriate to discuss and decide on necessary changes in the present curricula. When a crawling child cuts its teeth, the practice is still prevalent in rural areas to set two plates in front of the baby, one plate laden with dress-materials and baubles and the other containing sweetmeat ; and elders watch eagerly as to which of the two receptacles the child selects first. Such being the case even in regard to children, is it not necessary that a similar choice is made available to the students who are to bring the blue-print of a new era into being.

TO SHINE AS KORKAI PEARLS

If all were to become Professors, from where would come the Engineers to construct the buildings to serve as venues for the conducting of classes ? It would be a happy development no doubt if Historians were to emerge in strength and bestow on us the valuable findings of their research into the past, but on that account, could we afford to brush aside the growth of experts conversant with the wonders taking shape in the realms of Science. Therefore the Student-fraternity should shine as Korkai pearls in all the fields of knowledge. It was for this reason that Thiruvalluvar said : " Select with care what you have to learn ; and thereafter conduct yourselves in a manner worthy of that learning ".

BE THE MESSIAHS OF RATIONALISM TO PUT FATE ITSELF TO FLIGHT

They who graduate from the Centres of Learning should strive to spread the rays of Rationalism and engage themselves in the task of educating the people of our country to walk in step with the advancing world. To give room even now to fasten the chains of the caste-system and to allow superstitions to rule the roast in the name of traditions would mean that we are deliberately out to mar the younger generation too.

In order to help the world of knowledge to come to blossom, new changes would have to be brought about at the level of the Elementary Education itself. Having forgotten the maxim that it is Effort that leads one to success, he who surrenders the responsibility for everything to some super-human agency and counts his days in futile resignation becomes nothing short of a walking corpse—one who neither himself lives nor works for others to live. It is to prevent the tragedy of such a lowly state that you have taken the weapon of knowledge in your hand. This is something you should not forget. An idealist is one who stands firm in his principles, even if troubles were to assault him as a gale. It is my fervent desire that the names of those who obtain their University Degrees today should find a place in that scroll of honour.

I call upon you all obtaining your University-Degress today, to combat the atrocity of caste-divisions and the evil of casteism, to bring about Equality in the social set-up and an economic order free from disparities, to spread the rays of rationalism everywhere and to enable the country to evolve into an abode for warriors and a home for intellectuals and thereby help to pave the way for unprecedented prosperity. And as I take leave after felicitating you on the honour being conferred on you here, what more could I say than that you alone could establish the truth of the maxim of Thiruvalluvar that they who set their hearts on effort, without fear and without fainting, would be able to put even Fate to flight ?

Chief Minister

Dr. M. Karunanidhi

has delivered 118th

Convocation address

at Madras University,

held on 20—9—1975.

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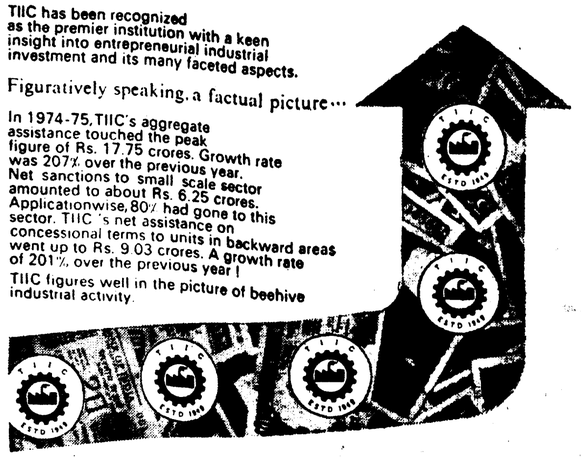

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22
15

Service In Prosperity Brigades

—:o:—

Will Count For Preference & Age Computing In Government Service

The prosperity Brigade Scheme was formulated in 1967 with the avowed objective of creating a new social awakening among the masses in order to arouse the spirit of Public Service by utilising Voluntary spare time services of able bodied men and women who are imbued with the spirit of social service and self denial. The Brigade will execute the locally needed works to provide basic amenities through voluntary efforts of the people. It has been, therefore, suggested that the concessions granted to the volunteers of Youth Service Corps may be extended to the volunteers of the Prosperity Brigade. The question of giving preference to these volunteers for recruitment to posts in Public Service has now been examined in consultation with the Tamil Nadu Public Service Commission.

The Tamil Nadu Public Service Commission, which was consulted, has agreed to the proposal to extend the concessions granted to the volunteers in the Youth Service Corps to volunteers of Prosperity Brigade also.

The Government have accordingly directed that the work for one year or more in the Prosperity Brigade may be prescribed as a preferential qualification for recruitment to posts in State and Subordinate Services. The persons who may have worked in the Prosperity Brigade may be given preference provided other qualifications being satisfied.

The Government have also directed that the actual period of work put in as a volunteer in the Prosperity Brigade (Whether Continuous or non-continuous), subject to a maximum of two years, be excluded while computing the upper age limit for appointment to posts in the State and the Subordinate Services.

The volunteers, who may have worked in the Prosperity Brigade should produce evidence of the fact that they had actually worked in the Prosperity Brigade for such and such period when they apply for a post.

The Special Officer (Prosperity Brigade) and Ex-Officio Assistant Secretary to Government, R.D. & L.A. Department is authorised to issue such certificates in respect of the Prosperity Brigade volunteers in Madras City, and in respect of other places the Panchayat Union Commissioners are authorised to issue the certificates.

The Government have further directed that there should be no reservation of vacancies for candidates who have worked in the Prosperity Brigade. These candidates can only be shown preference, provided other qualifications being satisfied in the matter of recruitment to the Government Service. **

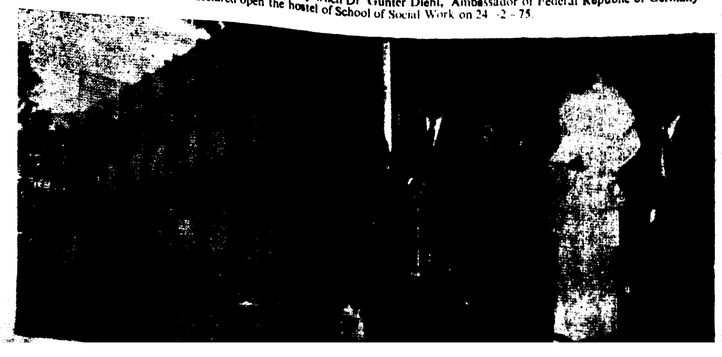
Houses for Harijans in Tamil Nadu are solid structurers given free. The Government of Tamil Nadu is committed to giving 30 000 such houses to Harijans by the end of Oct., 75. Above the Kattuputhur, Trichy Dist., scheme is being distributed to allottees by C. M. on 29-9-1975.

BOOK ON NON-FORMAL EDUCATION FOR WOMEN

Picture above shows Dr. V.R. Nedunchezhian Minister for Education and Tourism releasing on 24—9—75 a book on Non-formal Education for Women. The recepient of the first copy is Dr. Malcolm Adiseshiah, Vice Chancellor, University of Madras.

In this context it will be appropriate to recall that in Tamil Nadu, a comprehensive survey on all non-formal education activities had been completed by the Tamil Nadu Board of Continuing Education. There are 134 schemes of general and occupational education and training covering over 6 lakh persons. Among the programmes, the most effective are industrial training programmes run under the Apprenticeship Act and by the Polytechnics and Engineering colleges. Agricultural education is also good but is quantitatively reaching only a small number of farmers. The Tamil Nadu Agricultural University trains 140 farmers in 12 blocks in the Coimbatore district in improving farming practices. An evaluation of this educational effort shows that while difference in age, education, economic status, media participation and castle did not significantly influence variation of their farming technology and knowledge, there was a relation between knowledge, the extent of land holdings and the social status of the farmers. Another important finding was that only by transforming agricultural research results into non-formal education curriculum can extra yield be produced.

One more hostel for girl students come up in the City when Dr Gunter Diehl, Ambassador of Federal Republic of Germany declared open the hostel of School of Social Work on 24-2-75.



ABOLITION OF HORSE RACING

Had Gandhiji Been Alive—He would have been All Praise for Tamil Nadu.

" Of all the states in India, with the exception of Gujarat, Tamil Nadu is the only State which has firmly implemented the Prohibition Policy. In this State which is governed by the D.M.K. Party, a move in the right direction was made some time ago by imposing a ban on horse racing. The Government have now not only stopped their own lotteries, but have also prohibited in the State, dealings in lotteries of other States. Would that, the other Indian States follow in the footsteps of this State, in the matter of prohibiting intoxicants and gambling !

Had Gandhiji been alive today he would have showned high praise for these commendable actions of this State."

The above is a translation of an extract of a publication in the Urdu weekly published from Lucknow—Sidqe-Jadeed—edited by the renouwned scholar Abdul Majid Daryabadi, who is considered the greatest jurist of Islam in India today. Incidently the editor and the Late Dr. Zakir Hussain Sahib were great friends.

Janab Abdul Majid Sahib has written a commentary on the Holy Quran which has received great appreciation. The Sidique-Jadeed reaches a sophisticated and intellectual readership.

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LAND REFORM IMPLEMENTATION

TAMIL NADU IS AHEAD OF ALL OTHER STATES IN INDIA

BOMBAY WEEKLY'S PRAISE FOR DMK GOVERNMENT

The Prestigious Bombay Weekly " Commerce ", after an exhaustive and thorough-going inquisition into the implementation of land reform measures in the 12 States and 4 Union Territories of India, has made out that Tamil Nadu is ahead of other States in the implementation of land reforms. It is worthy of note that this weekly made it a point to verify the difference between legislation and implementation of land tenure reforms. The report published in " Commerce " dt : 13-9-'75 as far as it relates to Tamil Nadu is as follows :—

Tamil Nadu is ahead of other States in the implementation of the land reforms and the DMK Government has taken many measures towards attaining the objective of tillers owning the land. A recent measure adopted by the Government confers on the tenants the right to purchase the lands which they had been cultivating for several years by paying the value of the lands in easy annual instalments. The Act, has, however, ensured that the poorer and the small landowners were not affected adversely. The setting up of tenants financing corporation to assist poor tenants to purchase the lands from owners is under contemplation. The ceiling of land holdings is now 15 standard acres, although the definition of the standard acres varies from district to district, depending on the irrigation facilities, soil fertility, etc. The DMK Government has undoubtedly been quite vigorous in implementing the land reform measures as can be seen from the fact that the built of a land distribution took place only after the Government took office in 1967. The total area of surplus lands notified is 98,653 acres, of which 74,459 acres were notified after 1967. Before 1967, no land was assigned to any landless person, whereas after 1967 about 54,769 acres were assigned benefiting 29,542 persons. The State Government got a law passed in 1971 conferring ownership rights on agricultural labourers occupying Kudiyiruppus (homesteads) as on June 19, 1971 either as tenant or as leasee. The Act extends to all the districts, except Madras and a few pockets of some districts and municipal areas but does not extend to plantations. A law was passed in 1969 for preparing records of tenancy rights. The total number of tenancies registered so far is 399,350 covering 603,898 acres. From 1972 on a scheme has been in operation for the supply of patta pass book to each ryot. These books contain authenticated particulars of their holdings. The DMK Government has assigned 7.05 lakh acres of land to four lakh landless people.

The Tamil Nadu Government promulgated an ordinance in January this year granting a moratorium for one year on the recovery of debts incurred by agriculturists of the drought-affected areas. **

MANUNEEDHI THITTAM OF STATE ELECTRICITY BOARD

METHODS ADOPTED

The Tamil Nadu Electricity Board has introduced " Manu Needhi Thittam " (-as Contact Programme) on 15—9—75 by which the Electricity Board officials will go to the consumers and people and dutifully listen to their complaints and grievances and make all efforts to redress them on the spot where possible and where it is not possible to have it done with least delay.

To start with the " Manu Needhi Thittam " will be introduced at the Panchayat Union level and the Officers of the Board not below the rank of an Assistant Engineer will convene a meeting at the Panchayat Union Headquarters on the day on which the Panchayat Union meets with a view to take advantage of the presence of the Panchayat Union Chairman and Council Members along with the public. The local M.L.A's and M.P.s will be invited specifically. Advance publicity for the meeting will be given so as to enable the people in the area to know the date of the meeting.

A special Register of public grievances will be opened by the Assistant Engineer for each Panchayat Union and the register will be open to inspection to Superior Officers of the Board at all times. All written petitions and complaints will be received and given an acknowledgement slip before the meeting is over. The Assistant Engineer will indicate the action proposed to be taken in the acknowledgement slip and indicate the time limit also. If the grievance or complaint is not remedied within the time limit, the party may approach the Assistant Engineer or higher authority for further action.

In addition, the Divisional Engineers and Superintending Engineers will make themselves available at their Headquarters on any particular day notified by them during each month for receiving grievance day petitions from the public. All these petitions will be entered in a Register and follow up action taken till a state of finality is reached.

The public are requested to extend their full co-operation for successful implementation of " Manu Neethi Thittam " introduced by the Tamil Nadu Electricity Board.

By

Thiru. C. THANGARAJU,

Secretary,

Tamil Nadu Electricity Board.

THE TRULY GANDHIAN APPROACH TO PROHIBITION

ORTHANADU EXAMPLE CITED BY GOVERNOR

"The people's committees formed in Orathanad taluk, Thanjavur District, to keep a watch on illicit liquor trade is worthy of emulation. The people in the taluk have formed village committees consisting of able bodied youngmen and former prohibition offenders. These committees detect illicit distillation, watch the activities of suspects and carry on sustained propaganda against the evils of drink. I feel that the Orathanad example is bound to be a pace-setter for the people's participation in welfare schemes in Gandhian way."

So said the Governor of Tamil Nadu in praise of the special missionary fervour for enforcing wholehearted prohibition action in a small Town Orathanad, a taluk head quarters in West Tanjore of Tamil nadu. Orathanad stands as a striking example for people all over India to uphold and perpetuate the prime Gandhian doctrine of complete imposition of total prohibition with people's participation.

What did they do?

What did the people of Orathanad do to give such a reality to a cherished Gandhian dream ? The question deserves to be posed everywhere due to its well nigh impracticability! "Nothing but a self determination," said the Vice-President of Taluk Prohibition Committee, Thiru R. Durairajan, "and a rededication to a principle of great common good. At first a Taluk Prohibition Committee was set up free from caste, colour, creed, by enlisting all the individuals, who were sentenced mainly under prohibition offences, besides village people's voluntary enrolment in the Committee."

Further, he explained with a tinge of sadness that illegal distillation of country arrack was misconstrued by so many villagers as a perennial source of income in that area and so it had developed into a cottage industry of permanent footing in a situation, conducive to village atmosphere. He said that the reimposition of prohibition in Tamilnadu meant no difference to the poor as nobody realised and relished its social importance and so people thought that there could be no solace to this area, unless the importance of prohibition was brought home to them with serious consideration, and vigour born out of voluntary social endeavour from within. This can never be enforced from outside.

A crusade won

"Indeed, Orathanad registered the highest incidence of the offences of prohibition cases in Tamilnadu," said the Inspector of Police Thiru N. Ramasamy, "so we tried to bring out a consensus between local people and police, purely on ethical grounds. Because, the police force sometimes became strengthless in arresting drunkards as there was nobody available to be a witness in supporting the prosecution. On some occassions, people will come in battallions to revolt against the police, demanding the immediate release of even habitual drunkards. So we determined to inculcate the need of a common arrangement and understanding of local inhabitants and Police in eradicating this social stigma. I hope, we have won in our crusade."

Truth to tell, the pre-prohibition period of this peculiar area was full of embittered relations. For example, in Orathanad area, no decent man was allowed to be free from the verbal insults and physical attacks of drunkards. Alas! The drunkards dominated and out-numbered local people in all village festivals, carnivals including auspicious marriage and social gatherings. Unescorted fair sex felt the poignant need of protection even for an easy stroll even in her once familiar streets. Every day police had to register at least 20 cases of intense cruelty due to heavy drunknenness.

What use is An Intimidated Police ?

The problem was looked at in various dimensions and at last it was concluded that unless the Police were vouchsafed support of the people, enforcement of prohibition and thus to punish the law-breakers was well nigh impossible. An intimidated Police is of no value to the community! It was in this perspective that a prohibition committee was formed with a view to educate and advise the drunkards to become responsive to the tenets of prohibition and respect the law of the land. This committee comprises youngsters imbued with the cause of social upliff, village munsifs, and Karnams, Presidents and members of Panchayats, Village Credit Bank Presidents, hereditary local chiefs and students. This Committee hauls up the drunkards red handed and hands them over to the Police for further legal actions. The action committee also enjoys the sole privilage of bailing out the dtunkards on his bahalf of his crime is bailable in nature and then teaches such persons to accept the offence in the Court and face the consequences unflinchingly. Above all, the committee both unearth and destroy instantly the hidden fermented and undistilled arrack, its production apparatus, stocked arrack pots and bottles in the spot with due intimation publicly through an annoucement by tom-tom.

Having a ceaseless and constant vigil over the drunkards, the committee also envisage and prevent all possible opportunities which will entangle the drunkard to go on a spree or a bout. If a drunkard under influence of alcohol is trapped for the first time, the committee exercises generosity to fine him Rs. 25/- and his second or subsequent misconduct will miserably end in severe Police custody with no kith and kin to bail him out in that area due to the non-availability property certificate from Karnam or Munsif as all who can bail him out is a member of the enforcement committee. The amount collected by the Committee in fining the drunkard will be spent only for village welfare. An individual who gives correct clue to the committee about the drunkard is entitled to get a reward of one third of fine collected from the offender with future protection from the menace of drunken vengence.

High Drama in Family Circles :

A son handed over his drunken father while a desperate wife handed over her useless drunkard husband to the committee. An youngster by name Manickam in a village Echankkottai was made to rejoin his wife Dhanam, only after he had for sworn his appetite for drinks and had proved his capacity to resist the bucolic temptation for a number of months!

Orathanad taluk has a population of 1,50,744 and 110 village prohibition committees have been constituted among them for administrative feasibility. These Committees have enrolled 5,171 members and with their help prohibition has become absolute and strictly enforced in all the 203 villages which includes 83 major villages and 120 hamlets of the taluk. The incidence of prohibition offences was reduced to 128 upto January, 1975 and none was registered after that. In Thiruvonam Committee, as sizeable number of 56 female members have fervently joined the Enforcement Committee.

"We have been maintaining a strict prohibition order in our village and till date no addict was found arrested here for drunkenness," says Thiru Chitravelu, the Panchayat President of a small village Urandarayan Kudikkadu, situated in Orathanad Taluk, enroute to Pattukkottai, "because we 900 inhabitants have exercised restraint on consumption of liquor in any form and none is addicted as a result of our self-restraint."

This is how Orathanad is bringing reality to a Gandhian dream.

By

PINNAI A. PANNEERSELVAM, M.A.

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REALLOCATION OF PORTFOLIOS

Since Thiru A. P. Dharmalingam has been relieved from his Ministership, the subjects held by him and Thiruvalargal K. Anbazhagan, S. Madhavan, Mannai P. Narayanasami, M. Kannappan, K. Rajaram and S. Ramachandran have been reshuffled in the following manner.

1. Thiru K. Anbazhagan, Minister for Health M (H)	Minister in charge of Public Health, Medicine, Town Planning and Water Board.
2. Thiru S. Madhavan, Minister for Revenue M (R)	Minister in charge of Revenue, Food, Board of Revenue, District Revenue Establishment, Deputy Collectors, Bhoodhan and Gramdhan, Textiles, Yarn, Handlooms, Law, Courts and Prisons, Registration and Land Reforms.
3. Thiru Mannai P. Narayanasami, Minister for Co-operation M (C)	Minister in charge of Co-operation, Agricultural Refinance, Housing including Slum Clearance Board and Accommodation Control.
4. Thiru K. Rajaram Minister for Labour & Transport M (L & T)	Minister in charge of Labour, Transport, Nationalised Transport, Motor Vehicles Tax, Legislation and Weights and Measures, Statistics, Employment and Training and Ex-Servicemen.
5. Thiru S. Ramachandran, Minister for Local Administration M (L.A.)	Minister in charge of Municipal Administration, Community Development, Panchayats, Panchayat Unions, Stationery and Printing and Government Press.
6. Thiru M. Kannappan, Minister for Religious Endowment M (R.E.)	Minister in charge of Religious Endowment, Khadi & Village Industries, Rural Industries Project, Milk, Operation Flood Project, Tamil Nadu Dairy Development Corporation, Information & Public Relations and Film Technology, Youth Service Corps and Prosperity Brigade.

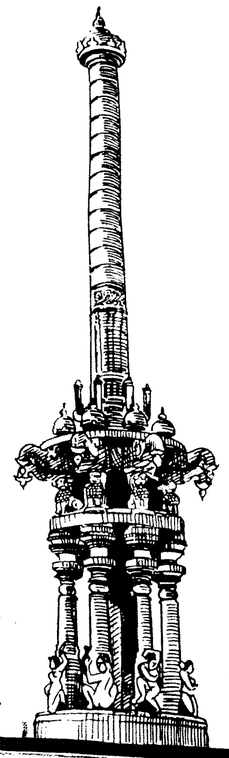
25
Rapid Green Revolution
Welfare of Backward Classes
Free Education up to P.U.C.
CAN YOU NOT HELP THE STATE?
Legal Distribution of Land to the Poor
Slum Clearance
Despite these Achievements
Rising Population Raises Problems
SURELY YOU CAN
PLANNING YOUR FAMILY
PARTMENT OF HEALTH SERVICES AND FAMILY PLANNI

Regd. No. M. 8676-A

VISIT

THE ART GALLERY AT

POOMPUHAR



- Where the stones tell a tale and recapture scenes from *Silappathikaram*, the ancient Tamil classic;
- Where a city sunk beneath the wave comes glowingly alive!
- A feast for the eyes — and food as well for thought — that's what you get at Poompuhar.
- The *piece de resistance* is the exquisitely carved statue of Madhavi, the temple courtesan.

COME...SAVOUR THE SCULPTURAL DELIGHTS OF THE POOMPUHAR ART GALLERY

Poompuhar is 21 kilometres from Sirkali and 29 kilometres from Mayavaram

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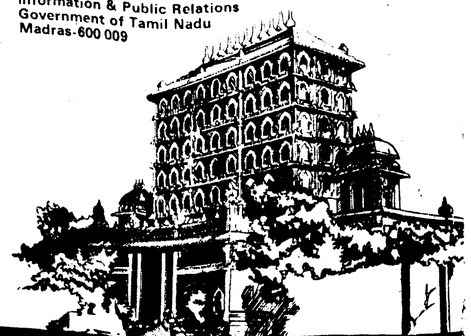

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Tamil Arasu

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A tribute to the Memory of Pandit Nehru on Page 4

Tamil Arasu

NOVEMBER, 1975 ISSUE: 5

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THE GOVERNOR IS '68

Thiru K. K. Shah Governor of Tamil Nadu being felicitated on his Birthday by Chief Minister at Raj Bhavan, on 27—10—75. The Governor's Birthday was marked by the publication of a Commemoration Volume of tributes by a variety of persons from all walks of life.

PANDIT NEHRU'S VISION OF INDIA

THE HUMAN GOAL OF SOCIAL AND ECONOMIC EQUALITY

TAMIL NADU GOVERNOR THIRU K. K. SHAH'S CALL FOR RELENTLESS CRUSADE FOR CLASSLESS SOCIETY AS OUR NEHRU MEMORIAL

Jawaharlal Nehru was bubbling with optimism whenever he talked of India. He had immense faith in the people of India. He hated cynicism and destructive approach to national problems. Every step he took and every measure he contemplated for the progress of India caused minimum inconvenience to a few and brought maximum benefit to the vast population of India. His concept of mixed economy was based on this principle. He was aware of the danger of the weaking irreparable damage. He was therefore cautious, and prevented extremists from allowing progress being sacrificed.

A cynic is apt to ask—" Whither India ?". Jawaharlal's clearcut answer is—" Surely to the great human goal of social and economic equality, to the ending of all exploitation of nation by nation and class by class, to national freedom within the framework of an international co-operative socialist world federation. This is not an empty idealist dream as some people imagine. It is within the range of the practical politics of today and the near future.'

If self-reliance was his motto, continued progress was his constant anxiety. No nation can depend upon external assistance for all time and yet no developing nation can catch up with the developed nations without external assistance. To match both is difficult and sometimes agonising. The larger the options, the greater the skill required to make correct choice. In the midst of clashing ideologies, throttling compulsions of game of balance of power by major powers and cut-throat competition, his approch was sound, sagacious and wise. These are his memorable words—" Unarmed and peaceful, we faced a proud empire, not looking for aid to any other country, and relying only on ourselves. This gave us the strength that sustained us during the struggle for independence. If we had faith and self-confidence when, to outward seeming, we were powerless, then surely we are much better off today when we are a free people with the strength of a great country behind us. Why then should our faith and our confidence in ourselves weaken ? We must learn to depend on ourselves and not look to others for help every time we are in trouble. Certainly we want to make friends with the rest of the world. We also seek the goodwill and co-operation of all those who reside in this country, whatever their race or nationlity. We welcome help and co-operation from every quarter, but we must depend primarily on our own resources. We should not forget that those who lean too much on others tend to become weak and helpless themselves." These words are still ringing in our ears. It is heartening that her illustrious daughter reinforces his wise concept with adroitness and unmatched wisdom.

What greater proof of Jawaharlal's uncanny capacity to handle this dangerous concept of mixed economy to the greatest advantage of India can be provided than the fact that between 1969 and 1972, India had developed resilience to spend more than ten thousand crores for defence alone, to spend about 5000 crores to face droughts, to find 6000 crores to face three wars and to continue to meet the capital costs of Five Year Plans. Thanks to the vision and versatile wisdom of Jawaharlal, India continues to progress in spite of crushing burden of galloping population.

Meaning of Social Justice

Let us therefore resolve to carry on his relentless crusade for a classless society and self-reliance. Let us not be swayed by momentary compulsions. Let us remember that when we have to face stiff resistance on all sides, we cannot do so unless our collective wisdom and united strength are put to maximum advantage. Social justice will remain an empty slogan unless we build up economic might to meet compulsions of social justice. If organised labour does not become an instrument of hope to starving millions who are unorganised, the unemployed would be obliged to organise. That means class war which Jawaharlal deftly avoided. We want to struggle for poorer sections without inviting class war. That can be accomplished only if we tread the path chalked out by Jawaharlal. Let us resolve to do so and thereby perpetuate his memory.

Associating T.N.E.B. Employees in Operational Activities

SERIES OF MEASURES FOR IMPROVEMENT OF LABOUR RELATIONS IN T.N.E.B.

A tripartite meeting attended by the Electricity Board Chairmen, Worker's representatives and the Union Ministers for Energy and Labour at New Delhi in August, 1975 has formulated a 10 point guidelines for associating workers' representatives with the Operational activities of the Power Systems in the country. The guidelines are under consideration of the Board.

All the employees of the taken-over Electric Licensees have become employees of Board but they are continued to be governed by the same terms and conditions of service of the Ex-licensees. The question of bringing these employees under the Boards service conditions by absorbing them in suitable posts under Board's cadre is under examination.

The Tamil Nadu Electricity Board Leave Regulations and the Standing Orders for workmen were modified providing maximum accumulation of leave of 180 days in all cases and also for grant of the entire leave on medical certificate admissible, throughout service, on full pay instead of on half pay as previously existing.

Under a scheme approved by the Board, the heirs of employees who die while in service, leaving their families in indigent circumstances are considered for employment under the Tamil Nadu Electricity Board in accordance with their qualifications and suitability.

Direct recruitment to posts of Junior Assistants and Cashiers have been deferred for the present so as to absorb qualified workmen who are already in service under the Board.

A family benefit scheme which enables the family of an employee to receive a lumpsum payment of Rs. 10,000 on premature death of the employee while in service has also been introduced for all the regular staff in the Electricity Board.

The TamilNadu Electricity Board has a phased programme for absorption of Temporary casual labour. The third stage of absorption of T.C.L. workmen who have put in 4 years of service as on 31st Ddecember 1974 in regular employment has been taken up and it is expected to benefit about 31,000 workmen. After this absorption only 15,000 would remain as T.C.L. and they would also be absorbed in 1976.

The previous settlement covering the wage revision expired on 30th November 1974 and negotiations have been initiated with the Unions of workmen concerned for arriving at fresh settlement.

With a view to have contented labour with job satisfaction, dialogues were also held with labour representatives and Engineering Associations for three days recently. Their various representations and grievances are receiving due consideration. Their demands will be met to the extent possible by the Board.

Board has sanctioned a sum of Rs. 40,000 for conducting inter-system Tournaments and participation of Tamil Nadu Electricity Board Teams in the All India Electricity Board Tournaments.

Also recurring and non-recurring grants are sanctioned to the various sports and recreation clubs under the Board according to their needs.

During February 1975 Tamil Nadu Electricity Board Sports Control Board conducted the second All India Electricity Board Basket Ball Tournament. In the First All India Electricity Board Athletic Meet held at Patiala the Tamil Nadu Electricity Board Athletic Team also participated.

INTER-CONNECTION OF TAMIL NADU ELECTRICITY GRID, WITH SRILANKA GRID MOOTED

Tamil Nadu has also taken up with the Government of India the need for inter-connection of grids with Sri Lanka and to pursue the matter vigorously. Tamil Nadu's geographical and cultural closeness to Sri Lanka is another factor to be taken advantage of in this respect and Tamil Nadu could be associated with the technical deliberations of interlinking of the grids. T.N.E.B. has participated in the first round of tripartite discussions with Sri Lanka Power Delegation both in Delhi and at Madras during August, 1975.

The Tamil Nadu Electricity Board has proposed Tuticorin Thermal Project for foreign assistance under Kuwait's Petro dollar scheme. This is receiving attention of the Government of India along with Kalinadhi scheme of Karnataka and Srisailam of Andhra Pradesh.

With the formation of Poompuhar Shipping Corporation under the State sector, Tamil Nadu's reliance on foreign chartered vessels for movement of coal has come down. The Tamil Nadu Electricity Board has entered into an agreement with Poompuhar Shipping Corporation in September 1974 for transport of coal from Kidderpore Docks to Madras. The Poompuhar Shipping Corporation is at present operating two vessels "TAMIL PERIYAR E.V.R." and "TAMIL ANNA" from December 1974 for transportation of coal from Bengal-Bihar collieries.

The Central subsidy for movement of Coal by sea is not adequate.

A scheme should therefore be devised by the Centre to fully compensate the additional burden incident on the State Electricity Board in transportation of coal by sea, in the interests of power generation.

SCIENCE REIGNS SUPREME

A State level Science Exhibition was held in Madras on 4—11—75. The Governor and Minister for Education evince keen interest in the exhibits.

ON THE THRESHOLD OF A NEW LIFE

The Chief Minister is presenting a 7 year Small Savings Scheme Certificate of Rs. 5,000 to a young widow who re-married on 22—10—75, at Periyar Thidal. This is one of the social rehabilitation programmes announced by Chief Minister on the occasion of his Birthday last June.

OUT OF RS. 65 CRORES SPENT ON DROUGHT RELIEF BY STATE, CENTRE GAVE ONLY RS. 7.5 CRORES MOSTLY AS LOAN!

Speech of Hon'ble Thiru M. Karunanidhi, Chief Minister, of Tamil Nadu presenting the First Supplementary Estimates for the year 1975-76 to the Tamil Nadu Legislature on 25th October, 1975.

The Supplementary Demands placed before the House are, in all, for a sum of Rs. 46.08 crores. Of this, a sum of Rs. 21.97 crores is in the Revenue Account, a sum of Rs. 14.11 crores is in the Capital and Loan Accounts and a sum of Rs. 10 crores is the appropriation for the enhancement of the corpus of the Tamil Nadu Contingency Fund. Out of the total demand, a sum of Rs. 45.55 crores is under voted items and a sum of Rs. 0.53 crore is under charged items. I shall touch upon the important schemes and programmes which find place in these demands for grants.

We have successfully faced the worst drought in a century with firmness and determination. We had spent Rs 8.8 crores on special drought relief works outside the Plan in 1974-75. In the current year, we have allocated Rs 15.8 crores for such special drought relief works, out of which an actual expenditure of Rs 15.3 crores has been incurred so far. In addition, an amount of Rs 3 crores has been sanctioned for distribution as taccavi loans to agriculturists for the deepening of irrigation wells. As a drought relief measure, a subsidy of Rs. 1,000 per diesel pumpset was given under a special scheme. The total expenditure incurred on this account is Rs 1.21 crores. I might mention that nearly 60,000 drought relief works were sanctioned out of which 57,600 works have already been completed. Drought relief works were widely spread throughout the State. In addition expenditure from normal Plan provisions have been accelerated in the drought affected areas. We estimate that out of the normal Plan provisions, Rs 30 crores have been spent in the drought affected areas in1974-75 and 1975-76. Altogether, therefore, a total expenditure of nearly Rs 59 crores has been incurred on drought relief. In addition, a provision of Rs. 6 crores has been included in the Supplementary Estimates being the compensation to Panchayats and Panchayat Unions to enable them to bridge their deficit arising from the waiver of the collection of local cess and local cess surcharge due to the drought.

I would like to draw the particular attention of the Honourable Members to the fact that we have received special assistance for drought relief from the Centre only to the extent of Rs 7.5 crores in 1974-75. I would also like to remind the House that 70 per cent of this assistance is in the form of a loan and only 30 per cent is in the form of a grant. The main burden of tackling this extraordinary and unprecedented natural calamity has been borne by the State Government from its own resources.

The drought had also cast its shadow on drinking water supply in urban areas, particularly in the City of Madras. Government have sanctioned a total assistance of Rs 176.18 lakhs to the Corporation of Madras. This has enabled the Corporation to sink 5,000 tube-wells, 400 open wells and to purchase 40 water lorries, 625 steel tanks, 28 oil engine pumpsets and other equipment to maintain a minimum level of water supply to the residents of the City. The massive programme launched by the Corporation was specially directed to meet the requirements of residents in the slum areas and other poorer sections of the City who did not have the benefit of sufficient tap connections. We had also undertaken special works to improve the water supply from the Poondi Reservoir. The Tiruvanmiyur Water Supply Scheme was completed in record time at an expenditure of Rs 50 lakhs. A provision of Rs 19.39 lakhs has also been included in the Supplementary Estimates for the artificial rain making experiments which were carried out in the catchment areas of our hydel reservoirs and in the Red Hills area. This experiment which was boldly undertaken by our Government was quite successful. It is a matter of great satisfaction to all of us that the South-West monsoon has been normal.

We have also made provision in the Supplementary Estimates for an assistance of Rs 24 lakhs to the Madurai Corporation for water supply purposes and a provision of Rs 4.78 lakhs to 19 municipalities to tide over their drinking water scarcity.

Even in a very difficult year, our Government has continued to provide adequate funds for various schemes for the benefit of Harijans and Backward Classes and for other weaker sections of society. The Harijan Housing and Development Corporation will complete the construction of 30,000 houses for Harijans as a first phase by the end of December 1975. The total cost

of this programme will be of the order of Rs 13.5 crores. We have so far sanctioned Rs 4.25 crores in the current year to the Corporation. A further provision of Rs 9.25 crores has been included in the present Supplementary Estimates to complete the first phase. The construction of these houses is now being supervised by the Collectors with special drive under the overall guidance of the H. H. Corporation.

We have also sanctioned the construction of 5,000 houses for fishermen at an estimated cost of Rs 2 crores. An initial provision of Rs 80 lakhs has been included in the Supplementary Estimates for this purpose. Five hundred houses for fishermen at a cost of Rs 35.09 lakhs have been put up at Poompuhar and 400 houses at a total cost of Rs 28.45 lakhs are being constructed at Vanagiri. I would like to announce that Government have decided to give up the collection of instalments already fixed for these houses and to give them free of cost to the fishermen. With this, 900 houses under this free housing scheme for fishermen will be completed shortly.

The Supplementary Estimates also include provisions for several special welfare schemes such as the provision of wheel chairs and tricycles to a total of 2,000 physically handicapped persons– Rs 8 lakhs; additional funds for the training-*cum*-production factory at Muttukadu which was inaugurated in May 1975– Rs 3.1 lakhs; grants to voluntary institutions engaged in the welfare of destitute children– Rs 4.56 lakhs; provision of 1,000 sewing machines free of cost to destitute widows–Rs 7 lakhs; provision of financial assistance in the form of National Savings Certificates for Rs 5,000 to widows who remarry; and the extension of the Old Age Pension scheme to cover destitute widows aged 45 years and above at a cost of Rs 24 lakhs.

Government have decided to extend all the concessions now being granted to scheduled castes to Harijans already converted to Christianity as well. In respect of admissions to educational institutions and reservation in public services, Harijan converts to Christianity will be treated on par with members of backward classes. At present the descendants of Harijan converts to Christianity are not eligible for these concessions. Government have decided to do away with this restriction and to extend these concessions to Harijan converts to Christianity so as to be on par with the members of Backward classes. The amount required for these concessions will be provided separately as an additional amount in the Harijan Welfare grant. Government have also sanctioned an increase in the boarding charges for students in Government hostels for Harijans, backward classes and denotified tribes. The additional cost on account of this increase will be Rs 18.63 lakhs in the current year.

Government have sanctioned the establishment of a Homeopathy Medical College with an attached hospital in Madras at a cost of Rs. 3.1 lakhs. Additional hospital buildings have also been sanctioned at Nagapattinam (Rs. 10 lakhs), Nagercoil (Rs 8 lakhs) and Kulithalai (Rs 5 lakhs).

Government have taken a major decision that the entire assistance so far provided to the Tamil Nadu Slum Clearance Board should be treated as a hundred per cent grant converting earlier loans also into grants having regard to the fact that this sheme benefits the poorer sections of society. In view of the fact that the expected assistance from the Housing and Urban Development Corporation is not likely to be forthcoming for our slum clearance schemes an additional provision of Rs 1.75 crores over and above the budget provision has been included in the Supplementary Estimates for the Tamil Nadu Slum Clearance Board. These items find place in Grant 33.

The establishment of sugar factories is one of our major programmes in the industrial sector. The Co-operative sugar factories being set up at Vellore and Tirupattur are making progress. In addition we have decided to set up a new sugar factory at Thanjavur. The Arignar Anna Sugar Factory at Thanjavur will be the first factory in the public sector under our policy that all new sugar factories should be under public ownership. Work on this project has already commenced and a sum of Rs 15 lakhs as initial share capital for this project has been included in the Supplementary Estimates.

The Supplementary Estimates also include a provision of Rs 1.5 crores for the handloom sector and Rs 86.75 lakhs to Co-operative Spinning Mills. Government have decided to provide an additional amount up to Rs 1 crore towards the rebate on the sale of handloom cloth. These items are included in Grant 56.

In Grant 54, provision has been made for an investment of Rs 1 crore as share capital in the Tamil Nadu Transport Development Finance Corporation which is expected to play a major role in the development of bus transport in the public sector.

The Centre has come forward to assist in an integrated development programme in the Nilgiris district at a total cost of Rs 7 crores during the Fifth Plan period. A number of schemes under various sectors have been sanctioned under this programme. It is anticipated that an expenditure of Rs 1 crore will be incurred under this programme in the current year. Schemes for raising tea plantations in the Nilgiris and clove plantations in the Kanyakumari district have also been taken up at a total cost of Rs 21.46 lakhs under the Western Ghats Development Programme sponsored by the Central Government. The provisions for these schemes are included in Grants 45 and 55.

We have been alive to the need for promoting art, culture, sports and national unity even in this difficult year. The Supplementary Estimates contain a provision of Rs 9.08 lakhs for the construction of 229 houses for the descendants of Veera pandya Kattabomman at Panchalam kurichi. A provision of Rs 2.82 lakhs for the purchase of a microfilming unit for the Saraswathi Mahal Library at Thanjavur and for training candidates in the Modi script will also be found in the Supplementary Estimates. We have also sanctioned an assistance of Rs one lakh to the Kamala Nehru Memorial Trust to put up a block to be named after Arignar Anna in the Institute of Science and Technology which they are establishing at Sultanpur in Uttar Pradesh. This item is included in Grant 17.

I have touched upon the salient features of the various items of expenditure included in the Supplementary Estimates. The detailed note placed before the House contains further details on these and other items. With these words, Sir, I commend the first Supplementary Estimates for 1975-76 for the acceptance of the House.

N.S.C. volunteers help doctors and patients in the eye camps.

VOLUNTEERS IN THE SERVICE OF POOR AND BECOME RICH

.... IN EXPERIENCE

The goal of National Service Corporations is education through community service. The purpose of the scheme is to enrich the students personality and deepen his or her understanding of the social environment in which he lives. It is expected that the scheme shall help students to develop awareness and gain knowledge of social reality to have a concern for the well being of the community, to undertake appropriate activities designed to tackle social problems and to promote socialwelfare of the community.

National Service Corporations was launched in 1969 by the Ministry of Education and Social Welfare, Government of India. The State Governments are actively involved in promoting the programmes. This scheme is implemented through universities.

The responsibility for evolving, implementing and evaluating programme projects is administered at four levels namely National, State, University and College Committees have been formed for the purpese and national and state stand as advisory bodies.

The work of N.S.C. is commendable since its inception in the universities. More and more students come forward voluntarily to enrol their names in the N.S.C. Like N.C.C. proposal is also there to make the N. S. C. compulsory for college students. Three universities in Tamil Nadu evincing keen interest in boosting up the scheme and they enrol large number of students viz Madras, Madurai and Annamalai Universities. There are about 8,000 volunteers working throughout Tamil Nadu taking into account 4,000 volunteers working in Madras University, 3,800 in Madurai University and 200 in Annamalai University. A Scheme is also there to extend N.S.C. to all colleges because every day universities are receiving letters from various colleges to include their names in the N.S.C. unit. Apart from men volunteers women volunteers are also evincing immence interest in the N.S.C. work. In reward for their services volunteers are paid a testimonail from the university in appreciation of the work they render through this scheme.

Very nominal amount only is being spent by the universities to cover transport costs of the volunteers. They are also provided food during out camps.

National Service Corps units are headed by a programme organiser viz. teacher in charge of N.S.C. unit. With the able guidance of the's principals of the Colleges the programme organisers and various committees formed by the student volunteers successfully carry out programmes on educational social well fare, Community Development health and hygiene and other matters. All these programmes are carried out with the able asistance of concerned departments. Programmes of health and sanitation is laid out mainly for the weaker sections of the communities in urban and rural areas.

Under educational programmes the N.S.C. has been launching fight against illiteracy among masses for which Adult Literacy Programmes have been the prime activity. Besides volunteers coaching children in schools they conduct night classes for school dropouts and send children to school yard. About 12,138 illiterates were made literates by the end of September 1975 and about 8,415 children were enrolled in the schools for the same period.

The health programmes of the N.S.C. is concentrating on immunisation programmes, organising health check ups, free medical and helping in eye camps organised by the Government of Tamil Nadu, helping the handicapped, blood donation, running dispensaries and helping the out patients through hospital visits. Health education and Nutrition education in addition to Women Welfare Programmes have also been the important activities of N.S.C.

The N.S.C.'s work on developmental activities are splendid. It

N.S.C. women volunteers are teaching health and hygienic methods for school children

includes slums and rural areas—organising youth clubs. Women's group i.e. Magalir Manram, Health Committee, conducting educational exhibition, Construction of school buildings, Public reading rooms, playgrounds etc according to the needs of the community. The N.S.C. Youth volunteers enforce Small Savings drive in rural areas. In the year 1974-75 about 11,620 people were enrolled under Small Savings Scheme.

Apart from the developmental activities they also conduct Manual Labour Camps in rural areas, creating tangible assets for the benefit of the community. Road laying, construction of balwadis, public utility shed for organising meeting are the laudable work rendered by the N.S.C. volunteers. Moreover volunteers participate in Flood Relief operations and refugees relief camps conducted in inter district and in All India level. In the year 1973 during summer vacation the volunteeers belonging to various city colleges engaged themselves in Youth Against Famine Camps. In the year 1974 the youths have conducted campaign against dirt and diseases. The camps were held during May, June, September and December 1974 holidays, with the participation of more than 1,500 campers in various places. Recently the Jamal Mohamed College unit undertook the Youth Against Drought Camp from 21st June 1975 to 30th June 1975 at Mohanur Panchayat Union area. About 68 students participated and made the campaign a very successful one.

Finance :—The Government of India and the Government of Tamil Nadu have been financing the N.S.C. in the ratio of 7:5 and this allocated funds are put under the disposal of university and they meet out all expenses incured during the N.S.C. operation.

Mostly, Madras University consults Madras School of Social Service, Madras which is one of the designated schools of social work, in implementing the scheme. Four orientation courses have been conducted so far for the teachers in charge of the N.S.C. units and this is done by M.S.S.W. on behalf of the Madras University.

To put it plainly, the work of N.S.C. is really admirable and the report shows that youngsters are deeply interested to spend their time and energy for the social cause to enrich the lives of millions of poor masses. Definitely there is going to be a reformation in the lives of rural folk.

S. S.

THE GREAT IMMORTALISER
PAPER

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SLUM CLEARANCE MUST PAVE WAY FOR "CLEARANCE OF SLUM MENTALITY"

MASSIVE PROGRAMME OF "SOCIAL ENGINEERING" BEGINS IN THE MIDST OF NEW SLUM TENEMENTS

Slum dwellers have not generally seen or known a way of life other than that which they are now encountering in the slums. It is imperative, therefore, that the problems of 'slum clearance' should really begin with the clearance of 'slum mentality' with the help of a squad of extension workers capable of 'educating' the dwellers in the art of living a more healthy and fruitful life.

In this task, we must carry the slum dwellers with us. Concrete services like nutrition education, health services, recreational facilities, child care, adult education and gainful occupational outlets should be the vehicle through which ignorance and all its manifold efforts can be counteracted.

Slum clearance is not a problem merely of 'public health engineering'; it involves — and should involve — 'social engineering' as well.

With the staunch support of the Slum Clearance Board, the State's Department of Social Welfare, and the New Residents Welfare Trust CARE has made a good beginning. A better future for the many thousands of our tenement dwellers are unfolding as a result.

With the view of eradicating the slums of Madras city within a period of 7 years, the Government of Tamil Nadu established the semi-autonomous Slum Clearance Board in 1970.

The Board was given the following mandate :

1. To clear all the 1,202-and-odd slums in Madras city within the targetted period (*i.e.*, 7 years) ;
2. To prevent further growth of slums in Madras city ;
3. To give protection to the slum dwellers from eviction and to re-house them in modern tenements ;
4. To provide basic amenities such as drinking water supply, electricity, storm water drainage, etc., to certain slum areas, until they are eradicated.

The carpet area of a slum clearance tenement ranges from 197 to 232 sq. ft. It consists of one living-cum-bedroom, a kitchen, a small room which can be used for dining and sleeping, plus a bath water closet attached to the tenement ; provision is made for electric lighting. The estimated rent works out to Rs. 40/- but the slum clearance dweller (*i.e.*, 'new resident') pays a subsidised rent of only Rs. 15/-.

There is an overhead water tank in each area, the source of water supply for which is either (*a*) the Municipal Corporation or (*b*) a specially constructed feeder well. Separate sheds have been provided in each block of tenements to house cattle.

In the site layout for each area, provision is made for a day care centre, an elementary school, a community hall, playground, clinic, park and a marketing place.

Occupations :

They are largely daily-wage earners of varied occupations, *e.g.*, milk vendors, domestic servants, fishermen, launderers, carpenters, masons, rickshaw pullers, cart pullers and other manual labourers. Some are employed in Government service as last grade servants, policemen, ward boys in hospitals, drivers and conductors of the State Transport Department, sweepers in the Municipal Corporation.

Family Size :

Figures pertaining to family size indicate an increase in the average family size from 4.21 in 1961 to 4.50 persons per family in 1971. The average household in the slum clearance areas selected for the project was 5.3 persons per family. Of the slum clearance dwellers in the age group of 25—59 years, only 0.54% have undergone family planning treatment.

Literacy Rate :

The percentage of adult literacy is 33.8% for the slum clearance areas studied as against 59.14% for all urban areas. Working children constitute 4.5% of the work force, as against 1.4% for the non-slum clearance urban areas.

There is a large unsatisfied demand for admission to pre-schools. One day-care-cum-pre-school has been provided in each slum clearance area. Provision is made for admitting 20 children aged 6 months to 2 years and 40 children from 3—5 years. Infants alone account for 12.86% of the total population of the project area. Among the school going children in the age group 5—14 years, 37.30% are not attending school.

The New Residents Welfare Trust is Born:

The New Residents Welfare Trust was started in January, 1972, with the aim 'to render expert social service and advice to families rehoused in Tamil Nadu Slum Clearance Board Housing projects.' Sponsored jointly by the Madras Christian Council of Social Service, the 77 Society and The Slum Clearance Board, it employs 14 trained Resident Welfare Officers (with a Master's degree in Social Work) at the Slum Clerance level, plus one Chief Executive Officer, to actively promote and consolidate all the efforts in the various project areas. The Executive Officer is assisted by 2 Assistant Executive Officers, each of whom is responsible for 6 areas. Of the manifold activities undertaken by the Trust in the project areas, the following feature prominently : formation of Mothers' Clubs, training in 'happier homes' for mothers, provision of additional income opportunities through tailoring, leather batik, patchwork, etc., provision of a medical umbrella through regular clinical services, immunization and deworming programmes, organization of Youth Clubs, sports and leisure-time pursuits for youth, and cleanliness campaigns initiated primarily by the Youth Clubs.

Nutritious Food for The New Generation

TACKLING THE NUTRITION PROBLEM IN NEW SLUM TENEMENTS

The Government of Tamil Nadu launched a Government of India sponsored Special Nutrition Programme in 1970 to combat malnutrition among the vulnerable sections of the population in urban slums. Under this program, pregnant women, lactating mothers and preschool children, belonging to the low income groups in these slum clearance areas, were given a nutritious free food supplement for 300 days yearly. 140,000 beneficiaries were covered in Madras.

Need for a Multi-dimensional Nutrition Project :

While the Special Nutrition Program, undoubtedly helped to improve the nutritional status of inscribed beneficiaries, it also revealed that supplementary feeding alone was inadequate to effectively combat malnutrition.

It became evident that nutrition education of the mothers was essential to consolidate the gains of the Special Nutrition Programme and make it a more meaningful effort.

A Project is Launched :

The Slum Clearance Nutrition Project, sponsored by the State Government of Tamil Nadu, Social Welfare Department and CARE, with close support from the New Residents Welfare Trust, was commenced in January 1974 ; the project's duration was calculated at one year. Twelve slum clearance areas were selected ; they contained some 6,323 families with a total population of 32,558. A programme designed to reach mothers, housewives, heads of households, influentials, teachers and preschool children, was carried out in three phases :

The education messages of the project were :

(a) Nutrition :

1. A pregnant mother needs to eat for two, and should include green leafy vegetables in her daily diet.
2. An infant's diet should include solid food from the age of 6 months onwards.
3. The school lunch is a supplement and not a substitute ; a preschooler should be helped to eat a little more of what he normally eats, more frequently.

b. Health :

1. A pregnant mother should have regular medical check-ups, avail fully of the existing health care services.
2. Have the children immunised ; avail of existing facilities for deworming.
3. Do not starve a child during diarrhoea or fever ; take the child to a doctor for regular advice and treatment.

c. Sanitation :

1. Keep home, surroundings and person clean.
2. Keep food and drinking water covered.
3. Wash hands before feeding the child.
4. Do not let a child defecate in all places.

Delivering Nutritional messages at low cost :

Extension education formed the core of the project, amply supported and sustained by the use of effective mass media. The following constituted media inputs :

An audiovisual van, complete with a 16 mm projector, film strip-cum-slide projector and public address system.

Films :

A film programme normally consisted of two entertainment reels and three nutrition education reels, which were pre-selected to form a complete meaningful unit ; each film presentation was programmed for a minimum of an hour and a half. CARE had two CARE-produced nutrition education films. Films were borrowed from the State Health and Education Bureau and The Directorate of Information and Publicity, and screened initially to small groups of slum clearance dwellers for purposes of selecting understandable, impact films for general presentation.

ALL THE MEDIA MPLOYED TO STRIKE AT ROOTS OF MALNUTRITION

eatre :

Theatre is a very popular medium the areas. Hence with a portable ge and cyclorama unit, al talent was recruited, nutrition/ alth educational shows were aged. A staged song-dance a nutrition theme, perform- as a prelude to a film program, oved very popular.

osters :

9 designs were developed and isplayed on specially provided bulle- n boards at the Clinics, day care entres, libraries and other vantage oints in the tenement areas. , Fur- her, the extension education team ade use of the posters as aids uring home visits and demonstra- ion sessions.

ooklets and Pamphlets :

Simple booklets, calendars and amphlets were produced. A major ffort was made to ensure that the nessages highlighted by the mass nedia input (films, theatre, posters, tc.) was reinforced during house isits/demonstrations held in the project areas.

Extension educators :

Fifty girls with high school education, residents of the project areas, were interviewed by a Project Selection Committee, composed of representatives from Social Welfare Department, New Residents Welfare Trust and CARE. From this group, some 32 girls in the age group of 20—25 years were selected for 2 weeks' training in the basics of nutrition practices and recipe demonstration by the Mobile Extension Unit of the Government of India. For an additional 2 weeks, the girls were given in-service training by being assigned general enumeration of target population, as part of a bench mark survey.

Once a final selection of 16 girls for appointment as Extension educators was made, a two-month intensive training program was conducted in child health and nutrition extension techniques, at the Avinashilingam Home—Science College, The Institute of Child Health's Mothers' Clinics and ultimately at the respective Day care Centres in the project areas.

The work of the extension educators was supervised by a qualified Project Nutritionist, selected by the committee, who holds a Master's degree in Food and Nutrition, and who was paid a salary of Rs. 400/- per month. The Nutrionist met the Extension educators every week and arranged for guest lectures and refresher training from time to time.

Widespread contacts were made by the Extension educators with the target population comprising pregnant / lactating women, mothers of preschoolers, influential women in the community.

The Extension educators, the project nutritionist, and the Resident Welfare Officers filed regular reports on the work done by them (by way of house visits, demonstrationlessons, media programmes, cleanliness campaigns, etc.) to the Department of Social Welfare and CARE.

PROJECT MODIFICATIONS IN MID-STREAM

At the onset of the programme in January, 1974, the focal point of the project was nutrition education, and all efforts were mobilised towards dissemination of the designed messages to the designated families at moderate cost.

It was quickly realised that, as a corollary to nutrition education, an enhancement of the health services offered to the target population would directly result in greater receptivity to nutrition education and would bind nutrition, health and sanitation together, making a more effective program. Hence, the following supplementary activities were grafted onto the original project tree, adding a new horizon to the slum nutrition education project.

Immunizations :

The Government sanctioned Rs. 8,500/- towards an intense seven-month immunization campaign in the selected 12 project areas. This dynamic scheme has achieved complete immunisation of 6,853 children with DPT and Polio vaccines. The scheme employed 10 auxiliary immunization helpers (selected from the slum clearance areas), to stimulate/bring the children for immunizations on the prescribed dates. The New Residents Welfare Trust provided doctors and community health nurses.

Prevention is better than cure

How nutritious can the food be?

In recognition of the immensity of the problem of intenstinal parasites and the effects of their infestation among the new residents, a deworming project was sponsored by CARE in 1974—75, in close co-operation with the New Residents Welfare Trust, at Cementery Road, one of the initially selected 12 project areas. This area has a protected water supply and lavatory facilities.

The deworming activities involved a stool examination of every resident in the area, for diagnosis of the parasitic infestation, and treatment of the infested with suitable drugs. CARE covered the cost of drugs for the vulnerable groups comprised of pregnant/lactating women/preschoolers, while the New Residents Welfare Trust met the cost for the remaining population. Environmental sanitation and health education were concurrently attended to.

The project supervisory staff included a medical officer, the respective Resident Welfare Officer and a visiting nurse (all paid by the New Residents Welfare Trust), plus CARE's Project Officer.

The population of the above mentioned area (Cemetery Road) was blanketed in 6 months ; this project was then shifted to another project area, Nochikuppam/Nochinagar where it is currently being implemented. Nearly 3,000 members of the target population have till date been dewormed. Subsequent follow-up tests for parasites revealed that the program was over 90% effective. Both of these areas *i.e.*, Cemetery Road and Nochikuppam, have been, programwise, blanketed within the budgetary estimate of Rs. 10,866/-.

Food Mix Unit :

From its modest beginning in early 1974, the Food Mix Unit has grown into a hihgly productive unit turning out, on an average, 10 Kg. of food mix per day. This food, composed of the following ingredients : cambu, greengram dhal and jaggery, is sold through clinics, small shops, and on a door-to-door basis, to the vulnerable groups. The cost, presently 35 paise per 100 gms., is calculated on a no-profit, no-loss basis. While proving to be an effective vehicle for provision of employment opportunities for local women, it is also developing into a full fledged unit for supply of a low-cost infant weaning food, which in turn adds substance to one of the basic project educational messages, *viz.*, "An infant's diet should include solid food from the age of 6 months onwards."

Day Care Centres :

Recognising the significance of the early formative years in the life of an individual, day care centres were started in all the project areas. to provide children aged 6 months to 5 years with opportunities for all-round growth and development. Each day care centre accommodated 20 children aged 6 months to 2 years and 40 preschoolers aged 2—5 years. Hence, a total of 720 children were covered. Special emphasis was placed on children of working mothers. Trained Balasevikas were appointed to run all the centres, each Balasevika was assisted by 2 ayahs. The Balasevikas also conducted demonstration classes once a week for the mothers of the day care centre children.

PROJECT BUDGET 1974—75

The Slum Clearance Nutrition Project was jointly funded by the Government of Tamil Nadu and Care. For the initially selected 12 areas, CARE's contribution was approximately Rs. 68,000/- ; the Department of Social Welfare's contribution was Rs. 1,30,000/-. In total Social Welfare Department New Resident Welfare Trust and CARE together was spent about Rs. 4,95,378 for 1974—75 project.

PRESENT AND FUTURE PROJECT SCOPE - 1975—76

The success of the Slum Clearance Nutrition Project in the initial 12 project areas during programme year 1974—75 has inspired the co-operating sponsors (Government Department of Social Welfare, New Residents Welfare Trust and Care) to extend project activities to cover an additional 12 areas. The project will now encompass :

(*a*) 6,500 families in 12 newly selected Slum Clearance areas and ;

(*b*) approximately the same number of families in the extent 12 slum clearance areas.

While cognisant of our inveterate aim to establish an awareness and a degree of habit change in concepts related to nutrition, health and sanitation among the vulnerable groups of the slum clearance population, the following constitute equally primordial objectives of current/future efforts :

(*a*) To produce and promote the widespread use of low-cost, locally made infant weaning food.

(*b*) To extend mass deworming and immunizations to the entire target population.

All the right ingedients in

T. N. E. B. IS A PIONEER POWER ORGANISATION

ONE MORE THERMAL UNIT OF ENNORE, NADUVATTAM and KUTTIYAR SCHEMES TO BE COMMISSIONED THIS YEAR

The Tamil Nadu Electricity oard is the biggest public sector ndertaking in the State, with about ne lakh employees on roll. It as been a pioneer organisation in ne field of power and power deve- opment over the years. The pro- ress of the State to a large extent dependant on the growth and per- ormance of the Electricity Board.

In Tamil Nadu the demand for ower has generally been out-stripping the availability. Thanks to the ipurt in industrial activity and ener- gisation of agriculture pumpsets the load growth has been phenomenal. Today Tamil Nadu has an installed capacity of 2254 M.W. This accounts for 12 per cent of the installed capacity in all India. Similarly the energy generation in this State accounts for more than 10 per cent of that in the whole country. The State continues to give top priority to agricultural production. The energy consumption in this sector is well over 25 per cent of the total consumption, the highest in the country.

The annual increase in power demand in recent years upto 1971-72 has been around 10 per cent. This has however come down during the last three years, due to power shortage and consequent inability to meet the demand in full.

The power development in this State has been sustained over the years. The pace of progress over the last decade has been such that there has been nearly a two fold increase in installed capacity peak demand and energy generation, with nearly three times increase in number of villages electrified and pumpsets connected.

The pattern of consumption sector-wise is as follows :—

		Per cent.
1. Domestic	..	5.9
2. Commercial	..	6.4
3. Public lighting	..	1.2
4. Industrial	..	42.6
5. Agricultural	..	29.1
6. Others (Traction, bulk supply to Licensees, Departmental works/projects and sales to other States, etc.,)	..	14.8
Total	..	100

During the current year, a 110 M.W. unit at Ennore Thermal Station would be commissioned. Vigorous efforts are being taken to expedite and advance the works. Also the Naduvattam diversion scheme with 69 million units and Kuttiyar pumping scheme with 40 million units potential would be completed during the year 1975-76.

The Peculiarity of our Power grid.

The Tamil Nadu Grid is a complex and peculiar one. Of the 17 Hydro stations totalling 1,224 M.W. 9 stations with a capacity of 633 M.W. are irrigation tied. The power houses get closed one after another and are not available for generation beyond December but the grid peak continuously rises during summer months, because of the predominant agricultural load. This has always posed a technical problem and the Board has been hard put in managing the situation particularly during the non-irrigation season i.e., the months of February to June.

The power position during the last year was not satisfactory. A power cut ranging from 40 per cent to 75 per cent had to be imposed during the year. Due to sharp decline in Neyveli generation and slippage in Ennore generation, non-continuous industries were requested not to draw power from the grid but to take up overhaul and maintenance of equipments to keep off the grid for a few weeks in April 1975. With the improvement of thermal generation at Neyveli and Ennore restrictions in the case of small

...industries were relaxed in steps. With the onset of south-west monsoon during the third week of June 975 the State Government decided o lift the power cut completely rom 25th June 1975. All restric ions on Agricultural services were lso withdrawn from 15th Septem- er 1975. New power connections re being permitted and loads con- ected prior to 1st December 1974 re allowed day supply also.

A close watch on generation of ower from Hydro and Thermal tations is being kept up to ensure udicious management without any vastage and banking of surplus ower with neighbouring State where er possible.

The South-west monsoon has een generous and the inflow has een copious and good. The storage quivalent as on 20th October 1975 vas about 2061 mu as against 1,751 nu in 1974 and 1,594 mu in 1973 on he corresponding days. It is hoped hat this comfortable hydel position vill lend good support in our manag- ng the overall power position this ear.

Central Power Schemes dragging

It is not as though Tamil Nadu as landed in a power crisis all of a udden. The first unit of 235 MW the Kalpakkam Atomic Power roject should have come to service y 1973-74 as per original targets. imilarly the improvement in the isting mine at Neyveli to increase he rate of lignite cut from 3.5 mill- on tonnes to 6.5 million tonnes per nnum should have fructified al- eady. But as members are aware here have been serious slippages on oth these counts. There is no firm ndication as to the early commis- oning of the units at Madras Ato- mic Power Project. The expan- on programme at Neyveli has only ust commenced.

The Tamil Nadu Electricity oard has been managing its power eeds with substantial imports from utside. Not less than 20 per cent f its requirements have to necessa- ly come from external sources. is therefore apparent that this tate has to take into account this nportant factor in planning for s power requirements and no firm ssumptions could naturally be nade in making any forecasts in this gard.

Admittedly, the Board's finances ontinue to be in difficult position. could not, in recent years provide for depreciation, payment of interest etc., and meet its commitments fully, as it should. The Board thus finds itself in an unenviable position.

The balance sheets of the Electricity Board have been showing a deteriorating trend. Rising costs of inputs including fuel and higher wage bills together with inadequate power tariffs and low utilisation of capacity are mainly responsible for this situation.

Steps have been initiated to remedy the situation by way of tariff revision, economy in operation and maintenance costs, maximisation of generation, improvements in overall operational efficiency, line loss reduction measures, better management, rationalisation of work loads, etc.

Rise in Cost of purchased Power

During the past five years there has been steady increase in the rate for purchase of power both from neighbouring States and from Neyveli Lignite Corporation. The rate for Kerala power has increased from 8 paise per unit to 9.5 paise per unit and the rate for Neyveli power from lignite has increased from 8.48 to 9.36 paise per unit from 1-4-1975. The Tamil Nadu Electricity Board has agreed to bear the additional cost arising out of the increase in wages given to the employees of the N.L.C. Besides, there has been steep increase in price of coal freight charges and also in movement of coal by sea. Cost of rail borne coal has increased from Rs. 102 per tonne to Rs. 132 per tonne during the last one year. Similarly cost of sea-borne coal has gone up from Rs. 186 to 263 per tonne during the same period. Tamil Nadu Electricity Board's requirements of coal is 1.44 million tonnes this year and will be of the order of 1.58 million tonnes from next year onwards till the first unit in Tuticorin Thermal Scheme is commissioned in 1978-79. In addition, cost of conversion to oil firing at Neyveli has also increased the cost of power. The cost of power from the oil fired unit from Neyveli is of the order of 30 paise per unit.

For the year 1975-76, the cost of power purchases is likely to go up to Rs. 37.02 crores, as against Rs. 25.68 crores in 1974-75. The quantum of power purchased has been 2208 m.u. in 1974-75. The same is anticipated to be about 2350 m.u. in the current year.

As already indicated in the last year's budget speech a review of the tariff rates was made and the tariff rates were revised in October 1974. The surcharge was also increased from 30 per cent to 50 per cent from January 1975 onwards. Special rates for cement, chemicals and aluminium industrial units were also revised in March 1975. The agricultural tariff was raised to 16 paise per unit with effect from 30th August 1975. Yet, the additional revenue anticipated in 1975-76 falls short of the requirements to meet in full the depreciation and other interest obligations during 1975-76.

The Budget Estimate for 1975-76 of Tamil Nadu Electricity Board for capital works is Rs. 39 crores and another Rs. 14 is required for repayment of loans etc., for which the known resources, viz., from open market, Life Insurance Corporation, Rural Electrification Corporation and deposits, etc., come to only Rs. 40.62 crores. In short the total efforts will be taken to bridge the gap of Rs. 12.38 crores in resources for the Capital Programme.

Expenditure on Plan Projects in IV plan has been of the order of Rs. 216 crores. Approved outlay for V Plan is only Rs. 326 crores. It is therefore necessary that the approved outlay for power should be in the range of Rs. 70 to 80 crores per annum during V Plan if not more to ensure timely completion of projects. The outlay approved for the first two years by the Central Planning Commission is hardly 50 per cent of requirements.

Discussions on Tuticorin Thermal Scheme which is the largest energy intensive Scheme under execution during 5th plan were held in August 1975 at New Delhi, and the Centre has been pressed for additional outlay to the extent of Rs. 19 crores against the outlay of Rs. 10 crores for 1975-76. An additional outlay of Rs. 1 crore only has been agreed to, subject to certain conditions. This is woefully inadequate and not equitable when compared with the total requirements.

The Centre should come in a big way to the rescue of the State Electricity Board both by adequate and timely financial support and by implementing independently power projects under Central sector to supplement the efforts of the State.

T. N. E. B. EFFORTS FOR RAPPORT WITH CONSUMERS

The Tamil Nadu Electricity Board has set for itself a motto of consumers' satisfaction by way of prompt service, as the overall satisfaction of the ultimate consumers will be the criterion in judging the performance of the Board. With a view to translate the motto into purposeful action, the Board after careful consideration has decided to introduce "Manuneedhi Thittam" which would also establish rapport with the public. A Vigilance Cell has also been instituted in the Board to weed out corruption.

With a view to regionalise the top functional level management, the headquarters of Chief Engineer/Distribution (South) has since been shifted to Madurai during October 1975. Eight distribution systems namely, Kanyakumari, Tirunelveli, Ramanathapuram, Madurai, Tiruchirappalli, Pykara, Udumalpet and Erode and one General Construction Circle at Tiruchirappalli come under his control.

The headquarters of Chief Engineer (Operation) who is in charge of Hydro Generation has also been shifted to Erode for reasons of better and closer control of Hydro Power Stations in the grid.

Two new circles have been formed one at Udumalpet and another at Tiruvannamalai in tune with the needs of the consumers of those areas as the existing systems of Pykara and Vellore have been found to be unwieldy. It is hoped that with the formation of the new systems the consumers in these areas will get better attention.

The Research and Development Directorate which was formed last year has been conducting diverse studies in the field of Generation, Transmission and Distribution. During the year results have been achieved on problems relating to Relay Protection and corrosion of Penstock pipes. Studies are continuing in respect of eleven projects.

The Central Power Research Institute proposes to associate the Research and Development Organisation of Tamil Nadu Electricity Board in respect of Research work in the field of exploitation of Solar Energy.

**

NO POWER FAMINE BUT USE IT SPARINGLY

I want to allay the fears if any in the minds of prospective consumers. The intermittent power shortage experienced by us is only a passing phase. There need be no apprehensions on the part of the enterprising entrepreneurs as to the availability of adequate power for farms and factories. This Government and Board is taking all steps possible in this regard to improve the power position.

With the versatile uses of Electricity and the subtle changes that have taken place over the years with the introduction and adoption of this effective tool, we have generally tended to a more liberal and carefree usage of energy. The time has come now to have a second look at our own attitudes and revise them. The concept of conservation of Energy is gaining public support all over the World and it will be in the fitness of things that this new concept is socially accepted and backed by all concerned.

—Thiru S. J. SADIQ PASHA.

MASTER PLAN FOR NEW TRANSMISSION SYSTEM

The Tamil Nadu Electricity Board among others has evolved a master plan for Transmission and Distribution at an estimated cost of Rs. 101 crores. Rs. 7 crores has been spent so far. More than 400 Kms. length of EHT and HT lines, 27 Nos. Sub-Stations have been erected against nearly 4,300 Kms. length of lines and 154 Nos. Sub-Stations planned. Further progress will be possible depending upon availability of funds. Improvement proposals costing Rs. 138 lakhs have been sanctioned by Rural Electrification Corporation.

Provision of L.T. shunt capacitors in new L.T. industries, and agricultural loads is being insisted upon by amending Board's Tariff conditions. Attempts are being made by the Board to procure and supply L.T. shunt capacitors to consumers. 36,000 Nos. L.T. capacitors have been ordered. Meters are being installed in selected distributions to measure the energy receipts and sales to the consumers so as to assess the extent of losses. A techno economic pilot study undertaken in this respect by Indian Institute of Science indicates a requirement of Rs. 15 crores for Chingleput System alone.

There have been frequent complaints of poor maintenance of street lights by the Board. Individual metering of street lights has been taken up and is in progress. Better attention is being given to proper street lighting, replacement of bulbs, etc. We hope that there will be no room for such complaints in future.

The State Electricity Board owns a huge network of transmission and distribution system comprising 69,775 Kms. of EHT and HT lines and 202,245 Kms. LT lines as on 31st March 1975. Out of this 1,038 Kms. of EHT and HT lines and 5,628 Kms. of LT lines were added during 1974-75. There are 279 numbers of EHT and HT sub-stations in the grid at the end of 1974-75. Yet, the line loss is much less than in any other State.

POWER SCHEMES IN PROGRESS AND PENDING CENTRAL CLEARANCE

Machineries for Suruliar Power House will be manufactured at Austrian works and will be supplied by them by about January, 1977, and will be commissioned in 1979.

2. The civil works for Tuticorin Thermal Scheme have been taken up. One unit of 210 M.W. capacity for this scheme is expected to be commissioned in 1978-79.

3. The Kadamparai pumped storage scheme envisages installation of 4 units of 100 M.W. each. We have however, now decided to execute the scheme with 2 units only.

4. As far as Pandiar Punnapuzha H.E.S. is concerned, it has been decided to go ahead with the original scheme. Works will be resumed.

5. Under Servalar H.E. Scheme, civil works like excavation for dam foundation, inter-connecting tunnel, etc., are under progress. The scheme is expected to be commissioned in VI Plan period.

6. For Nellithorai H.E.S., preliminary civil works have been taken up.

Ennore Power Complex has turned the corner. The generation during 1974-75 has been 17 per cent over and above that during the previous year. During 1975-76 further improvements are anticipated.

The problems at Ennore were reviewed comprehensively and a special project "Operation Ennore 340" has been launched. Messrs. BHEL has been asked to closely collaborate in this project. The modifications are actually carried out by Messrs. BHEL themselves for satisfactory operation of the plant after modifications. Capital maintenance and overhaul on the first two units have been completed. Overhaul of the third unit is in progress. On completion, the fourth unit will be taken up. With this, complete revamping of all the units is expected to be done by December 1975/January 1976, so that full ouput from the Station will be available to the grid in the next summer season.

Most of the recommendations of the Mahalingam Committee in respect of Ennore have been implemented. The recommendations among others on operatinol requirements have been implemented by engaging Messrs. Tata Consulting Engineers for studying all operational problems at Ennore.

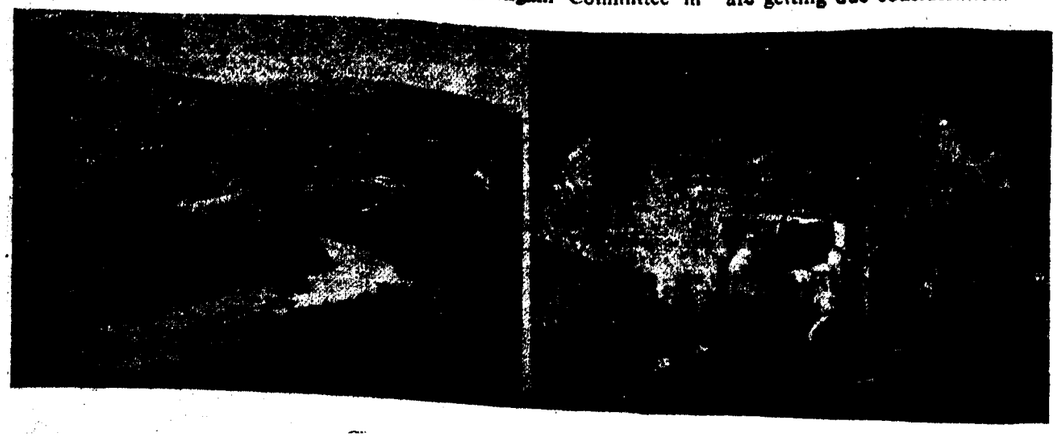
Also in order to give undivided attention to the Ennore Thermal Station a separate Chief Engineer has been posted along with two separate Superintending Engineers.

In an attempt to improve matters and also to have technical advice, the services of Thiru V.P. Appadurai, a previous Chairman of the Electricity Board have been requisitioned. He is the Special Adviser to the Board now. His suggestions to improve utilisation of the existing plants both at Ennore and at Basin Bridge in particular and also other Hydro generation Stations in general are getting due consideration.

POWER SCHEMES PENDING CENTRAL CLEARANCE

Serial number and name of the Scheme.	*District.*	*Installed Capacity M.W.*	*Energy benefits m.u.*	*Estimated cost Rs in Lakhs*
Akkamalai H.E.S..	Coimbatore ..	25	91	898
2. Cholathipuzha	Nilgiris ..	60	225	739
3. Lower Mettur	Salem ..	160	643	3,414
4. Manimuthar ..	Tirunelveli ..	65	277	1,884
5. Paralayar H.E.S.	Kanyakumari..	35	100	563
6. Shanmuganadhi	Madurai ..	30	125	1,250
7. Upper Amaravathy	Do	20	69	728
8. Upper Thambraparani	Tirunelveli ..	165	557	4,965
9. Mettur Thermal Scheme	Salem ..	330	2,024	6,553
	Total ..	890	4,111	20,994

IMPROVED PLANT UTILISATION



TAMIL NADU INDUSTRIAL INVESTMENT CORPORATION DISPLAYS NEW DYNAMISM

INDUSTRIES IN BACKWARD AREAS COMING UP FAST

* * *

PACE-SETTING ASSISTANCE OF Rs. 675 LAKHS TO 370 SMALL SCALE UNITS IN 1974—75.

The Tamilnadu Industrial Investment Corporation Ltd., the oldest State-level Development Bank of the country, which celebrated its Silver Jubilee during the last year, has recorded spectacular progress in its operations during 1974/75.

The total assistance sanctioned during the year in respect of 462 applications had amounted to Rs. 17.75 crores, as against only Rs. 5.77 crores sanctioned in the previous year, in respect of 142 applications, registering a high growth rate of 207%. The assistance sanctioned during the year formed 27% of the total sanctions during the entire previous period of 25 years. Likewise, disbursements during the year were also of the high order of Rs. 8.25 crores, as against only Rs. 4.03 crores, showing a growth rate of 105%. The assistance sanctioned was spread over all the Districts of the States of Tamil Nadu as also Pondicherry. The out-standing assistance stood at Rs. 37.67 crores, as against Rs. 31.41 crores as at 31st March 1974.

TIIC's assistance on concessional terms to units in the industrially less developed areas had also shown a remarkable increase during the year, in that it had amounted to Rs 9.03 crores in respect of 180 applications, as against only Rs 3.00 crores in respect of 64 applications in the previous year and Rs 5.71 crores in respect of 118 applications for the entire previous period. The amount of assistance to backward areas had amounted to 51% of the total sanctions during the year.

In respect of assistance to small-scale sector also, TIIC's record is exemplary. Assistance sanctioned during the year amounted to Rs 6.25 crores in respect of 370 applications, which compared to only Rs 2.21 crores in respect of 108 applications in the previous year and Rs 7.87 crores in respect of 397 applications for the entire previous period. Application-wise, 80% had gone to the small-scale sector during the year.

TIIC's assistance under a Foreign Exchange Line of Credit, extended by the International Development Association, had amounted to Rs 296 lakhs during the year, making an aggregate of Rs 397 lakhs, comprising of rupee assistance of Rs 226 lakhs and foreign exchange assistance of Rs 161 lakhs.

Out of the 462 units assisted during the year, as many as 319 units were new undertakings, of which 129 were to be managed by qualified technocrats and another 146 by technocrats well experienced in the industry though not formally qualified. Again, 44 units were to be started by persons from trade & commerce.

During the year, TIIC had assisted a number of units which were to take up manufacture of products for the first time in the State, viz., Polystyrene thin films for packaging etc., metal reflectors for cine projectors etc., mechanised manufacture of mirrors, mechanised coir carpet weaving, industrial boilers, miniature automobile lamps, reed switches and metal glass film resistors for telecommunication, electronic lockers, ceramic microphones, etc. etc.

The Corporation's operations during the year had resulted in a net profit of Rs 42 lakhs, as against Rs 32 lakhs in the previous year.

It was also explained that the total cost of the projects assisted during the year had amounted to as much as Rs 43.33 crores. TIIC's assistance, therefore, had amounted to 41% thereof. The projects assisted would provide direct employment to about 11,000 people and when in full production, they would produce goods and services valued about Rs 118 crores in the near future.

The progress made during the year has thus set up many records and the Silver Jubilee Year has really turned out to be a milestone in the history of the Corporation. This speaks eloquently not only of the dynamic role the Corporation is playing, but also of the robust optimism of the entrepreneurs in the future of the industries in the State, in spite of the many temporary constraints that were obtaining.

Qualified Technocrats to the fore

Dealing with the current operations of the Corporation, it was mentioned that for the period ended 31st August, 1975, the total sanctions had amounted to about Rs 7.50 crores in respect of 257 applications. Disbursements during the period were to the tune of Rs. 4.80 crores. Sanctions under the IDA Line of Credit for the said period had amounted to Rs 2.15 crores, making a total of Rs 6.02 crores comprising of rupee loan of Rs. 3.23 crores and foreign currency loans equivalent to Rs. 2.79 crores.

Pending applications as on 31st August, 1975 numbered over 500 for a total assistance of about 17 crores. The resources position of the Corporation continues to be satisfactory.

FOR YOU TO SEE TIIC IN FACTS & FIGURES!

THE MOVEMENT FOR IMPROVEMENT IN INDUSTRIAL INVESTMENT•

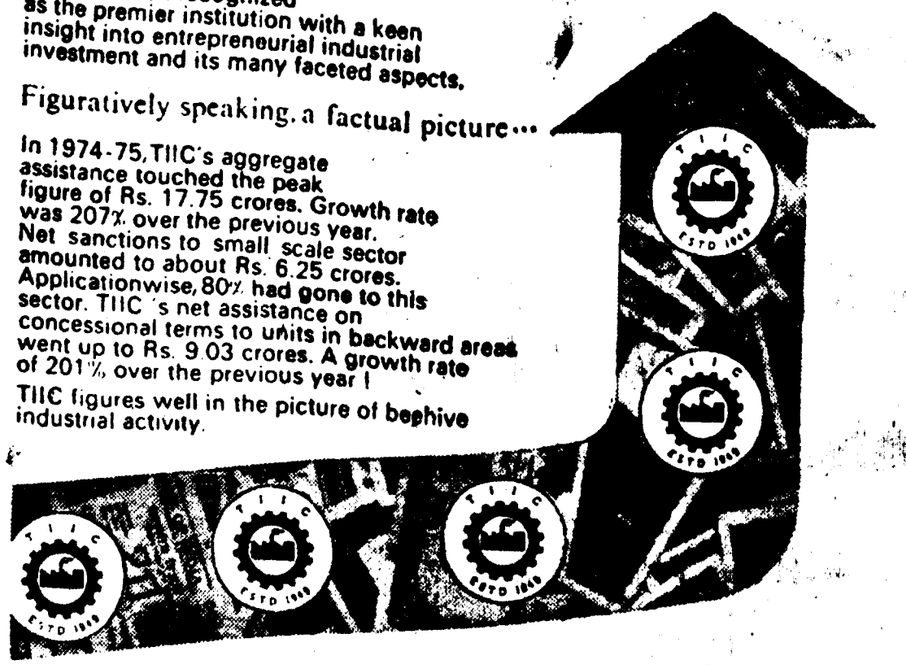
At the moment...

TIIC has been recognized as the premier institution with a keen insight into entrepreneurial industrial investment and its many faceted aspects.

Figuratively speaking, a factual picture...

In 1974-75, TIIC's aggregate assistance touched the peak figure of Rs. 17.75 crores. Growth rate was 207% over the previous year. Net sanctions to small scale sector amounted to about Rs. 6.25 crores. Applicationwise, 80% had gone to this sector. TIIC's net assistance on concessional terms to units in backward areas went up to Rs. 9.03 crores. A growth rate of 201% over the previous year!

TIIC figures well in the picture of beehive industrial activity.



THE TAMILNADU INDUSTRIAL INVESTMENT CORPORATION LIMITED
ARULMANAI
26, Whites Road, Madras-600 014.

Managing Director: S. N. PAI.

Branches at: Coimbatore, Madurai, Salem, Thanjavur, Tirunelveli and Vellore.

TIIC
THE FINANCIAL INSTITUTION WITH A HEART

Out of the 462 units assisted, 319 were new undertakings accounting for Rs 11.55 crores sanctioned. Again, out of those 319 units, 129 units are managed by qualified technocrats and 146 units by persons not formally qualified but with long experience in industry. The remaining 44 units are put up by persons with experience in trade who are entering the industrial field for the first time.

Management counselling Service to help Small Units Planned

Another aspect which deserves mention is the assistance to small-scale units. As could be observed, there has been a distinct shift in your Corporation's approach to development banking, and in the recent past, the greatest emphasis has been laid on assistance to small-scale industries. Our State has been a pace-setter in the development of small units. TIIC can be proud in claiming credit for having played a key-role in this sphere. Even here, 1974-75 has proved to be a record year when the T.I.I. Corporation sanctioned assistance totalling Rs 625 lakhs to 370-small-scale units. This should be compared with the performance of the Corporation for the entire period of 25 years since its inception up to March 1974, where the total sanctions were only Rs 787 lakhs to 397 units. As a proportion of the overall performance during 1974-75, assistance to small-scale industries formed 44% of the total amount and 80% applicationwise.

Viewed from yet another angle, the Corporation has played a significant role in the development of backward areas. Analysing on a geographical basis, Rs 903 lakhs—i.e more than one half of the total sanctions during 1974-75—were in respect of 180 units located in the backward areas in the State. In this effort to help development of backward areas in the State, your Corporation has been working in close liaison with other State institutions like SIPCOT, SIDCO etc, who have been helpful in developing infrastructural facilities in the less developed areas like the districts of Ramanathapuram, North Arcot, South Arcot, Madurai, Thanjavur etc. Each of these districts has had a fair share of the assistance offered by your Corporation.

Sanctions of foreign exchange assistance under the IDA Line of Credit also gained momentum during 1974-75 as will be apparent from the accounts and the Directors' Report.

The T.I.I.C. Directors have been keenly conscious of the need to further step up our activities and to extend the sphere of operations in such a manner as to render complete service to the entrepreneurial class. One of the gaps that has been observed is the problem of managerial assistance for certain industries, particularly in the small-scale sector. Instances have come to light where small-scale industries become sick units due to the lack of timely expert assistance for management decisions. With a view to assist our constituents the Corporation has been actively considering setting up of a Management Counselling Service, which would provide a continuous monitoring the performance of constituent units and assist them with timely expert help, particularly to the entrepreneurs in the small-scale sector.

By the same token, in order to expeditiously deal with a large inflow of applications, the organisational set-up of the Corporation has been increased and strengthened. During the year 75 new officers and staff members including Chartered Accountants, Cost Accountants and Engineers from various disciplines have been recruited. Great importance has been laid on training and a large number of our staff have undergone training in various institutions in different disciplines.

Looking back over the year which has concluded, the Chairman, Thiru R.V. Raman said he cannot but help feel that contrary to the popular view, the tempo of industrial advancement of the State has not slowed down. On the other hand, if we were to take the rate of inflow of applications as an index of industrial activity, one can only conclude that industrial development is on the increase rather than otherwise. Your Corporation can, therefore, rightly feel proud of having contributed its efforts to the industrialisation of the State."

NEW GEOLOGICAL RESOURCES GIVE COUNTRY TREMENDOUS BOOST FOR GROWTH

The substantial opportunities that our country has for generation of economic growth on an unprecedented scale are to be found in the many surveys that have been carried out on the natural resources this includes studies in depth of mineral and geological resources, land and water use, transportation and communication, water power and industrial products.

For example, a survey of Indian agriculture reveals 'Given better seeds, more fertilisers, and improved farming methods, India possesses sufficient land and water not only to feed the present population but also a population twice its size.

Rich strands of valuable timber, oil and petroleum, mining and mineral industry furnish an equally impressive evidence of undisclosed assets. Reserves of coal in India are estimated to exceed 50 billion tonnes and secondary coal 80 billion tonnes only a small portion has been exploited so far.

Our iron ores are estimated at 21,000 million tonnes, more than one-fourth of the total estimated reserves in the word—the largest deposit for any country. What is more, it is of the richest kind, more than 55% iron.

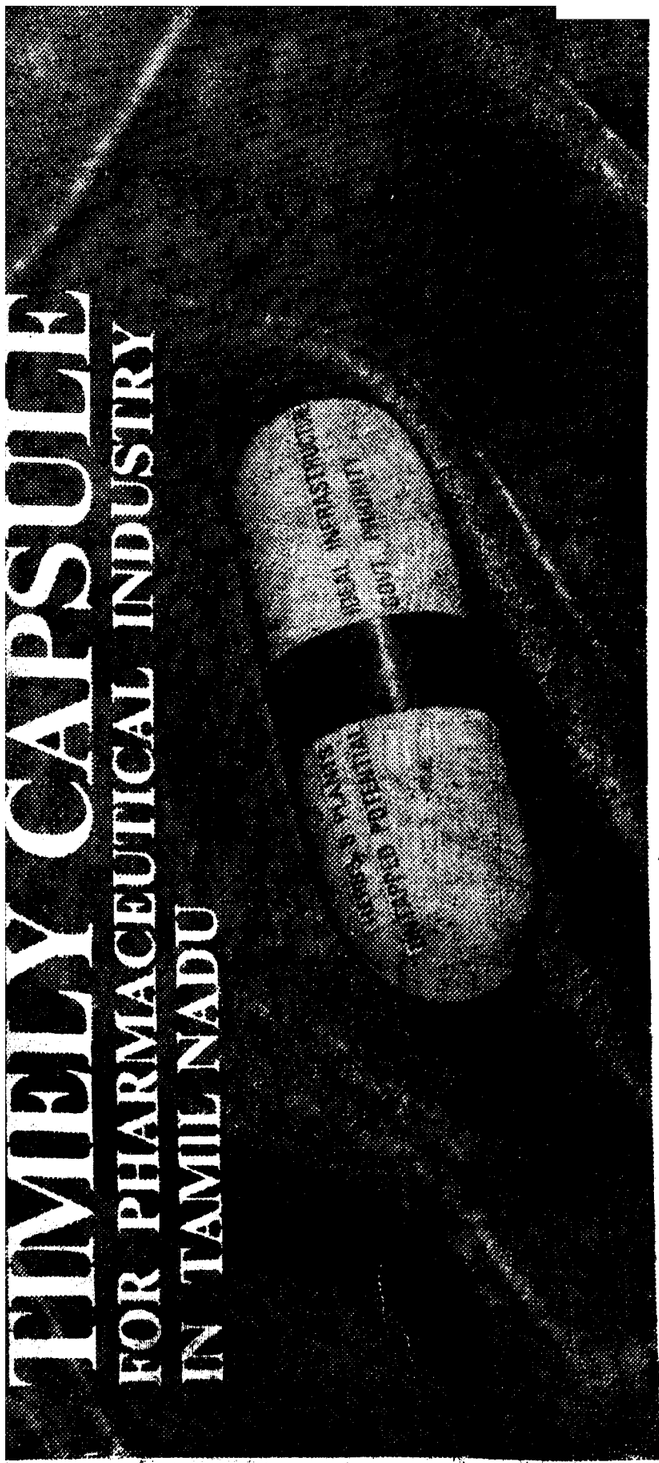
India ranks third in the world for manganese deposits more than 500 million tonnes.

India has more than 350 million tonnes of titanium; 70% to 80% of total world's mica output; and a high grade of bauxite.

More than 75% of our natural resources are either undiscovered or partially utilised. Hardly 5% of our water resources are developed and utilised. Nearly 66% of our total capital resources are estimated to be unproductive. We utilise less than a third of the hydro-electric energy. The list can be never ending. It is, therefore, quite clear—there are tremendous and relatively untouched opportunities for development of physical and natural resources and if properly harnessed, it can bring about social betterment, in creating consuming power, raising the standards of living and banishing poverty.

(From a talk over AIR, MADRAS by Thiru M. K. RAJU, Chairman, H.P.F.)

TIMELY CAPSULE
FOR PHARMACEUTICAL INDUSTRY
IN TAMIL NADU



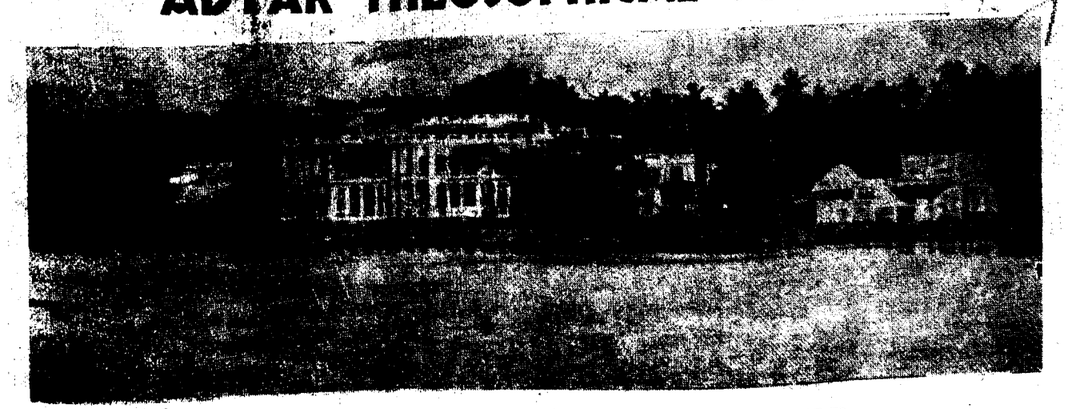
The total demand on drugs and pharmaceuticals in Tamil Nadu is about Rs. 15-20 crores per annum. The State's share in production is hardly 5%. Precisely why SIPCOT's today's emphasis is on the rapid development of pharmaceutical industry within the State.

For this specific purpose, a timely capsule! Down to earth assistance and incentives to pharmaceutical industry. With a package of facilities, SIPCOT invites entrepreneurs to come and set up pharmaceutical industrial units in Tamil Nadu to produce basic and intermediate pharmaceuticals.

SIPCOT
STATE INDUSTRIES PROMOTION CORPORATION OF TAMIL NADU LTD.,
11-A/1, Anna Salai, Madras-600 002.

ADYAR THEOSOPHICAL SOCIETY

37



ABODE OF UNIVERSAL BROTHERHOOD

The world-wide Theosophical Society is celebrating this year the centenary of its foundation. These celebrations are being held in sixty countries of the world where the Society works, and leaders of all communities, sections and faiths are participating in them. They commenced on November 17, 1974, with a meeting at the World Headquarters of the Society in Adyar, Madras, in which the Governor of Tamil Nadu, Thiru K.K. Shah, participated.

From November 14th to 20th, 1975, the Centenary World Congress will be held at New York, where the Society was established one hundred years ago by Madame H.P. Blavatsky, the famous Russian occultist and spiritual teacher, and her American colleague, Col. H.S. Olcott. Following this England will hold its celebrations, November 23-30, 1975. From December 20 to 30th, the Centenary World Convention of the Society will meet at Adyar.

Meanwhile, and through the year, the 1220 branches of the Society at the national, regional and local levels all over the world will be commemorating the Centenary with their own programmes, all of which have the object of bringing Theosophy, the Divine Wisdom, closer to the people.

IN INDIA

Adyar, in South Madras, at the confluence of the river of that name with the Bay of Bengal, a place of great beauty and great peace, has been World Headquarters of the Society since 1882. Of the sixty national sections of the Society, the Indian Section has the largest membership. There are over 500 branches of the Society in India at the city and town levels, and they are organised in 15 regional federations. The Madras Theosophical Federation Coordinates the work of 13 branches of the Society (called Lodges) in the City. The Tamil Theosophical Federation is similarly concerned with the work of 79 Lodges in Tamil Nadu, Karnataka, with 67 Lodges, has the highest number of Theosophists among the States of India. There are 23 branches in Kerala and 93 in Andhrapradesh.

OBJECTS OF THE SOCIETY

The three Objects of the Society are :

1. To form a nucleus of the Universal Brotherhood of Humanity, without distinction of race, creed, sex, caste or color.

2. To encourage the study of comparative religion, philosophy and science ; and

3. To investigate unexplained laws of Nature and the powers latent in man.

The Society has drawn the nations and peoples of the world closer to each other by its work for these three objects, and has been a strong factor for unity and harmony among mankind. Its members come from all religions—Hinduism, Zoroastrianism, Jainism, Hebraism, Buddhism, Christianity, Islam, Sikhism and other Faiths—and also include persons who may profess no religion but the service of mankind and of all life. Their bonds of union are their approval of the Society's three objects ; their wish to remove religious antagonism and to draw together men of goodwill, whatever their religious opinions ; and their desire to study religious truths and share the results of their studies with others.

FUNDAMENTAL TEACHINGS

Theosophy, the ancient wisdom, the divine wisdom, God—Wisdom, the Brahma Vidya of India, the Sophia of Greece, has been described as the common basis of all religions ; as a way to the direct knowledge of God ; as the wisdom arising from the study of the evolution of life and form ; as the art of Godcraft ; and in many other terms. Its three fundamental propositions were set out by Madame Blavatsky as follows in her monumental work, **The Secret Doctrine**, first published in 1888 and still the source book of modern Theosophy :

1. An Omnipresent, Eternal and Immortal Principle, on which all speculation is impossible, since it transcends the power of human conception and can only be dwarfed by any human expression or similitude ;

2. The Eternity of the Universe *in toto* as a boundless plane ; periodically "the playground of numberless Universes incessantly manifesting and disappearing."

3. The fundamental identity of all Souls with the Universal Over-Soul, the latter being itself an aspect of the Unknown Root ; and the obligatory pilgrimage of every Soul —a spark of the former—through the Cycle of Incarnation, or Necessity in accordance with Cyclic and Karmic Law, during the whole term

View of the wide spread hundred years old banyan tree in Adayar.

The truths of Theosophy have also been set forth in the simplest language in the following three tenets :

1. The soul of man is immortal, and its future is the future of a thing whose growth and splendour has no limit.

2. The principle which gives life dwells in us and without us, is undying and eternally beneficient, is not heard, or seen, or smelt, but is perceived by the man who desires perception.

3. Each man is his own absolute law-giver, the dispenser of glory or gloom to himself ; the decreer of his life, his reward, his punishment.

DEDICATED LEADERSHIP

The Theosophical Society has been blessed with a distinguished and dedicated lineage of leaders— H.P. Blavatsky, who made the initial presentation of the Wisdom in her books *Isis Unveiled* and THE SECRET DOCTRINE ; H.S. Olcott Co-Founder of the Society with Madame Blavatsky, gifted organiser and first International President of the Society, 1875/1907 ; Annie Besant, utterly dedicated servant of humanity, occultist, philosopher and one of the greatest orators of her times, second International President, 1907/1933 ; with her, her close colleague, the great/clairvoyant and occultist C.W. Leadbeater (1847/1934), whose researches in the inner worlds have revealed to humanity something of the fields of experience normally beyond the vision of most ; George S. Arundale, whose dynamic leadership enthused the membership during the difficult years of the second world war, third International President, 1934/1945 ; C. Jinarajadasa, who, in a lifetime completely devoted to the propagation of Theosophy, brought the light of the Wisdom to thousands of seekers, fourth International President, 1945/1953 ; N. Sri Ram, of deep wisdom and saintliness, matched by his humility, fifth International President, 1953/1973 ; and now John B.S. Coats, dynamic, devoted sixth International President 68 years young.

Mr. Coats is a great traveller who has visited practically all the sixty countries of the Theosophical World in his international lecturing tours, many of them a number of time, and has initimate knowledge of the Society and its membership.

He believes that "the great purpose of the Society, as it moves into the second century of its work, is still what it always has been— to work for the spreading of the philosophy of wholeness throughout the world, of which universal brotherhood is the univitable expression in daily life."

WORK FOR INDIA

It has been said that the Theosophical Society's circumference is world-wide, but its centre is in India, the home of the Maharishis, the land from which the wisdom of the spirit flows out to the world.

The Founders of the Society, Madame Blavatsky and Col. Olcott, were advised to move the Headquarters from New York to India by their Teachers, two members of the Brotherhood of Adepts (Perfected Men) who, Theosophy says, have completed Their human evolution but remain with humanity to help it in its onward progress. These are the Maharishis, the Masters, the great sages and Saints of all the religions, and Theosophy teaches that the way to Them is open even today to earnest seekers. The life to be lived and the discipline to be followed by such seekers is given in the book AT THE FEET OF THE MASTER, embodying teachings given by one of the Adepts to his disciple, and in other Theosophical books.

Theosophical leaders have helped India greatly in her cultural, educational, social and political renaissance. Madame Blavatsky and Col. Olcott contributed much to this renaissance by propagating the great value of Eastern teachings, by organising educational institutions such as the Olcott Memorial Schools, by awakening Indians to a sense of their great heritage. Col. Olcott organised the first Swadeshi exhibition to be held in India, in 1879. The Olcott Memorial Schools were probably the first educational institutions to be started in the country for the education of Harijan children. Between 1894 and 1906 five such institutions were established by Col. Olcott in the Madras region. Dr. Besant similarly worked for the Indian renaissance through the Central Hindu College.... Dr. Besant worked for it through the Central Hindu College and High School she founded and ran at Varanasi, through the many similar educational institutions she established or inspired, through her social reform work, and through her leadership of the Indian Home Rule Movement. She was President of the Indian National Congress at its 1918 Sessions, and her work was continued by her successors. An estimate of the contribution made by Theosophy to the restoration of a sense of Indian self respect after 200 years of British rule is made in the following words by Mr. Percival Spear in his book INDIA : A MODERN HISTORY :—

> The importance of Theosophy to India was that it was a movement led by Westerners which put things Indian on a level with things Western. It thus helped to bring the modern Indian into equal relations with the West, neither regarding himself as exclusive and superior to others, as did the old orthodox Brahmin, or inferior or behind the times, as the ordinary Westerner implied. The movement encouraged both self-respect and mutual respect,

INDIA AND THE THEOSOPHICAL SOCIETY

Indian Intelligentia made to realise its ego

* * *

Mrs. BESANT A FORE-RUNNER OF GANDHI AND NEHRU

By

THIRU SRIPRAKASA

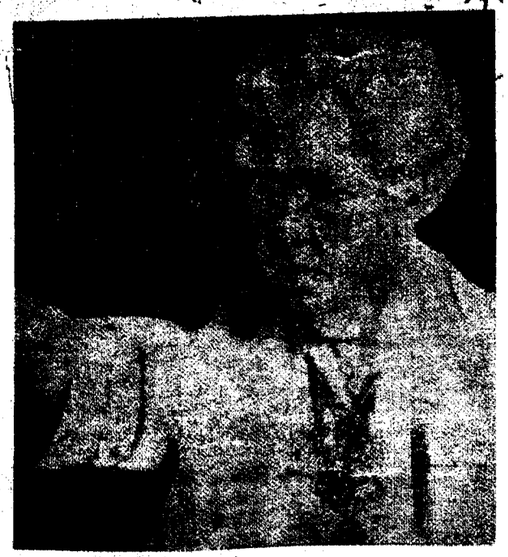
(Former Governor of Tamil Nadu)

In 1893, when Mrs. Besant came to India to start her work here for theosophy and the Theosophical Society, having been drawn to such work by Madame Blavatsky and later Col. Olcott, the founders of the Theosophical Society, we witnessed in India a strange and serious conflict. The country as a whole had come under the political domination of the British who were fast organising an elaborate and efficient system of administration, and were helping in the consolidation of the whole land as one large political unit. Western influences were also naturally fast coming into the country in their wake. English was being widely learnt : schools and colleges, dispensaries and hospitals were being opened at various places ; and the discoveries of science were being utilised for the starting of many institutions for the general well-being. Still, the main purpose of the rulers was the establishment of what may be called a "police State" where the maintenance of law and order was the primary consideration, and where the well-being of the people came only as a very distant second.

The consolidation of British power in India having been immediately by a period of great internal disturbance and of general insecurity of life and property when empires and kingdoms rose and fell, it would not be untrue to say that the strong rule of the British was eagerly welcomed, despite its being foreign, by the generality of the people of the land.

Many persons came seriously to think that nothing but a complete metamorphose of India, making her as near a copy as possible of the Western world, could save us. At the same time, great numbers of other folk who continued to live their own lives — glad only that they were reasonably secure — and uninfluenced by foreign teaching, felt strangely disturbed at the phenomenon that was taking away what appeared to be best in the land, to diverse lines of thought and activity that went counter to their own age-old notions of right and wrong ; and these people were inclined therefore to withdraw themselves into a shell in order to keep themselves at least unpolluted. As the British Government did not interfere with their lives in any way, they felt in duty bound to preserve their faith and custom in their own persons as best they could. **Mrs. Besant with her unparalleled powers of speech and with her new found idealisms given to her by theosophy, came like a storm on the Indian scene in the closing years of the nineteenth century, to stand, so to say, as a bridge between these two elements of Indian society that were getting more and more separated one from the other.**

Thus towards the close of the 19th century, when Mrs. Besant came to us, we find people taking great pains to study the English language with the utmost care, and make themselves familiar with all that goes with the word English.



Three Facets of Annie Besant's work in India

So we have to look at the Indian scene of the time of Mrs. Besant's coming in its three main facets : the political dominance of British ; the imitation by some classes of people, of what they regarded as western ways of life and thought, and which, they honestly felt, would not only be materially helpful to themselves, but also be conducive to the welfare of the country and the people at large ; and, finally, the feeling in other classes that there was nothing left in the world that was worth having, that they must withdraw themselves into a shell, adhere as best they could to the old ways, and live in the expectation of the day when the high Gods will come to Earth to put things right once again. **Mrs. Besant seems to have realised the gravity of the problems and to have set herself in her own way, to try to solve them at this crisis of our country's history in the midst of all the clashes and the conflicts of the time.**

There was, first of all, the political situation. Here she took full advantage of her white skin ; and being herself British -- and so in a way above suspicion — she went all out to show that there was no difference between the Indian and the English, and that they could and should live as brothers and fellow-workers in the land. Some Christian missionaries particularly

of the Salvation Army, had also done that ; but Mrs. Besant had additional advantage that she had come to learn and not to teach ; that she was not here to ask the people of the land to accept another faith, but to know their own better. She was also anxious that there should be better relations between the Indian and the English, so that all mutual bitterness might disappear, and mutual understanding may lead to mutual esteem, and perpetuate the relationship between the two countries as equal partners in a Commonwealth for the good of all mankind. While preaching, therefore, strict loyalty to the British Throne which stood as the dignified symbol of a common endeavour in all the lands owing allegiance to it, she gave no special place to the English people themselves, as members of the conquering race, or as persons in administrative authority over the people. **She vigorously fought for this equality inclucating friendliness and modesty among those who ruled, and dignity and self-respect among those who were ruled.**

Then she had to deal with persons who were going away entirelyfrom the old moorings under the influence of the new forces and ideologies that came in the land from the West. Here came into play her matchless eloquence. There was her deep, sincere, burning love for the people; and her gigantic brain enabled her to learn up all too quickly the ancient lore of the land — its philosophy, its religion, the basic ideals of its culture. She also quickly familiarised herself with the manners and customs of the people, so that she may be no stranger anywhere she went. Under the auspices of the Theosophical Society, she undertook continual tours in the land, travelling over and over again throughout the length and breadth of the country; delivering literally thousands of lectures depicting in vivid and beautiful language, the glory and the greatness of our ancient thought and those who propagated them. Her purpose was, it seems to me, to wean all those who, may be, due to their ignorance of the past, and unable to withstand the blinding light of the present, were most unwisely thinking that there was nothing good in themselves or other ancients ; and that they must imitate and imbibe all that was foreign in order to come into their own and save their land from further degradation.

When Mrs. Besant told them that India was the homeland of the invisible powers that rule the destinies of men and nations, that their ancient scriptures made them the teachers of the world — naturally persons who were drawn away from their old moorings, were induced to stop and to think, for these words came from a British person, well-known and highly respected in her own country, who had obviously no axe of her own to grind — in fact, everything to lose and nothing to gain — and who was there only to serve and help them and their country, and who was giving her all without asking for or even expecting anything in return. **She thus became a very great force at that time in crying halt to the process that was taking away the educated and therefore the most influential and powerful — classes of the people not only from the outward forms of ancient days, but actually making them disdainful of these and eagerly attracted by foreign ways which gave them no social position among the rulers, and cut them away from their own people.** This work she did with great success by her perfervid eloquence. Her lectures drew large audiences who went back the better for their listening to her unrivalled oratory accompanied by great knowledge and sympathetic understanding. **All this was part of her work for Theosophy in the service of which she had really come out to India. She was its greatest exponent in her time, and helped to organise and consolidate the Theosophical Society after its great founders, Madame Blavatsky and Colonel Olcott, had passed away.**

Then she had also to tackle that orthodox group which by withdrawing itself in disgust and despair, was helping to perpetuate many of the narrownesses that had overtaken India's thought and created many evils due to the struggles of many forces during the intervening centuries. These excrescences had to be removed ; but removed in a manner that should not cause any offence or hurt any feelings. Whatever was to be done, should be done in a way so as to give it the appearance of voluntary action and natural evolution. Any violence was bound to arouse opposition and only make matters worse. This very important and necessary work, Mrs. Besant did through the network of her schools and colleges that she founded at various places in the land, the most important being the Central Hindu College at Banares. Here her students were taught the literatures of the east and the west alike ; and while modern science was a part of their educational syllabus, the teaching of ancient religion, philosophy and ethics also formed an integral part thereof. She being a woman in whom the ideal and the real were equitably blended, who was alike a practical worker and a visionary, she introduced in her educational institutions various items of active social reform as well.

Her lectures on ancient Indian thought and philosophy on the one hand, and her schools and colleges which popularised education and social reform, on the other, to my mind, formed the bridge between the two sections of India's society that were drifting apart, one becoming what was dubbed as Anglicised and the other that was undoubtedly reactionary. She also forged a [illegible] practical bond between the English and Indian peoples by her European friends making common cause with the Indian people, and mixing most freely, in her educational and theosophical institutions, with their students and their colleagues, bringing out the good in both, and putting all on an equal basis of their common humanity.

Precursor of Gandhi :

I have ventured to say in the course of the above narrative, that in a way Mrs. Besant had taken up most of the items that were later elaborated — and no doubt independently thought of — by Mahatma Gandhi. The two personalities were so strong that it was really not possible for them to work together ; and each had to have the whole field to himself or herself if he or she were to do anything worthwhile. The parting therefore between Mahatma Gandhi and Mrs. Besant came fairly early.

The gulf between Gandhi and Mrs. Besant was wide. Mrs. Besant had made a careful study of the sacred books of the Hindus, and was always quoting chapter and verse as she delivered her great orations. Her personal life was by no means so simple as that of the Mahatma, and therefore could be better followed by those who came in contact with her. In a way she was more human, for she made allowances for the weaknesses of human nature and the failings of the flesh in others which Mahatmaji found it difficult to do. She also brought the minds of those who heard her, back to the scriptures as such, which Mahatmaji's teachings did not. Thus those who came in contact with the Mahatma, tried to be simple in their personal lives as best they could, and tried certainly to be moral in accordance with his teachings but they were not told — and so did not know — of the glories and achievements of our ancient heroes and preceptors. Curiously enough, Mahatmaji's heroes were of the western world, and he quoted Count Tolstoy, Cardinal Newman, and Jesus Christ oftener than the figures of the history and legend of his own land. No wonder, the Christian missionary was far more attracted by him than the Hindu pandit. The modern minded men and women of India came to him for comfort and guidance : and the masses of Indian peasants followed him because he looked so much like them despite his [illegible] and promised them freedom [illegible] want if they helped him in getting them freedom from foreign domination. **In the social and intellectual aspects of life, therefore, Mrs. Besant's influence was entirely different from that of Mahatma Gandhi. Moreover, Mrs. Besant's appeal was more to the middle class educated folk, while the Mahatma's was to the vast masses of the country: hers was to the head, while his was to the heart. That may account both for the differing methods adopted and the results that ensued.**

She helped in the continuation of the work that Col. Olcott, the President-Founder of the Theosophical Society, had started in Madras by establishing and helping in the establishment of what were then known as Panchama Schools, schools for the fifth caste, really the outcaste, she made no violent efforts to abolish caste. In this matter Mahatmaji's method was positively different. He had practically no personal contact at all with persons who represented the ancient lore such as Mrs. Besant had to some extent directly and to a great extent indirectly through her colleagues of the Theosophical Society and the Central Hindu College.

It may therefore be said that while the effect of Mrs. Besant's work was slow, indirect and evolutionary in its nature, the effect of Mahatmaji's activity was swift, direct and revolutionary. Both helped the same cause and worked for the same results which are before us to-day, and on which each of us is entitled to pass his own opinion in accordance with his own ideal and temperament.

Mrs. Besant has, in her Autobiography, described in vivid language her own coming into The Theosophical Society after her firstmeeting with Madame Blavatsky. Readers of that book will remember that she was given Madame Blavatsky's "Secret Doctrine" to review by the famous W. T. Stead. The study of the book changed her mind ; and believer ; and joined The Theosophical Society. That was in 1889.

Dr. Radhakrishnan

On Contribution of the Theosopical Movement to Indian Renaissance

Dr. S. Radhakrishnan, world famous philosopher and former President of India, has paid the following tribute to the Theosophical contribution to the Indian renaissance :

When, with all kinds of political failures and economic breakdowns we were suspecting the values and vitality of our culture, when everything round about us and secular educatiou happened to discredit the value of Indian culture, the Theosophical Movement rendered great service by vindicating those values and ideas. The influence of the Theosophical movement on general Indian society is incalculable.

The Besant Theosophical College Madanapalle

SHANTINIKETAN OF THE SOUTH

By

K. S. S. SESHAN
LECTURER IN HISTORY

AUDIENCES come surging to their feet as the strains of the Indian National Anthem waft down the air, but few people know that though the lyrics of the Anthem were written by Rabindranath Tagore as early as 1911, it was only eight years later that a tune was set to it since it was being sung to different melodies all over the country. It was at the Madanapalle Theosophical College where Tagore stayed for five days in 1919 that the now-familiar melody of "Janaganamana" was set by Mrs. Margaret Cousins, the wife of the College Principal Dr. J.H. Cousins.

The Nobel Laureate was very fatigued after his tour of South India, and on the advice of C.F. Andrews rested at the Madanapalle Theosophical College. He stayed in a small Cottage (called today as "Tagore Cottage") in the College Hostel premises From Feb, 25 to March 2, 1919. It was during his stay here that Tagore translated "Janaganamana" into English as "The Morning Song of India". The original copy of the translation penned in the poet's own beautiful hand and presented to the College was later bought by an American Art Collector for a fabulous amount. But the then Principal, Dr. J.H. Cousins saw to it that a photostat copy of the latter was preserved in the College library.

As for the music of the song which was later to be adopted as the Indian National Anthem, it was Mrs. Counsins who composed the musical notes for it and later, with the help of some college girls, sang it in the "Art Room" of the College in the presence of Tagore who was very much taken up with it. When Rabindranath Tagore left Madanapalle he is reported to have called the College "The Shantiniketan of the South".

Fruitful Service

This "Shantiniketan of the South" which nestles in Andhra Pradesh has today completed 60 useful years of service in the cause of education and is proudly celebrating its diamond jubilee this year. Madanapalle which has to its credit a long history of educational institutions is also well known as the birth place of 20th century thinker-philosopher Jiddu Krishnamurthy, one-time disciple of Dr. Annie Besant who founded the Besant Theosophical College.

Even before this College was started however Madanapalle saw a High School, established by the Local Board Authority in 1887. The very next year a "Congress High School" was started by Congress workers to joyously commemmorate the success of the Indian National Congress whose meeting was held in Madras that year. But Madanapalle turned out to be too small a town to contain two high schools which indulged in unhealthy competition, and so in 1891 Mr. J.N. Atkinson the sub-collector, amalgamated the two schools into the "Town Congress High School". But again in 1892 the school under-want a second change of name and became the "Madanapalle High School" with the further addition of the Mission High School which had been started the previous year by Christian Missionaries.

At about this time the Jignasa Lodge a branch of the Theosophical Society was started in town with Mr. O.L. Sharma, Manager of the High School at its president. The Headmaster Mr. R. Giri Rao who was himself an ardent Theosophist was awarded a certificate of merit by the Viceroy in recognition of his work as an educationist.

In 1910 Dr. Annie Besant herself paid a visit to Madanapalle since it was the birthplace of Jiddu Krishnamurthy and during her stay visited the school and exclaimed her appreciation of the good work being done there-it was a school where among other things, caning students as a punishment had been banned since 1896. At a public meeting held at the time Dr. Besant was urged to take over the school administration and she instructed the Theosophical Society to do so and entrust its management to "Krishna Vidyalaya" which was established by her in Jiddu Krishnamurthy's name.

The school underwent yet one more change of management when in 1913, it was taken over by the Theosophical Education Trust which was founded with Dr. Besant as its president. It was upgraded into a college and affiliated to the University of Madras in 1915 when on July 19, the Governor of Madras, Lord Pentland, formally opened it. It was the first ever college to be started in the Rayalaseema area. The College was fortunate in having a series of great educationlists of international repute such as Messrs. C.S. Trilokikar, M.U. Moorne, G. Pearce, B.R. Kumar Dr. J.H. Cousins and Dr. D. Gurumurthy and so on as its Principals.

The College became such an active centre during the freedom struggle that it was even disaffiliated from the University as a punitive measure for the resistance carried out by Dr. Besant and the college students. She started the Home Rule movement in 96 and the students and the staff of the College exhibited intense patriotic fervour when news of Dr. Besant's imprisonment in June 16, 1917 reached them. Undaunted by the disaffiliation, however Dr. Besant named the College "Wood National College" and got it affiliated to the National University which was then organised by the Society for the Promotion of National Education of which Rabindranath Tagore was the Chancellor. Its other constituent colleges were the National Women's College at Benaras, the National College at Hyderabad (Sind) and the College of Agriculture and Commerce at Madras.

Obstacles:

In its six decades of existence the College has undergone several vicissitudes. The strength of the College dwindled so much that in 1921 it was shifted to Madras where it was merged with the National College at Adyar. But with Dr. Besant and personalities like Sir. C.P. Ramaswamy Iyer working so hard for its revival the College was shifted back to Madanapalle two years later. A girls' hostel was made ready in 1928 and by then with the introduction at B.A. degree course, it had been raised to the first grade level.

THE 20-POINT PROGRAMME IN TAMIL NADU

The Tamil Arasu gives in this free supplement, excerpts from the speech of Chief Minister Dr. M. Karunanidhi, in the Tamil Nadu Legislative Assembly on 30—10—75 while defending his Government against the censure motion brought forward for failure to implement the 20-Point Programme propounded by the Prime Minister. The Censure Motion was defeated.

— EDITOR

More than twenty Members have expressed their opinion on the Censure Motion brought before this House by our good friend Mr. A. R. Marimuthu and seconded by the leader of the Communist Party of India, Mr. K.T.K. Thangamani. Mr. Marimuthu who tabled the Motion delivered his speech with great nobility, although it is a moot point whether the views he gave out could be acceptable to us or not. Mr. K. T. K. Thangamani too set out his views in a steadfast manner, whether they related to charges against this Government or whether they pertained to certain aspects of the attitude of the Central Government which he could not approve of.

The speeches of the Leader of the Organisation Congress, Mr. R. Ponnappa Nadar and the Leader of the Legislature Swatantra Party Mr. B. Venkataswami were touching and at the same time helped to underline facts, for they admitted that they had stood up only to swell the numerical requirement to enable tabling such a Motion ; expressing views contrary to the Motion, they explained they were adopting a neutral stand in the matter.

The Deputy Leader of the Anna D.M.K., Mr. G. R. Edmund utilised the intricacies of Law for the advantage of his arguments and his speech in support of the Motion was essentially that of a Lawyer.

On behalf of the Muslim League, the Forward Bloc and the Tamil Nadu Communist Party, which are in alliance with the ruling Party, the Leaders and Members who spoke here have explained in detail how the present Censure Motion is unnecessary.

The very basis of the Censure Motion is the charge that the D.M.K. has not implemented in Tamil Nadu the Twenty Point Programme announced by the Prime Minister in the wake of the proclamation of the Emergency. Before proceeding to list the 20 points of the Programme and before taking up for analysis whether or not this Government had commenced to implement those measures, I would like to give expression to certain views as a sort of preliminary exercise.

FIFTH PLAN HAS VANISHED!

The Fourth Five Year Plan for the Indian sub-continent was announced on behalf of the Central Government, the total outlay of the same being Rs. 25,000 crores. On the conclusion of the Fourth Five Year Plan, the draft of the Fifth Five Year Plan was prepared and the outlay for the same was announced after a session of the National Development Council in which the Chief Ministers of all the States in India participated. As I stated, the outlay of the Fourth Five Year Plan was Rs. 25,000 crores. As far as our State, Tamil Nadu, was concerned, the extent of Central Assistance in the course of the Five Years of the Fourth Plan was Rs. 200 crores.

Out of this Rs. 200 crores, we have to repay 70 per cent which is in the nature of Loan. The mode of repayment is that, when they make the allotment for the next year as Rs. 40 crores or Rs. 50 crores, they would deduct from that the instalment to be repaid and sanction only the balance. The amount given by the Central Government during the Five Years of the Fourth Five Year Plan — 70 per cent of which was Loan and 30 per cent was Grant — has been Rs. 200 crores approximately.

The Fifth Five Year Plan was styled as the biggest Plan of all and a gigantic Plan even ; and when it was announced that the outlay would be Rs. 53,000 crores, we were indeed overjoyed. The reason for our elation was that the investment was more than two-fold and so we felt that it would be possible to fulfil in entirety the needs of the State. The draft of this Rs. 53,000 crore Plan was discussed at a session of the National Development Council for two days.

Two years have elapsed since. But even after these two years, no one is able to say what exactly has become of that Fifth Five Year Plan!

The Five Year Plan has shrunk to mere One Year Plans and that is the manner in which allotment is being made to each of the States. What we have to consider is whether,

at this rate, we could at all achieve the target of Rs. 53,000 crores. The allotment under this Five Year Plan is only of the same proportion as was made annually to our State during the Fourth Plan. For example, the allotment for the year 1974-75 was Rs. 41 crores ; and for the year 1975-76, it is again Rs. 41 crores. If they make allotment for the remaining three years too on the same scale, the total receipts during the five-year-period would be only Rs. 200 crores. Thus the Fifth Five Year Plan is just like the Fourth Plan, and what they had announced has not actually materialised.

And so, what indeed has become of the Fifth Plan ? Even as this scene is in progress, the curtain falls, much in the manner to present the road-scene in stage-plays ! The announcement is made of a Twenty Point Programme. That is, the scene of the Fifth Five Year Plan vanishes and the Twenty Point Programme takes its place.

THE TWENTY POINTS

At a time when the State had been visualising that they would receive substantial allotment under the proposed Fifth Five Year Plan and thereby they could implement their own Plans for State development, this Twenty Point Programme has been announced after flinging to some remote corner a big Plan discussed in detail over two years back, and without providing any answer to the question as to what became of the Fifth Plan.

Earlier, in May 1967, they had proclaimed a Ten Point Programme at the All India Congress Committee. Our friend Mr. K. Suppu pointed out yesterday in the course of his speech here that only the contents of the Directive Principles of the Constitution are now taking shape as 20 Point Programme. What were the Ten Points of the 1967 Programme? They were : (1) Nationalisation of Banks ; (2) Nationalisation of Insurance ; (3) Abolition of Privy Purses to Princes ; (4) Rural Programme, Land Reform ; (5) Ceiling on Urban Property ; (6) Fulfilling the basic needs of the people ; (7) Restriction of Monopoly ; (8) Expansion of the Co-operative Sector ; (9) State take-over of the Foodgrains Trade ; and (10) Commodity-wise improvement in Exports and Imports. This was the Ten Point Programme.

Which of these Ten Points were fulfilled and which were embarked upon but given up afterwards?— this is something we should not forget. They had announced that Banks would be nationalised. But only 14 Banks were actually nationalised and not a step has been taken

urther. Insurance was nationalised and Privy Purses were abolished. The Rural Programme (Land Reform) is among the 20 Points announced now, as also the Ceiling on Urban Property. As for the next Point, namely, fulfilling of the basic needs of the people, this was stated in vague and general terms without specifying the needs referred to. The next item was the Restriction of Monopoly, but, for some reason, it does not find a place in the Twenty Point Programme. As regards the expansion of the Co-operative Sector, no-one can deny that in Tamil Nadu the Co-operative Sector had been expanded even before the time of announcement of the Ten Points and it has been still further expanded since. What they have done in the present Twenty Point Programme is to leave out the Co-operative Sector and add a new item in its place.

The ninth Point of the Ten Point Programme of 1967 was the State take-over of the Foodgrains Trade and accordingly, the Government took over the wheat trade. But within a few days, the Point was given up, as it was not found feasible. Next, the commodity-wise improvement in Exports and Imports —even this does not appear to have been done properly. Such has been the Ten Point Programme ; and now the Twenty Point Programme has been announced . When the erroneous charge is being set out that we are not implementing the Twenty Point Programme or that we are opposing it, any volume of evidence could be adduced to the effect that the D.M.K. had accorded its approval to the Ten Point Programme.

WHAT ARE THE 20 POINTS?

" What exactly are the Twenty Points ? Hon'ble Members who spoke here emphasised some five or six Points. What the Prime Minister announced over the All India Radio was that in the first place, the Government would undertake a series of steps to stimulate production, speed up procurement and streamline the distribution of essential commodities. Has the Government of Tamil Nadu paid attention to this or not ?

POINT—ONE

The Government has undertaken vigorous measures to step up production on the food front, in fulfilment of 20-Point Programme. In Tamil Nadu New rice varieties, ADT 31 and PUSA 33 were released this year, the former covering an area of 1.30 lakh acres and the latter, an area of 56,000 acres.

During the months of July, August and September '75, a quantity of 25,123 'N' tonnes of pool fertiliser was distributed against the normal supply of 20,520 'N' tonnes. Further distribution would be made for the Sambha and other crops ; and thus there is no scarcity of fertiliser. We are certainly keen on maximising production.

During the months of drought, this Government announced a subsidy to the extent of Rs. 1,000 for each oil-engine pumpset ; and under this special programme, as many as 12,200 pumpsets were supplied to the the farmers. So that the benefit of this scheme may reach out to 15,000 persons, we had set apart a sum of Rs. 1,50,00,000. The agriculturists are aware how this was a veritable boon to them at a time when they were severely afflicted by drought.

During the summer months of 1975, about 500 tonnes of hybrid cholam and maize seeds were supplied in the districts of Coimbatore, Tirunelveli, Madurai and a part of Salem. Consequent on these vigorous measures, the production of foodgrains is estimated to be as shown in the table below and this assessment is of course subject to Nature not letting us down as it did during the last year.

	1974-75	1975-76 (Anticipated)
	(In lakh tonnes)	
Rice	41.66	61.00
Cholam, Cumbu, Maize etc ..	7.74	17.00
Cotton	2.20 (lakh bales)	4.03

PUBLIC DISTRIBUTION SYSTEM

Speaker Sir, even when severe drought conditions prevailed in the State, we undertook efforts to provide some rice, although it could not be adequate, to 52 lakhs of families out of a total of 98 lakh families. We made arrangements for the supply of rice to these families through an extensive public distribution system comprising 9,926 retail points run by the Tamil Nadu Civil Supplies Corporation and the Co-operative and the Local Bodies. In urban areas, particularly in places such as Madras and Coimbatore, assured supply of rice to card-holders having income of Rs. 500 and above has been raised from 10 kilos to 20 kilos per month. Further, this scheme has been extended to Tiruchirappalli and Salem too. What all I have said so far is with reference to the first point of the Twenty Point Programme.

POINT—TWO

The second point of the Twenty Point Programme is this : 'The vast majority of our people live in the rural areas. We must implement Ceiling Laws and distribute surplus lands among the landless with redoubled zeal. We want the help of the local people in completing land records." Let us see now to what extent we have distributed surplus lands.

They have brought out a booklet titled "A HUNDRED NEW GAINS." This issue however is found to have been recorded in an incorrect manner therein. In regard to Tamil Nadu they have stated that 10 lakh acres of land have been distributed. No such distribution has taken place nor is it possible. When has this distribution taken place, according to them ? After the proclamation of the Emergency ! Is this a Maya Bazaar for such miracles to occur ? They have written that after the proclamation of the Emergency, all the States have intensified the Land Redistribution programme ; and that in Kerala, an extent of 1,30,000 hectares has been distributed. Even this could not be correct, as we could ascertain from the Government of Kerala.

Mr. P. Srinivasan : —The zero might have been printed by mistake.

Chief Minister : —If only numerals had been used in the text we might suspect that a zero has erroneously appeared in excess. What they have recorded actually in this booklet is the figure '10' (in numerals) followed by the word 'lakh'!

Mrs. T. N. Ananthanayaki :— It is only the Government of Tamil Nadu that has given this wrong information.

Chief Minister : —If we had supplied that wrong information, we might have capitalised on that error and boasted that we have distributed 10 lakh acres ! Thus, since that booklet titled "A HUNDRED NEW GAINS" contains certain items of incorrect information, I would not prefer to cite from that publication.

The Land Ceiling Act had been passed on 6th April 1960. From that date up to the year 1967, the extent of land notified as surplus in the State (during the seven years) was 24,194 acres. Out of the 24,194 acres declared surplus, the extent of land taken possession of was 16,330 acres. But no assignment was at all made to anyone. And since no assignment was made, not one person had derived benefit under the Act !

Since the year 1967, however, the total extent of land notified as surplus so far is 1,08,065 acres. Out of this the extent of land taken possession of is 88,146 acres and the extent assigned is 62,682 acres. The number of persons benefited by this is 38,504. Our own Land Ceiling Legislation reducing the Land Ceiling to 15 standard acres was brought on 15th February, 1970. **The All India Congress Committee (Ruling) has itself given a testimonial in this regard that it is Tamil Nadu and Tamil Nadu alone that is foremost in India in the matter of implementing Land Ceiling and Land Reform.**

Mr. K.T.K. Thangamani said that we have not yet lifted the exemptions granted to orchards and the like. If we take the total area of the orchards in Tamil Nadu, it is only 18,169 acres. In case we bring the orchards too under the Ceiling, it would affect production and exports to other States and other countries even. And it is for this reason that we have left out the orchards.

Indeed, how many are the exemptions annulled by us ? Exemptions were there for sugarcane lands and we repealed them. Similarly, exemptions were there for grazing lands and dairy-farming lands. We annulled those exemptions also. We stipulated a Ceiling for Public Trusts. This does not obtain in Kerala or in Andhra Pradesh. In those States no limit has been placed on the Public Trusts ; only the income therefrom should be spent for those very Trusts. But here we have laid down the extent of that Public Trusts land could keep and prescribed further that the income should be spent only for the same. Even this would apply only to those Trusts that were in existence on 1st March '72. We have made it very clear that new Trusts should not be brought into being for the purpose of getting round that Legislation. Under this Law, Public Trusts should not hold more than 40 standard acres for Colleges. High Schools should not have more than 20 standard acres, Elementary Schools not more than 10 standard acres, Students' Hostels not more than 25 standard acres, Technical Schools not more than 25 standard acres, and Agricultural Schools and Orphanages not more than 25 standard acres. The Ceiling fixed for other Trusts is 5 standard acres.

LAND RECORDS

Next, the Prime Minister has stated that records should be there and registrations made in respect of tenant cultivators and the like. This has also been carried out by us. Not after the date of the Prime Minister's announcement, but well

before that ! In the year 1969 itself this Government enacted the Tamil Nadu Agricultural Land Record of Tenancy Rights Act so that tenancy-rights may be recorded at village-level. So far 3,99,350 tenancies have been registered involving an extent of 6,03,899 acres.

Apart from this, a unique scheme intended to assist the landholders by giving them full particulars of their holding was introduced in 1972 itself (long before the Twenty Point Programme) by issue of patta pass-book. So far 1.04 crores of patta passbooks have been issued at a cost of Rs. one crore.

Among the 20 Points announced by the Prime Minister is one relating to the assigning of cultivable lands to the landless poor. From the year of Independence up to 1967, an extent of 2,88,000 acres had been assigned to 1,15,000 persons. But during the eight years after 1967, we have assigned 7,19,000 acres to 3,69,000 persons.

Mr. Marimuthu mentioned that benami transactions are taking place under the Land Ceiling. One or two took place of course but quite a few instances had occurred in those times. Even a relative of a very prominent Minister of that era (I do not desire to mention his name) possessed 282 ordinary acres, equivalent to 141 standard acres, on 6th April, 1960. But before 2nd October 1962 he sold off 135 standard acres out of the 141 standard acres and thereby he escaped from the Land Ceiling Law. Although the stipulation was there that no-one should cheat the Ceiling Law and effect any sale during that period of two years from 6th April 1960 to 2nd October 1962, this relative of the prominent Minister went ahead with the transaction, since he was of the view, " Money comes, Appa, why leave it ?" and since he was apprehensive of the Ceiling to come. He should have been proceeded against for this before 1967 itself, but nothing of that sort was done. Only after Anna came to power in 1967 — after the D.M.K. took over the Government in 1967 — was action initiated for that wrong-doing.

POINT—THREE

Chief Minister : We come to the Third Point now. " The programme of providing house-sites in rural areas will be vastly expanded. Laws will be introduced to confer ownership-rights on landless labourers, who have been in occupation of house-sites of the landlords over a certain period"—This is the announcement of the Prime Minister.

A recent survey prepared by the Government of India shows that, at the time of the announcement of the Twenty Point Programme, the Law concerning conferring ownership rights to agriculturists for their house-sites was satisfactory only in the States of Bihar, Gujarat, Jammu and Kashmir, Orissa and Tamil Nadu. Even in this, Tamil Nadu was the one and only State where the agriculturists and the agricultural labourers acquired ownership-rights on house-sites free of any charge, whereas in the other States the beneficiary had to pay for the cost of the house-site before obtaining full title.

We had enacted the Tamil Nadu Occupants of Kudiyiruppu (Conferment of Ownership) Act in the year 1971 itself. Not in 1975, after the announcement of the Twenty Point Programme over the All India Radio but in 1971 itself ! The total number of pattas granted under this Act is 1,75,000. Out of these, 1,02,404 persons belong to the Depressed Classes, 40,550 to the Backward Classes and 32,123 to other Classes. The expenditure incurred by the Government on this account is nearly Rs. 21,00,000.

Under the scheme to assign house-sites from Government lands, 63,770 persons had been given house site pattas in the course of the 20 years up to 1967, by the previous regime. During the past 8 years the beneficiaries under the scheme are 5,03,697 in number.

FREE HOUSES FOR HARIJANS AND FISHERMEN

Under the programme of the Government of Tamil Nadu for the acquisition of house-sites for Harijans, 2,36,000 Harijan families have benefited so far and the expenditure incurred on this account is Rs. 4.25 crores. Apart from this, as a Point not to be found in the Prime Minister's Programme, pucca houses are to be provided to 30,000 Harijans before the close of December this year, the cost per house being Rs. 4,000. This programme is nearing completion, the expenditure in this connection being Rs. 13.30 crores.

Likewise, a sum of Rs. 2 crores has been allotted for building 5,000 houses for the fisherfolk in the first stage and work in this regard is proceeding apace. This again, does, not find a place in the Prime Minister's Twenty Point Programme.

The Slum Clearance Programme was initiated here, in 1970-71 itself. On behalf of the State Housing Board 3,220 tenements were constructed for the rehabilitation of slum-dwellers and on behalf of the Slum Clearance Board, as many as 17,019 tenements have since been completed. The number of tenements in the process

of construction is 3,312. Thus at a cost of Rs. 17 crores more than 20,000 tenements have been constructed. This too is outside the Twenty Point Programme announced by the Prime Minister. You could chide us for initiating and implementing this when it is not found in the Prime Minister's 20 point Programme!

POINT—FOUR

The Prime Minister has announced : " We propose to take action by stages to liquidate rural indebtedness. While new schemes will be drawn up to devise alternative agencies to provide institutional credit to landless labourers, rural artisans and small and marginal farmers who own less than two hectares, there will be a moratorium on suits and execution of decrees for recovery of debts from subgroups. Debts from Co-operatives, Commercial Banks and Governments will be excluded from this Scheme."

We enacted the Tamil Nadu Debt Relief Act, 1972 in order to liquidate not only rural indebtedness but the indebtedness of those residing in the urban areas also. In the context of the recent drought, the Tamil Nadu Indebted Persons (Temporary Relief) Ordinance, 1975 was promulgated in January 1975. Under this measure, there is a moratorium for one year for the execution of suits and other legal proceedings for the recovery of debts. Although debt payments to Co-operative Societies and on Government loans do not come within the purview of this, Hon'ble Members should not forget that the same was sought on behalf of this Government and the facility was obtained for those in the rural areas that these debt payments too stand postponed for one year.

Under the Tamil Nadu Indebted Persons (Temporary Relief) Ordinance, 1975 promulgated in July 1975, Relief is provided to indebted persons who are non-agriculturists ; and no interest shall accrue in respect of debts for a period up to 15th January 1976. Thus it can be shown we had been implementing this in advance!

POINT—FIVE

" A review of the existing Legislation on minimum wages for Agricultural labourers will be undertaken and action will be initiated for suitable enhancement of minimum wages, wherever necessary." This is the Programme announced by the Prime Minister. In the year 1969, a Commission was set up under the Chairmanship of Mr. V. Karthikeyan, Member, Board of Revenue, to go into the question of minimum

wages for labour employed in Agriculture and ancillary occupations in Thanjavur District ; and we have implemented the Recommendations of that Commission. We convened a Tripartite Conference in which the Agriculturists and the Agricultural labour, the Unions and the Government participated and we arrived at a happy decision.

Now once again — after the proclamation of the Emergency and the announcement of the Prime Minister's Twenty Point Programme —we have set up another Committee under the Chairmanship of Mr. Srinivasan and this Committee is conducting its investigation. The Committee would study the position in the several districts.

In the meanwhile, it has been announced by the Central Government that equal wages should be paid to men and women. On that basis too the Committee would go into the matter and arrive at appropriate decisions in the near future for the fixation of wages for specific items of work, rather than for men-workers and women-workers as such. The Report of the Committee would be examined by the Government and the needful done.

POINT—SIX

The sixth announcement of the Prime Minister runs as follows : " Water and power hold the key to higher agricultural and industrial output. Steps are being taken to bring under irrigation at least another five million hectares of land."

Up to the year 1947— that is through the reign of the Chera, the Chola and the Pandya monarchs and later, the Britishers — the extent of land brought under irrigation in Tamil Nadu was about 44 lakh acres. In the course of the next 20 years — that is, after those ancient monarchs and the Ferringhees, right up to the close of the revered Mr. Bhaktavatsalam's reign —an additional eight lakhs of acres received irrigation facilities. During the subsequent eight years of the D.M.K. rule, a further 15 lakh acres have been brought under cultivation.

Not only that. The amount spent by the Government for new irrigation-projects after the year 1967 is Rs. 148 crores. At present, projects involving an outlay of Rs. 49 crores are under implementation. More than Rs. 62 crores worth of irrigation-schemes are pending clearance by the Government of India.

POINT—SEVEN

" Harnessing of present underground water-resources and undertaking of further surveys for irrigation and for the provision of

drinking water, especially in dought-prone areas"—these are important Schemes indeed and we welcome them whole-heartedly. The ground-water potential in Tamil Nadu is only 11.5 million acre feet, which is a mere 5 per cent of the All-India potential of 213.6 million acre feet. Even so, the number of energised irrigation wells in Tamil Nadu is 7,15,000 which is 30 per cent of the 24,35,000 energised irrigation wells in the whole of India.

Apart from this, on the subject of surveys of underground water resources referred to by the Prime Minister, water atlases are being prepared for each district in Tamil Nadu. So far, a sum of Rs. 7.5 crores has been spent on ground-water investigation. No assistance has been received from the Central Government for this effort.

Mention has been made of drinking water facilities. Since the year 1967, an expenditure of Rs. 14.15 crores has been incurred through Panchayat Unions for the purpose of supplying protected drinking water. 33,000 dug-wells and 4,444 overhead tanks have been constructed under this programme.

Under the Tamil Nadu Water and Drainage Board — (nowhere else in India is there such an organisation ; only in Tamil Nadu was it created in the year 1971 itself)— 7,736 schemes have been implemented since 1971, at a total expenditure of about Rs. 12 crores.

In the recent drought relief operations, the expenditure on drinking water supply alone outside the Plan was Rs. 3.52 crores. During 1975—76, the allotment for drinking water supply in drought-affected areas amounted to Rs. 7.10 crores in addition to normal Plan provisions.

Thus it would be seen that these schemes too were being implemented steadily by our Tamil Nadu Government, even before the announcement of the Twenty Point Programme.

POINT—EIGHT

The eighth Point in the Prime Minister's Programme is as follows : "Action is being taken to generate further 2,600 megawatts. Adequate funds are being provided to implement power-projects. For long-term needs, superthermal power stations under the Central Government are being planned. State Electricity Boards are being streamlined." This is a very important Point in the Prime Minister's announcement.

As far as Tamil Nadu is concerned, this Point is fraught with problems. The total outlay for our Tuticorin Thermal Plant is Rs. 120 crores. We have spent Rs. 5 crores in 1974—75 ; and the estimate for 1975—76 is Rs. 18.67 crores. An allotment of Rs. 10 crores has already been made in the State Plan and we have applied to the Centre for the balance of Rs. 8.67 crores. Only if an expenditure of Rs. 18.67 crores in 1975—76, Rs. 53 crores in 1976—77, Rs. 30.5 crores in 1977-78, Rs. 17.5 crores in 1978—79 and Rs. 4.5 crores in 1979—80 is incurred, would this scheme be in a position to be completed in 1979—80.

Out of the large sum of Rs. 250 crores announced by the Centre for power-generation, they have allotted a mere Rs. 1 crore to us after the release of the Twenty Point Programme and this meagre allotment too has been made only after repeated requests from us.

For how long indeed has the 2nd mine cut of Neyveli been doing penance ? Even when Mr. Kamaraj and Mr. Bhaktavatsalam were in power here, the demand had been raised for a second mine-cut. Had they started the work then itself, it would have been completed only now, for the task is of seven or eight years' duration. But the work has not even been commenced.

POINT—NINE

"The policy of reservation for handlooms is being rationalised to give greater protection to weavers." This problem, relating to handloom-weavers has been discussed on many occasions here in this august Assembly. When yarn-prices rulec very high in 1974, the Tamil Nadu Government organised supply of yarn valued at about Rs. 16.5 crores through the Co-optex and the Tamil Nadu Handloom Finance Corporation to the weavers, utilising the production from the 12 Cooperative Spinning Mills. Thereby the Tamil Nadu Government rendered what aid it could to the handloom weavers.

The Prime Minister has announced that certain varieties of cloth should be reserved for the handloom. This is not a new scheme by any means ; and the Prime Minister herself has acknowledged this with graciousness when she said : "Some of them are new ; others were set forth earlier but require to be pursued with greater vigour and determination." We have no difference on this point of view.

Even when Rajaji was in power here, our State pleaded for the reservation of certain varieties of cloth such as dhotis, saris and lungies for exclusive production in the handloom sector. After the

passage of so many years — when a memorial has come up for Rajaji and two Anniversaries have been observed after his demise — the Prime Minister has stated that there should be reservation for handloom!

In this very House, a Resolution was adopted unanimously in the year 1974, to the effect that certain varieties of cloth should be reserved for the handloom sector. That Resolution was also duly forwarded to the Central Government.

At least now they have come forward to do this. The Central Minister Mr. D.P. Chattopadhyaya too sought my views on reserving standard cloth for the Mill sector. I told him in categorical terms that if that were to be done, it would ruin both handloom and khadi. All this has been made clear to them by our Government in the course of our discussions with them, long before the proclamation of the Emergency and the announcement of the Twenty Point Programme.

The responsibility for carrying it out rests only with the Centre and certainly not with the State Government.

POINT—TEN

Ceiling on Urban Land : The Tenth Point in the Programme of the Prime Minister is this : " Legislation is being initiated to impose Ceilings on the ownership and possession of vacant land, to acquire excess land, to restrict the plinth-area of new dwelling units and to socialise urban and urbanisable land."

We are those who had welcomed the proposal for imposing a Ceiling on urban property, even at the time when the matter was mooted first.

We must examine the problems related to this Ceiling. Are we to restrict ownership and possession of vacant land in urban areas ? We should find an answer to this question. Should the proposed Ceiling be on the basis of houses already constructed ; or should it be on the basis of the property-value of the houses and the vacant plots ? When all these issues crop up, there is bound to be some confusion as to the manner in which the Ceiling Law is to be formulated. I feel it is because of all this that no decision in the matter has yet been reached by the Central Government. It is only with the object of being of assistance to them when they do take a decision, that the State Government has promulgated an Ordinance on the Urban Land Tax. We have given shape to the Ordinance after taking into consideration the views

of the Members of the Legislature, through the process of discussion.

Through this step we would now itself know the aggregate holding of each person and thereby we are working out ways and means for the Centre to bring Urban Land Ceiling. This has not been done in any State. It is only in Tamil Nadu that we are preparing the groundwork for the Centre to implement the Tenth Point of the Twenty Point Programme. It would soon be brought before this House.

POINT—ELEVEN

Hunt for Black Money

The next Point of the Prime Minister's Programme is the proposal to set up special squads to prevent the undervaluation of property and for the purpose of property valuation. Punishments would also be stern for those evading Income Tax.

In the year 1973 itself we adopted a Resolution in this Assembly and forwarded the same to the Centre.

Thus, as early as 1973, we had accorded our concurrence in advance, to this the eleventh Point of the present Twenty Point Programme. And so there is no hitch in regard to this either.

POINT—TWELVE

The next Point of the Programme relates to Schemes for workers participation in the Industries and for employee-participation in the equity-capital.

From March 1973 itself, we have been insisting on this measure being implemented, but we have not received concurrence from the Centre till date. All we got was a letter expressing appreciation of the Scheme. And now the Prime Minister has included the Point in her Programme.

The fact is that, if investment is made, workers do not have to bear liability in case of loss, but would receive share in profits. The only snag in this is that dividends should not be calculated after payment of Income Tax : on the other hand Income Tax should be paid after working out the dividend — only then would the workers get more. We addressed the Government of India to amend the Company Law and the Income Tax Act so that the guaranteed dividend payable on the shares to Employees may be treated as an admissible deductible item of business-expenditure so that it can be taken into account before arriving at the net taxable income.

Thus it would be clear that we had inaugurated this scheme in March 1973 itself.

POINT—THIRTEEN

"In order to help students from poor families, essential commodities will be supplied at controlled prices to all hostels and approved lodging houses"—this is the thirteenth Point in the Prime Minister's Programme.

There are 570 hostels for Harijans and the Scheduled Tribes, with a strength of 35,782. And there are 231 hostels for students of the Backward Classes with a strength of 16,332. Essential commodities are already being supplied to these hostels at controlled prices by the Civil Supplies Corporation. We have been doing this all the while and so it is not a Point that we would oppose!

POINT—FOURTEEN

The fourteenth Point of the Prime Minister's Programme is that textbooks and stationery should be available at reasonable prices to all School, College and University students. Price would be strictly controlled and Book Banks established.

Members on the other side should consider whether, even before the announcement of the Twenty Point Programme, the Tamil Nadu Government had not evolved arrangements for setting up the Tamil Nadu Textbook Society so that textbooks to all school-classes may be printed, published and supplied solely through the Government Sector and not through the Private Sector.

Such an organisation had already been set up; and that is why we asserted boldly that we had completed the implementation of that scheme.

Every year, we are giving textbooks free of cost to 18 lakhs of children in Standards I to III and the amount spent so far under this scheme is Rs. 85 lakhs.

The publication of textbooks has been nationalised in several States in India. Scanning the statistics, we find that the sale-price per page in Rajasthan is 1.08 Paise; in Gujarat it is 2 Paise and in Himachal Pradesh 4 Paise. In Tamil Nadu, however, it is only one Paise!

Let me point out that, in the whole of India, it is only in Tamil Nadu that textbooks are sold at the lowest prices.

POINT—FIFTEEN

The next point is to provide training to educated youth under the Apprenticeship Act.

When our Minister for Labour Mr. Rajaram announced some time back that, in the matter of utilisation of Apprentices' training places, the Tamil Nadu Government had surpassed the target and achieved a utilisation of 107 per cent. I myself was surprised. Only when I went through the figures could I see that 4,264 seats had been set apart in the Private Sector establishments and 2,123 on the State Sector establishments, the total being 6,387 places.

POINT—SIXTEEN

"The practice of bonded labour will be abolished," says the Prime Minister.

As far as Tamil Nadu is concerned, we affirm that the practice of bonded labour is not prevalent here. Even if it is said that the practice is there in one or two places, the Central Government has promulgated an Ordinance ending the same. If it were to rear its head anywhere, it would be eradicated. We have no objection to this Point.

POINT—SEVENTEEN

"Special legislation for confiscation of Smugglers' properties."

This legislation should be brought forward by the Centre. Therefore the Censure Motion must be moved there and not here, where it is out of place!

POINT—EIGHTEEN

"Liberalisation of investment-procedures and action against misuse of import-licences."

I happen to know that the C.P.I. entertains some differences of opinion regarding this. Yet this House is well aware that effort on this has to be undertaken by the Centre. And so, on this Point too, the Government of Tamil Nadu has no responsibility to shoulder.

POINT—NINETEEN

"National Permit Scheme for road transport."

We have already told them that as long as it is ensured that the rights of the State are not taken away, our Government would support the measure. They have said now something about 5,700 permits for lorry, of which 200 would be for Tamil Nadu. Nothing definite has, however, been communicated to

this Government. Nor do we know whether Ministers of that Department would meet and decide the issue. This Point is also one which the Centre has to undertake.

POINT—TWENTY

"Income Tax exemption limit, will be raised from Rs. 6,000 to Rs. 8,000 per annum"—This is the 20th Point. We have nothing to do in regard to this as it is entirely a Central affair.

And so, you gentlemen who have brought a Censure Motion saying that this Government has not implemented the Twenty Point Programme, should you not have left out at least four or five points and stated that fifteen of the Points have not been implemented? Without stopping to grasp what all come under the responsibility of the Centre and what all come under the responsibility of the State, to have brought this Censure Motion stating that the Government has not implemented the total of Twenty Points is anything but appropriate! Had you but cared to show the draft to me, I would have amended it suitably; but you did not adopt that course of action.

'MAINSTREAM' ON TWENTY POINTS

I had said at the outset that it is the earlier Ten Point Programme that has developed into the Twenty Point Programme. In this context, let me now quote from the journal **Mainstream** which is known to our friend Mr. K. T. K. Thangamani. Its Editor is Mr. Nikhil Chakravarthy who is believed to be a member of the C.P.I.—I presume this information is correct, for otherwise Mr. K. T. K. would have by now refuted it! The 13th Annual Number of that journal has come out; it carries a message of greetings from the President of India even; and quite a few of the Central Ministers have contributed articles to that issue. In the Editorial of that issue of **Mainstream**, Mr. Nikhil Chakravarthy, who is a member of the C.P.I., writes as follows about the Twenty Point Programme:

"On the programmatic plane there is noticeable advance. From mere passing of Party-level Resolutions promising Reforms (and in this respect too, one can of course claim progress from the Ten Points of 1967 to the Twenty Points of 1975) there is all-round exhortation by public leaders at different tiers of relevance, calling upon the flocks under their command to take up the implementation of the declared programme. From Resolutions to exhortations marks a perceptible advance in commitment!"

The Editor of **Mainstream** Mr. Nikhil Chakravarthy who is capable of this degree of sarcasm writes further about the Twenty Point Programme:

"(Central Finance Minister) Sri Subramaniam's plan for setting up Rural Banks with the World Bank funds but without taxing the rural rich, deserves the serious note of every patriotic Congressman. Those who think that the popularisation of the Twenty Point Programme is by itself a guarantee for socio-economic advance, tend to forget that the first Party to welcome it within a couple of hours of its announcement, as pragmatically realistic, was the Federation of India Chambers of Commerce and Industry, then already fortified by the Prime Minister's official assurance against further nationalisations!"

Thus has Mr. Nikhil Chakravarthy commented in **Mainstream**. From this alone could one understand the nature of reception accorded by the commoners to the Twenty Point Programme.

Only a Radio-Speech:

They have handed out the Twenty Point Programme without stating or coming forward to state the ways and means to raise the resources required for its implementation. As Mr. Manali Kandaswami (of the Tamil Nadu Communist Party) said, they in the Parliament conveyed praise to the Government for the announcement of the Twenty Point Programme, but did they pass any Resolution to the effect that necessary funds should be allocated for the Programme?

Or did the Centre invite all the Chief Ministers, convene a session of the National Development Council and ask, "In which of the the States are these Points to be implemented and in what manner? What has been done so far; what is yet to be done; and what is the quantum of the financial assistance required for the purpose?"

Not only that, it is the radio-speech that we have taken as the Twenty Point Programme and we are in raptures over it, saying, "Indeed, what a revolutionary Programme this!" What I ask is: "In the Programme that I read out now, which of the items is revolutionary?"

In the broadcast, Prime Minister Mrs. Indira Gandhi had also mentioned that there would be no further nationalisation of Industries. Why was this not tagged on as the 21st Point of the Programme? We have

picked out a few and we call those the Twenty Points !

Censure without Purpose :

Even after seeing for themselves that this Government had already commenced implementation of fourteen or fifteen Points of the Twenty Point Programme ; that it had implemented in full one of two of them ; that, during the last four-five years, it is implementing the Manu Needhi Scheme under which our Officers go to the villages and listen directly to the grievances of the people ; that in a trail-blazing endeavour, which surpasses the Twenty Points, it has started the Government Employees' Family Welfare Scheme under which as many as 2,200 families of Government Employees have been paid Rs. 10,000 each ; that it has undertaken a number of social welfare schemes such as Eye Camps, Rehabilitation of the Physically Handicapped, Rehabilitation of Widows, and Homes for Orphans ; and that, by way of demonstrating that we march along the Gandhian path, it has done what even Congressmen have failed to, namely, the enforcement of total Prohibition although it had been suspended for a while ; and that it has abolished Raffles altogether apart from putting a stop to horse-racing—even after seeing for themselves that this Government has thus gone ahead of Twenty Points, is there any meaning in their seeking to censure such a Government ?

In which other State is there a Water Board ? Is there a Slum Clearance Board in any other State ? Is there a Corporation for providing Housing to Harijans in any other State ? Asserting that the only plans are those set out in the A.I.R. Broadcast, to say that we are to be censured for not implementing them -- is there any meaning in this ?

TAMIL ARASU PRESS, GOVERNMENT ESTATE, MADRAS—600 002

UNITS–A GOOD INVESTMENT FOR COMMON MAN

The Unit Trust of India is being patronised by people from various walks of life. Ever since it commenced operation in July 1964 it has mobilised nearly Rs. 200 crores.

The initial capital of the trust of Rs. 5 crores was contributed by the Reserve Bank of India, L.I.C. State Bank of India and other financial institutions. With this capital, the trust has acquired interest in over 500 companies in India including many in the growth sector.

The Unit Trust pools the savings of the public and invests the funds on their behalf in productive corporate investments. It provides the common man the advantages of indirect ownership of shares and debentures of industrial concerns through the medium of the trust, and at the same time provides the unique advantages of safety of capital together with reasonable returns and ready liquidity. To operate directly in securities on the stock exchange requires constant study and analysis of market conditions and a thorough knowledge of the factors that influence share prices. This function is performed by the trust on behalf of the Unit holders to ensure safety of capital and a growing return through diversification of investments and a balanced portfolio.

Assistance to Industry

The trust provides financial assistance to industry through underwriting support to new capital issues and direct subscription to shares and debentures of industrial concerns. It also provides financial assistance to concerns in the form of bridging finance pending actual disbursal of funds by the term lending institutions in respect of loans sanctioned by them. Government's policy of reducing the non-residents' shareholdings of Foreign Companies has also opened a new avenue as the trust gets an opportunity to take up these shares.

DIVIDEND TO SHARE HOLDERS

The income from the various investments described above is distributed equitably among the unit holders after meeting the Trust's Managerial Expenses. A full year's dividend is paid to all unit holders irrespective of the date of purchase. The units can be bought by individual, residents as well as non-residents, companies, co-operative societies and trusts. A minor by himself cannot apply for units, either of his parents or his guardians can, however, purchase units on his behalf. The face value of a unit is Rs. 10 and units are sold in multiples of 10. A minimum of 10 units has to be purchased and there is no upper limit. The units are sold at the offices of the trust at Bombay, Calcutta, New Delhi and Madras and at most of the Banks and Post offices spread all over the country.

SALIENT FEATURES

Units can be sold back to the trust at any time at the ruling purchase price which, under the current policy of the trust, is increased from August 1, onwards to take account of nearness to the dividend declaration date, on the analogy of the equity shares of companies which also go up in price on a dividend basis as the dividend declaration date comes nearer. All that needs to be done is to complete the form on the reverse of the unit certificate and send it to the office of the trust from where it was issued. The money is sent by draft cheque, money order or cash as requested by the unit holder.

TAX REBATE

As an incentive to encourage savings, special tax concessions have been given by the Government. Unit holders are now entitled to exclusive tax exemption upto Rs. 2,000 per annum on income from units from income tax and upto Rs. 25,000 on their investment in units from wealth tax. Besides the re-investment plan, the children's gift plan and the unit-linked insurance plan all suit the requirements of the unit holders.

Socio-Economic Objective

The trust as a financial intermediary is serving the Socio-Economic objective of Government by providing the small investors an opportunity to indirectly own corporate securities and to assist the individual growth of the country through its investment operations. It has taken concrete steps to economic growth in the context of 20 point programme. The objective of regular and growing dividend has been fulfilled in that the trust has paid consistently from the very first year of its operations and has been able to raise the dividend from 6.1 per cent in 1964-65 to 8.6 per cent in 1974-75.

ADYAR LIBRARY AND RESEARCH CENTRE

The internationally well-known Adyar Library and Research Centre, which devotes itself to the study of Indology and the promotion of oriental learning, is one of the Dept.of the Theosophical Society. It was established in1886 byCol.Olcott to restore oriental studies and research to their proper place of importance as they had suffered greately by neglect. The Library has some 17,500 palmleaf and paper manuscripts from many countries and more than 1,50,000 books on religions, philosophy mysticism, occultism and spiritual life. It has published about 150 books on Indological subjects, and scholars from many overseas countries as well as India utilise it for research.

Child health and nutrition occupies a crucial place in the national development plan.

Various diet and nutrition surveys undertaken during the last 4 decades in the country have disclosed three main nutritional deficiencies : protein-calorie deficiency, ironfolate deficiency and vitamin-A deficiency, especially amongst pre-school children, pregnant women and nursing mothers in urban slums, tribal areas and other backward rural areas. There is close inter-dependence between the health and nutritional status and the level of socio-economic development of a community. Again, there is close inter-relationship between general socio-economic development and population trends. The Government policy is, therefore, to view health, nutrition and family welfare as one package of inputs, constituting an integral part of the overall development strategy.

At the Prime Minister's initiative, a large programme of supplementary nutrition for pre-school children, pregnant women and nursing mothers in urban slums and tribal areas was started in the year 1970-71. By the end of the Fourth Plan, this programme covered about 4 million beneficiaries in the country. The mid-day meals programme for school going children was continued and it covered about 1 2 million children by the end of the Fourth Plan. The applied nutrition programme for promoting nutrition awareness in rural area, encouraging local production and consumption of nutritious foods and spreading the knowledge through extension techniques like demonstration and training, covered 1181 blocks by the end of the Fourth Plan. Supporting programmes of production of processed foods, health and nutrition education, immunisation, and prophylaxis against nutritional anaemia as well as blindness due to vitamin-A deficiency have also been undertaken.

Article 47 of the Constitution enjoins the State to raise the level of nutrition and improve public health. On August 22, 1974, the Government of India adopted a National Policy for children, outlining a 15-point programme, allocating priority to child health and nutrition, education and training of destitute children, care of children of working and ailing mothers and the rehabilitation of handicapped children. Improvement in the nutritional status of the community is,

THE INTEGRATED CHILD DEVELOPMENT SCHEME

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SCOPE AND OPERATION OF SERVICE

in the long run, dependent on increased food production, economic uplift and health and nutrition awareness of the community. The large population of children and a high incidence of mortality, morbidity and malnutrition among children have been a continuous cause of concern. Several programmes of child health and nutrition have been taken up during the previous plans. The Fifth Plan lays its thrust on an integrated approach to the health, nutritional, educational and socialisation needs of children. An integrated child development services scheme has been started on an experimental basis from October 1975.

By
MADHU SUDAN DAYAL
Director, Child Welfare Division.

The integrated child development services scheme envisages an integrated delivery of the services of supplementary nutrition, immunisation, health check-up, referral services, non-formal pre-school education, and health and nutrition education to pre-school children, pregant women and nursing mothers. The scheme further envisages convergence of the mutually supporting services in the ICDS project areas such as drinking water supply, applied nurtrition programme, strengthening of health infrastructure, prophylaxis against nutritional anaemia and blindness due to vitamin-A deficiency, education and training in nutrition through mobile food and extension units, etc.

The ICDS scheme aims at an integrated delivery of the above-mentioned services through the focal point of an anganwadi in each village and strengthening of health infrastructure so as to provide one female health worker for every unit of 5000 population and coordination of all the mutually supporting services and their implementing departments at various levels. The scheme envisages that the anganwadis will be run by local institutions such as mahila mandals, local bodies etc. This will encourage participation of the community, especially parents, in the programme. The State social welfare advisory boards and the community development programmes can play an important role in promoting and organising voluntary organisations in villages. The success of the scheme will mainly depend upon the extent of involvement of the community and voluntary organisations in this scheme. If the scheme succeeds in making an appreciable impact on the health and nutritional status of children in the project areas, it can be expanded to other areas in a phased manner.

Various health and nutrition programmes are implemented under the direction of different ministries/departments at the Central and State levels. Coordination committees have been set-up at various levels. At the central level, a Central Coordination Committee on nutrition programmes has been set-up under the chairmanship of the secretary, department of social welfare. The nutrition monitoring cell in the National Institute of Nutrition, Hyderabad, reviews the nutrition situation from time to time and the nutrition cell in the Directorate General of Health Services, Delhi, provides technical assistance to the central ministries/departments implementing or directing various nutrition programmes. Similarly, the nutrition units in the States (these have been set up in 16 States and 6 UTs) provide technical support to the nutrition programems of the State departments. Nutrition education has been included by AIR in the SITE programme. NCERT has brought out literature to promote nutrition education of the community and has done considerable work in promotion of nutrition education through class rooms. The central coordination committee coordinates the various nutrition programmes such as the special nutrition programme for pre-school children, pregnant women and nursing mothers ; the mid-day meals programme for school-going children ; the applied nutrition programme for promoting nutrition awareness and encouraging local production and consumption of nutritious foods, production of processed nutritious foods, and nutrition education and research.

P. I. B.

THE INDIAN PARLIAMENT

VOICE OF THE PEOPLE

India became independent on August 15, 1947. The Constitution of Free India came into force on January 26, 1950. Republican and Federal in character, the Constitution provides broadly for a parliamentary form of government based on universal adult franchise and the accountability of the executive to the elected representative of the people. The Parliament represents all constitutionally organised shades of public opinion at the national level and occupies a pre-eminent and pivotal position in the constitutional set up of the country. It has over the years secured a unique place in the esteem and affections of the people as the forum through which they articulate and realise their aspirations and ventilate their grievances and difficulties. Among many great achievements of free India the successful working of the Parliamentary democracy is notable.

OUR HERITAGE

Democracy and democratic institutions are not new to this country. People had a long tradition of freedom and tolerance towards differing views, creeds and ways of life. Democratic institutions like popular assemblies, and elected monarchies had been in existence in our country as early as Vedic period (3000—1000 BC). In the later period of over 16 centuries (1000 BC to 600 AD) republican form of government flourished in many parts of the country. Popular assemblies like the Samiti (meeting together of people) and the Sabha, a smaller and selected body of elders, had been functioning more or less as the Parliament for disposing of public business by debate and discussion. Besides the Samiti and the Sabha, democracy at the grass roots had thrived in the country since centuries in the form of Gram Sabhas or village assemblies. These village republics survived the end of many dynasties and the downfall of empires. The country is rich in democratic traditions and the democratic temper of Indian people has enabled the adoption of parliamentary form of government in modern times.

The growth of parliamentary institution in the country had been chequered. In more modern times, the British introduced reforms as a step for establishing contact with public opinion. Under the Indian council Act of 1861, some important concessions were made by the British Improvements in the original Council Act of 1861 in subsequent years reflected themselves in the growing demand and the maturity of people of India for self-government in the parliamentary history of the country were the Indian Council Act of 1892. Minto-Morley Reforms Act, 1909 and the Montague-Chelmsford Reforms Act (The Government of India Act), 1919.

The first legislative assembly under the Government of India Act 1919 came into being at the Centre in 1921. The reforms establishing responsible government in the Provinces, did not introduce any element of responsibility at the Centre, but these proved totally inadequate to meet the popular demand for responsible government and national opinion gathered momentum for a fully sovereign Parliament and Government responsible to it. After a number of Round Table Conferences, held in London, the Government of India Bill was introduced providing for the establishing of federation of India, uniting the Governor Provinces of what was then known as British India and the Princely States then known as Indian States. The resulting enactment, the Government of India Act, 1935 also introduced Provincial Autonomy. The system could be described as a Parliamentary system of the "controlled type". Federal legislature, under the Act was bicameral and consisted of a Council of State and the Federal Assembly called the Central Legislative Assembly. Defence and External affairs were reserved subjects and were administered by the Governor-General while other subjects were administered with the help and advice of an executive Council responsible to the legislature. The experiment served as a training ground for parliamentary democracy in the country and familiarised Indian legislatures with various elements of the modern parliamentary procedure.

After the end of the Second World War, fresh negotiations with Indian National leaders were initiated by the then Labour Government in Britain and the British Government accepted India's right to decide her own destiny. Under the Cabinet Mission's plan of May 16, 1946 a Constituent Assembly of India was formed for framing the Constitution of the country. The Assembly, although constituted on the basis of indirect elections, was indeed a truly representative and a most impressive body consisting as it did of many of the foremost leaders of the country's freedom struggle, eminent jurists, constitutionalists and other distinguished men and women in the country's public life. With the partition of the country into India and Pakistan, the Constituent Assembly became a fully sovereign body. It also assumed full powers for the goverance of the country. Under the Indian Independence Act, 1947 the then existing Central legislature was abolished and the Constituent Assembly meant for framing Constitution was also asked to function as a dominion legislature. The functions of the Assembly as a Constitution making body and legislature were separated. The draft Constitution came into force on January 26, 1950. Under the provisions of the Constitution, the Constituent Assembly became the provisional Parliament of India and it acted as such, till the first General Elections were held in 1952 on the basis of adult franchise.

The Parliament today is bicameral consisting of the President and two Houses of Parliament known as the Council of States (Rajya Sabha) and the House of People (Lok Sabha). The strength of the Rajya Sabha is fixed at a maximum of 250 members, 12 of whom are nominated by the President for their special knowledge practical experience in the fields of literature, science, art and social service. The remaining seats are allocated to various States and Union Territories in proportion

to their population. The electorate of the Rajya Sabha consists of the members of the Legislative Assemblies of the States. The Rajya Sabha is not subjected to dissolution but one third of its members retire every second year.

The Lok Sabha is consfituted by direct election on the basis of adult franchise with maximum membership of 525. The elected strength is distributed among States in such a way that the ratio between the number of seats allotted to each State and the population of the State is practically the same for all States. Normal life of the Lok Sabha is five years. The period could be extended by Parliament by law, by proclamation of emergency, for a period not exceeding one year at a time and not exceeding, in any case, beyond a period of six months after the proclamation has ceased to operate.

The first Lok Sabha came into existence in May, 1952 following General Elections held in the country.

The first and the two succeeding Lok Sabhas (Second and Third) were dissolved after completing the full five years term. The fourth had a life of only about four years and was dissolved by the Presiddent on the advice of the Prime Minister on December 27, 1970. After the premature dissolution of the fourth Lok Sabha mid-term elections were held in March, 1971. These involved a total electorate of about 274 million as against 173 million in the first general election held in 1952. The Fifth Lok Sabha was constituted in March, 1971.

Like other Parliamentary democracies, Parliament in India has three cardinal functions—legislation check over the executives and ventilation of grievances. The Parliament can under certain circumstances assume legislative power over a subject falling within the State's sphere. It may legislate on matters included in the State list if the Rajya Sabha declares by a two-third majority that it is necessary and expedient in the national interest to do so. It also acquires power to make laws with respect to any of the matters enumerated in the State. List in times of emergency or breakdown of constitutional machinery in a State. The Constitution also vests in the Union Parliament, the constituent power or the power to amend the Constitution. The procedure for amendment envisages its being passed by a special majority and in certain cases, its ratification by State legislatures. The amendment of the Constitution, subject to these provisions, follow practically the same legislative process as any other legislation.

In conclusion, it may be said that democracy in India has not only struck deep roots in our country but the democratic process has shown both resilience and ingenuity in tackling the manifold challenges of building up a new society and a great nation.

The successful functioning of Parliamentary government and democratic institutions in India is not a mere coincidence because, over a quarter of a century since Independence, the country has passed through periods of stresses and strains and successfully overcome them. This is wholly due to the intrinsic soundness and vitality of the Indian experiment in democracy This has been proved time and again. For example, it was the basic strength of the Constitution and the stability of the democratic system in the country which made it possible for a smooth succession after the passing away of a great leader like Jawaharlal Nehru.

Again, it was the inherent strength of Indian democracy that enabled the country to withstand the critical days of the Chinese invasion in 1962 and the confrontation with Pakistan in 1965 and in 1971 which came in the wake of a staggering influx of about 10 million refugees from Bangladesh with all its serious and attendant consequences. Not only did the Indian people rise as one man to defend their freedom and future, but this amazing unity in purpose and action was achieved without sacrificing the democratic modes and freedoms enshrined in the Constitution. Even in the darkest days of the Chinest aggression, Parliament and the Press continued to function as vigorously as ever; there were no witch-hunts and no arbitrary infringements of individual freedom.

Considering the country's political stability and its achievements in the economic and social spheres, since Independence, it can be confidently claimed that parliamentary democracy has worked well in India, and has come to stay. Not so much because the system derives its authority from the Constitution but because it has been able to fulfil and continues to echo the aspirations of the people at large.

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MUSHROOMS

Scientific Notes, And Recipes For Delicacies

MUSHROOMS are a gift of nature and are included in a group known as Fungi. The members of this group differ from other plants mainly in that they cannot manufacture their own food with the help of carbon dioxide and water in the presence of sunlight., but grow on the decaying waste parts of plants or organic matter under the shade of trees. They are called saprophytes. There are about 50,000 known species of fungi, of which around 1,000 are edible ones. The most evolved ones of this group produce conspicuous fruiting bodies for reproduction. The word mushroom is used for these reproductive, fruiting bodies or sporophores. During rainy season mushrooms are seen growing in meadows, fields, lawns and dirty places. Mushrooms are often referred to as "toadstools" also.

Use of mushrooms as food has been known through centuries. According to old tales, the Romans and Greeks considered them as food for the gods. They used to prepare various dishes with mushrooms and eat them with great gusto on different festive occasions. However, among the mushrooms there are many varieties which are poisonous but similar in shape and size to edible ones. But now mushrooms can be grown artificially, and this removes all doubts and fears of finding a poisonous one among cultivated mushrooms.

High Protein Contents

Unlike other vegetables, mushrooms have no part which need be thrown away as waste. The whole mushroom is washed and used as food, the bigger ones may be cut into two or four pieces. Mushrooms contain almost double the quantity of minerals as compared to other vegetables. They offer a higher content of proteins, twice as much as knol-khol and potatoes, nearly four times as much as tomatoes and carrots, and about six times as such as oranges. Being devoid of starch, mushrooms are an excellent food for diabetic patients and for those who do not want to increase body weight. They can be digested easily. When cooked in milk as porridge, they are an ideal diet for invalids and convalescing patients.

Mushrooms are the source of a sufficient amount of vitamins also. The important ones found in them are vitamins B and D. Some enzymes are also available in them, particularly 'trypsin' which aids digestion. Apart from these, appreciable quantities of a few amino acids like lysine and tryptophan are also found in mushrooms.

Unlike other plants, mushrooms do not produce seeds for their cultivation. They are propagated through tiny spores which are produced in innumerable numbers on the ventral surface of the fruiting body (cap) between the gills. As soon as the spores get the suitable environment of temperature and humidity, they germinate and form a cottony mass called "mycelium". The mycelium growing in soil or the decaying leaves or twigs of plants is called spawn. This is used as "seed" for cultivation of mushrooms. When such a naturally growing mycelium is collected, it is called "virgin spawn". It was used in olden days for cultivation. Later, "brick spawn" and "flake spawn" were prepared by artificial means. But now, grain spawns and straw spawns are prepared scientifically in the laboratories under aseptic conditions.

In fact, a good spawn is the first pre-requisite for a good yield of mushrooms. Recently, a Mushroom Research Institute has been opened at Solan in Himachal Pradesh which is expected to produce 60,000 spawn bottles for the benefit of mushroom growers.

On account of their high nutritive value and subtle taste and aroma mushrooms are a popular food among all classes of people. Their meat-like flavour is a great attraction to both non-vegetarians and vegetarians, but some vegetarians in India may dislike them for this very reason. The use of mushrooms as food has been restricted mainly because a number of varieties are poisonous and cannot be easily differentiated from the non-Poisonous. But now, the known edible varieties can be conveniently grown artificially.

Mushrooms can be grown for profit and pleasure, in rotation with other agricultural crops, because of the possible use in the fields of spent manure obtained from mushroom cultivation. If the mushroom spawns of Volvariella and P. flabellatus are readily made available in the market, housewives can grow them easily on paddy straw in their kitchen gardens, just like other vegetables. For growing Agaricus (button mushrooms or champignon). it would be desirable to get spawned and cased trays (ready for yield of mushrooms).

by
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Delicious Dishes with Mushrooms

Mushrooms can be used in the preparation of various delicious dishes along with vegetables, cereal and dairy products and flesh foods so as to enhance and improve the flavour of the dish. Some simple recipes with mushrooms are given below :

1. Tomato soup :

Mushroom (sliced)		1 cup
Tomato	..	10 Nos.
Onion (big)	..	1 No.
Butter	..	3 teaspoon
Cornflour	..	2 teaspoon
Sugar	..	1 teaspoon
Pepper salt	..	to taste

Scale the tomato in boiling water, peel and extract the juice without seed. Melt butter in a pan and fry the mushroom for 10 minutes

Add the tomato juice and a cup of water and cook till mushroom is well cooked.

While the soup is boiling, tie the finely chopped onion and pepper powder in a white cloth loosely and put inside the soup.

Take the bag out when mushroom is cooked.

Make a paste of corn flour in small quantity of water and add to the soup and continue boiling for 3 minutes. Remove the soup from heat add the sugar and salt.

2. Omelette :

Mushroom	..	2 cups
Onion	..	4 Nos.
Green chillies	..	4 Nos.
Bengalgram flour	..	2 cups
Coriander leaves		
Curry leaves	..	little
Salt	..	to taste
Oil	..	to fry

Chop the mushroom and onion. Cut the green chillies and coriander leaves curry leaves to small pieces. Mix all the ingredients together and add sufficient water to give a thick slurry Fry as omelette.

3. Mushroom with Vermicelli :

Vermicelli	..	100 gm
Mushroom	..	150 gm
Cheese (grated)	..	1 cup
Milk	..	2 cups
Corn flour	..	4 tablespoons
Tomato sauce/ ketchup	..	5 tablespoons
Pepper Salt	..	to taste
Refined oil	..	3 tablespoons

Cut the mushroom to small pieces and boil in less of water till cooked. Drain the excess water and keep aside. (4 if canned mushroom is used, it can be used as such. In case of dehydrated mushroom it should be cut after softening in boiling water). Mix the corn flour in the excess water drained, to get a smooth paste. Heat the oil in pan and fry the vermicelli. (Try not to break the vermicelli as far as possible)

Grease a shallow baking dish. Arrange a thin layer of vermicelli. Arrange some mushroom pieces on the top of it and sprinkle some grated cheese, pepper powder and salt powder. Once again arrange a thin layer of vermicelli. Repeat this till all the vermicelli, mushroom and cheese are finished. Care should be taken to have a layer of vermicelli on the top. Boil the milk. Add the corn flour paste and continue cooking for 2 minutes. Pour over the contents arranged in the baking dish. Bake at 375°F for 15 minutes.

Spread the tomato sauce on top and serve hot.

4. Cutlet :

Mushroom	..	15 Nos.
Potato	..	3 Nos.
Onion (big)	..	3 Nos.
Green peas	..	1/2 cup.
Green chillie	..	3 Nos.
Ground coconut	..	1 tablespoon
Red chillie powder	..	1/2 teaspoon
Turmeric powder	..	1/2 teaspoon
Ginger (ground)	..	1/2 ,,
Coriander leaves	..	little
Salt	..	to taste
Bengal gram flour	..	1 cup
Oil	..	to fry

1. Chop the mushroom and boil it along with green peas in just enough water.

2. Boil the potato, peel and mash well.

3. Finely chop onion, green chillies and coriander leaves.

4. Mix all the above prepared item along with ground coconut, ginger, chillie powder, turmeric powders and salt.

5. Divide into balls and shape them.

6. Make a paste of bengalgram flour with water and add a dash of salt.

7. Dip the shaped cutlet into the flour to get a complete coating and fry in oil.

5. Fried Mushroom.

Mushroom	..	20 Nos.
Bengalgram flour	..	1 cup
Chillie powder	..	to taste
Salt	..	
Oil	..	to fry

Boil the mushroom in minimum amount of water for 10 minutes. Add required amount of chillie powder, salt and water to bengalgram flour to give a smooth paste.

Dip the mushroom individually into this paste and deep fry in oil.

6. Khorma:

Mushroom	..	1 cup
Onion (big)	..	3 Nos.
Green chillies	..	4 ,,
Coconut ground	..	3 tablespoons
Fennel		
Coriander seed	..	1/2 teaspoon
Poppy seed		each
Cloves	..	2 Nos.
Cinnamon	..	little
Cardamom	..	3 Nos.
All spice leaves	..	2 Nos.
Refined oil/ghee	..	3 tablespoons

Chop mushroom, onion and green chillies separately. Grind fennel, coriander seed and poppy seeds together. Heat oil and add onion, green chillies, cloves, cinnamon, cardomom and all spice leaves. When the onion turns golden brown add the ground coconut, fennel, coriander and poppy seeds.

Finally add the mushroom, cook for 10 minutes, then add required quantity of water and salt and cook until the mushroom is done.

7. Baked mushroom with cheese

Mushroom	..	20 Nos.
Bread crumbs	..	1/2 cup
Cheese (grated)	..	1/2 cup
Butter	..	3 tablespoons
Pepper, Salt	..	to taste

Grease the baking tray, and arrange the mushroom cut to halves. Sprinkle the bread crumbs, grated cheese, pepper and salt on the top. Finally sprinkle melted butter and bake at 400°F for 25 minutes.

8. Macaroni—Mushroom

Macaroni	..	1 cup
Mushroom	..	1 cup
Tomato	..	3 Nos.
Onion (big)	..	1 No.
Refined oil	..	3 teaspoons
Chillie powder	..	1/2 ,,
Turmeric powder	..	1/2 ,,
Salt	..	to taste

Boil macaroni in water for 20 minutes and drain the water. Chop the tomato, onion and mushroom separately.

Heat the oil and fry the onion till golden and add chillie and turmeric powder.

Add the mushroom and tomato and continue cooking without adding any water.

When mushroom is cooked add salt and macaroni and remove from heat after 3 minutes.

Recipes Written by :

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DETAILS OF SERVALAR POWER HOUSE

River Thambaraparani, known as Peyar in its upper reaches, has its origin at the high hill ranges separating Thambraparani and Manimuthar basins in the north and Kodayar basin in the south in the Tirunelveli District. The Papanasam power house now under operation harnesses flows from a total catchment area of 332 sq. km. (12' sq. m.) of the River Thambraparani and its main tributary Servalar. At present there is only one storage dam across the Thambraparani Ar there being no storage dam across Servalar which contributes nearly 40% of the total flows realised in Papanasam diversion weir (forebay for the Papanasam P.H.) The Servalar flows are wasted to a certain extent and are surplussed at the diversion wier. The Upper Thambraparani Hydro Electric Scheme which contemplates construction of a number of storage reservoirs with 6 power houses has been proposed towards avoiding this surplus to facilitate extra power generation in the Papanasam Power House and to stabilise irrigation supplies and also to harness the untapped power potential available in the Upper reaches of the Thambraparani and Servalar rivers. Of the six Power Houses, four are in Servalar Basin, one in the Thambaraparani basin and the sixth power house will harness the flows of Kallar and Karunaiar streams, tributaries of Ghatana Nadhi. The last in the series of the 4 Power Houses contemplated in the Servalar basin named as "Mundanthorai Unit" is proposed at the foot of the Servalar Dam located at about 6.4 kms. up stream of the confluence of Thambarapani Ar and Servalar. This will help to arrest the surplusses at the Diversion Weir and help to develop power potential from out of waters that were so far unutilised. In addition, this will also provide good storage so badly wanted by the P.W.D. who had themselves contemplated a storage dam across Servalar. In view of these specific advantages offered by this Unit and as the necessary hydrological data required are available readily, the Project Report on this Unit (Mundanthorai Unit) has been prepared independently.

The scheme envisages the construction of the following :

(i) A 51.21 m. high masonary dam across Servalar river to act as the main storage dam.

(ii) An unlined tunnel of length 3318 m. to interconnect the existing Thambaraparani reservoir with the Servalar reservoir.

(iii) Embedding a 4.88 m. dia power pipe in the Servalar reservoir to convey water from the dam to the power house located at the foot of the dam.

(iv) A Power House with a single generating unit of 20 MW capacity.

The power station will add 75 MV of energy annually to the grid. The scheme is estimated to cost Rs. 647 lakhs and is expected to fetch a net revenue of Rs. 65.54 lakhs per year. The scheme is expected to be completed by 1978-79.

A Panoramic view of Naduvattam H. E. S. Dam.

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What is Nellithorai Hydro-Electric Scheme ?

Under Kundah Hydro Electric Scheme Stages I to III, five Power Houses with a total installed capacity of 425 M.W. have so far been set up for generation of power, utilising the good flows of rivers Bhavani and its main tributary Kundah with the steep falls available upto Pillur Dam, this being the last dam built across Bhavani river. Under Kundah Hydro Electric Scheme—IV Stage which has been cleared by the Planning Commission and is being implemented, a third generating unit of 60 M.W. capacity and a second unit of 50 M.V. capacity will be installed at Kundah P.H. III and IV respectively, so as to generate more power especially for peaking purposes during)non-irrigation season. The total installed capacity with these additions will increase the installed capacity of Kundah Hydro Electric Project to 535 M.W. The last dam under the Kundah Hydro Electric Project is the Pillur dam on river Bhavani. From here the river runs in gentle cascades upto the point where it enters plains near Nellithurai village and the fall available below Pillur dam and this point is proposed to be harnessed for power generation.

This scheme called ' Nellithorai Hydro Electric Scheme ' due to its proximity to Nellithorai Village, is located down stream of Pillur dam in Reserve Forest area of Avinasi Taluk of Coimbatore District. The Scheme is approachable both from Pillur Dam and Mettupalayam, the nearest rail head.

The Scheme envisages utilisation of a nett inflow of 1613.13 mil. cub.m (average annual) from a total catchment area of 1307.05 sq. km. of rivers Bhavani, Kundah and adjoining Kallumaiduraipallam stream. The Scheme contemplates construction of

(i) a main storage dam across river Bhavani.

(ii) a diversion weir across the adjoining Kallumaiduripallam stream

(iii) a power house on the downstream toe of the main storage dam on the left flank.

The storage dam called ' Nellithorai dam ' is proposed with F.R.L. 356.6 m. and will back upto the tail race level of Kundah P.H. IV. This dam will command a gross storage of 27.9 mil. cu.m. A small weir will be built across ' Kallumaiduripallam ' an adjoining stream and the flows from this stream will be diverted to Nellithorai Reservoir by a sort flume of 195 m. long. The Nellithorai reservoir will act as forebay and waters from this reservoir will be drawn through a 6.1 m. diam. M.S. pipe (capable of discharging a peak discharge of 169.84 cu.mecs. embedded in dam masonry to a power house located at the toe of the dam in the left flank. The tail waters from the Power House will flow back into Bhavani River through a short tail race channel. The Power House is proposed with a single unit of 50 M.W. installed capacity.

Power generation at Nellithorai P.H. will mostly follow the pattern of discharges from Kundah P.H. IV. All the Kundah Power Houses will be operated as peakload stations especially during non-irrigation season when irrigation controlled stations will be either shut down or produce only meagre power.

The power House will be connected to the Tamilnadu Grid at suitable location with 230 KV transmission line.

The scheme is estimated to cost Rs. 1003.82 lakhs and is expected to yield a net return of Rs. 87.02 lakhs per year.

Turbine and generators of the V unit at Ennore.

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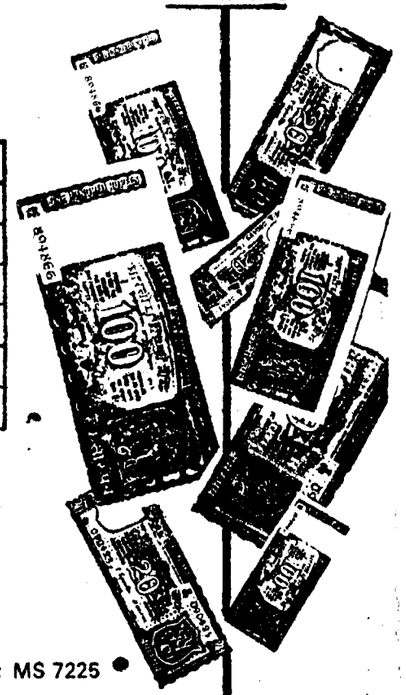

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A PROUD MOMENT FOR SAINIK SCHOOL

AMARAVATHI NAGAR

TAMIL NADU

Wg. Commander T. B. Srivastava, Principal, Sainik School receiving Defence Minister's Trophy.

The Sainik School of Tamil Nadu which is located at Amaravathi Nagar has bagged the Defence Minister's Trophy for the 2nd year in succession, by sending the largest number of Cadets to the National Defence Academy.

In order to provide facilities to every sector of the population in India to send up leadership material for India's Defence Forces, seventeen Sainik Schools were established in different parts of the country. Patterned on the famous public school system of England, these Sainik Schools are boarding schools which take in their pupils from VI Standard i.e. from the tender age of 9-10 onwards and after completion of High School finals these pupils are meant to sit for the entrance examination to the National Defence Academy. The grooming in these schools had been so good that the Sainik School products seem to find it easy to score in the entrance examinations or interviews for the more prestigious medical and engineering courses. "Slowly it was becoming evident that admissions to the Sainik Schools were being sought after by parents for their wards, with ambitions other than the Defence Academy. Thus the "Defence Minister's Tropy" came to be established for being awarded to the Sainik School which sent the maximum number of students to the Defence Academy each year, judged of course, only from among the Sainik Schools. So the Trophy is not to be belittled because it is being awarded for accomplishing what one is intended to viz., groom ing the young to fit into the Defence Academy. The Tamil Nadu Sainik School had won the Trophy this year by sending the largest number of cadets to the 53rd course of the National Defence Academy. On top of it, the school has the distinction of producing the top-scoring boy in the All India H.S.C. examination among all Sainik Schools for the last two years—*Ed.*

The year 1961 found independent democratic and socialistminded India giving birth to Sainik Schools with the declared aim of producing healthy and patriotic citizens who would be leaders in different walks of life. Even the children born in the lowliest of families, were to be given admission on the basis of merit, for which purpose a liberal scheme of scholarship was to be instituted on the basis of merit-cum-means, by the State/Central Governments. The policy was to have a Sainik School in each State to act as feeder institutions to the National Defence Academy and at present there are 17 Sainik Schools in the country.

Fourteen years of existence of these schools with glorious success, has amply proved the justification for which they were started. Already they have contributed about 1300 officers to the Indian Armed Forces within the nine or ten years they have been sending up pupils to take the National Defence Academy Entrance Examination. Three Service Officers deputed from the Armed Forces to work as the Principal, the Headmaster and the Registrar have the responsibility of managing the institution. These personnel serve as living examples to the Sainik School Students. Apart from the contribution to the National Defence Academy, these schools have also given as many or even more than the Army, a number of youngmen of high calibre with sound character having leadership qualities to the other public services of the country.

These schools have an all India character in as much as boys from different parts of the country come here to study, play and live together in the dormitories learning to sink all differences of caste, creed, language and religion and imbibe qualities of courage, team spirit, patriotism and above all to even cultivate a one-world outlook. Self-reliance is another quality taught from an early age to the pupils as they come to the school at a very tender age of 9/10. The school caters to the different tastes of the pupils through hobbies, clubs and associations; thus every child in the school gets an opportunity to develop his inner talents. Indoor and outdoor games and sports of all kinds at the same time give the child the much needed recreation and help it to have a healthy body and develop its physique, thus contributing to fulfilment of the aim of education—a sound mind in a sound body.

ANNUAL DAY FETE AT AMARAVATHI NAGAR

Sainik School, Amaravathinagar (Tamil Nadu) celebrated its Fourteenth Annual Day with great pomp and grandeur on 10th September, 1975. The Chief Guests on the occasion were Dr. V.R. Nedunchezhiyan, Minister for Education and Thiru S.J. Sadiq Pasha, the Minister for Electricity and Industries, Government of Tamil Nadu.

The day's programme started with an armed 'Guard of Honour' by the senior boys after the Chief Guests were garlanded on their arrival. They were then taken to the library by the Principal Wg. Cdr. TB Srivastava, where a beautifully illuminated model of the school campus was displayed. The coloured lights twinkled intermittantly as the water in the reservoir simmered and flowed into the canals. It was a beautiful sight to watch.

Later they went round the Exhibition arranged by different clubs and associations viz., Social Studies, Mathematics, Physics, Chemistry, Biology, Radio, Photography, Philately, Ship and Aero Modelling, Home Science, Art and Crafts. Both the Ministers evinced keen interest in the exhibits prepared by the students and commended their efforts.

Next they witnessed a swimming Demonstration by the pupils which commenced with a swimpast. Their performance, including different swimming strokes, life saving, diving and waterpolo was highly applauded by a large gathering of distinguished guests and parents.

The athletic events started at the school oval on the call of buglers from the top of the Fort, specially erected for the occasion. The marchpast of the athletes led by School Captain Narendra Kuar, commenced as a green signal carved a streak of trajectory in the sky. Thereafter the athletic events were conducted and the school report was read by the Principal. It high lighted the achievements of the school which had the dinstinction

By

Thiru B. Jayaprakasam,

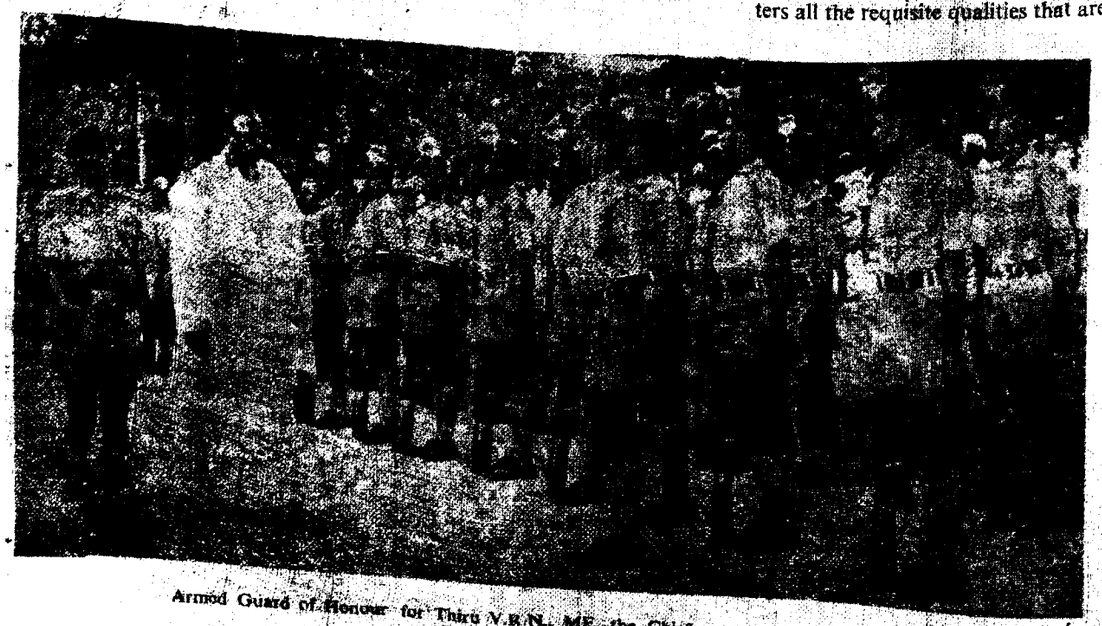
District Public Relations Officer,

COIMBATORE.

SAINIK SCHOOL, AN EXAMPLE OF NATIONAL INTEGRATION

of producing the first boy amongst all Sainik Schools of the country in the All India Higher Secondary Examination for two successive years. On the Principal's request, Thiru S.J. Sadiq Pasha gave away the prizes to the winners of various events.

Afterwards the Education Minister Dr. V.R. Nedunchezhiyan presented the 'Defence Minister's Trophy' which the school had won by sending the largest number of cadets to the 53rd Course of the National Defence Academy from among all Sainik Schools. It was a thrilling moment for the inmates of the School to have gained this honour. The Education Minister in his speech said "Sainik School, Amaravathinagar sets an example for the National integration, as students from various States of the country are studying here with cordial relationship. This school fosters all the requisite qualities that are



Armed Guard of Honour for Thiru V.R.N., M.E., the Chief guest at Amaravati Nagar

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Scientific talent and acquatic feats

essential to join the armed forces, in addition to the qualities like character-building, original thinking, discipline, physical training, dedication to purpose and patriotism. If all the 2800 High schools which are functioning in Tamil Nadu were to follow the footsteps of Amaravathinagar Saink School, I am sure that Tamilnadu will be developed in every field and people would be more prosperous."

The school band in their colourful uniform gave a fine display and finally sounded 'Retreat' on which the School Flag was lowered ceremoniously.

After a short interval for tea, the School Oval came to life again for the Torch Light Tattoo. The fort and arenas for the events were beautifully lit up as soon as the Chief Guests arrived and then, with a flash, all lights went out. The school band marched out of the Fort with lights gleaming on their caps. Their performance captivated the hearts of everyone present there.

The next items were demonstration of 'Bayonet Fight' by N.C.C. Cadets, P.T. Dance, Dumb-Bells, lezim by smaller boys followed by ground exercises, vaulting, horse work and flaming torch demonstration by Senior boys. The novelty of presenting these events in the night in floodlit arenas received thunderous ovation from the huge crowd present on the occasion. The function came to a close on a red light signal fired in the air and National Anthem played by the band.

THE EARTH WORMS OF RICE SOIL

SOME CONTROL MEASURES

Some species of earthworm are considered as a great nuisance because of their habit of castings on turf, lawns and gold greens and interestingly as early as 1947 earthworms were listed among pests of rice in the Philippines. During 1973 it was reported from Chennimalai area (Coimbatore District) that nearly 100 hectares of rice crop have been stunted badly due to reddish earthworms occurring in rice soil. The thin thread-like reddish worms measuring 5 to 7 cm long cast the earth at the base of seedlings soon after transplantation to a height of about 4 cm from the soil surface and produce a physical strangulation effect affecting tillering considerably. The worms are found in large numbers around the roots of rice plants. The poor stand of rice crop has been mainly attributed to the earthworm though it does not cause direct injury. The earthworms were identified as *Malabaria sp.* (*Ocnerodrilidae*: *Annelida*) through the kind courtesy of the Director, Zoological survey of India, Calcutta.

When the problem was brought to the notice of the Department of Entomology by the Farmers Training Centre, Coimbatore, in the earthworm infested rice field observational trials were laid out for controlling it by incorporating tobacco waste intlo the soil, by surface spray application of parathion 0.50% and fenthion 0.1% by impounding a thin film of water for two days and by incorporating into the soil endosulfan (Tnhiodan) 4% granule. It was seen that application of endosulfan 4% granule at 1 kg. a.i. /ha or (25 kg/ha) brought about appreciable control of the earthworm and the stand of the crop became normal.

SOURCE :

Dr. T. R. Subramaniam and
Dr. B. Vasantharaj David,
Department of Entomology,
Tamil Nadu Agricultural
University,
COIMABTORE-3.

CHEMICAL WEED CONTROL IN CUMBU

The farmers are aware that weeds compete with the standing crop in food and space and out grow the crop and produce loss to the farmer. Usually to eradicate weed, weeding and hand-hoeing is done. This involves labour and cost. The research study conducted at Tamil Nadu Agricultural University revealed that chemical weed control is more economical and advantageous than hand hoeing and weeding.

The researches conducted on direct sown HB 3. cumbu showed that pre-emergence application of atrazine at 0.375 kg active ingredient is highly effective and economical. The cost for chemical weeding works out to Rs. 56/- per hectare only whereas hand-hoeing and weeding costs Rs 60/- per hectare. The farmers are advised to take up the economical chemical weed control for controlling weeds of cumbu.

SOURCE: Department of Agronomy,
Agricultural College and
Research Institute,
COIMBATORE-3.

HEART ATTACK AND PSYCHOLOGICAL FACTORS

Until recently people who had suffered a heart attack were scratched off the list of active, able-bodied citizens. But now medical advances, especially those made in recent years, have injected a large dose of optimism into attitudes about such people. Everyone knows that the number of heart attack victims is steadily growing; and no one is surprised to hear of men and women who have weathered even three such attacks. Through the care of therapeutists, cardiologists, climatologists these people are gradually enabled to return to normal life and work. It has become clear, however, that the aid of psychologists and psychiatrists is also essential, for, a heart attack often affects a person's mental state no less than his heart.

It has been established that about fifty per cent of heart attack victims are prevented from returning to a normal life by psychological factors alone. Some are haunted by the constant fear that their heart is going to "burst" perhaps even in their sleep. They become afraid of the night and develop insomnia. Others withdraw into themselves, anxiously charting every heart beat and change in their condition. They turn into hypochondriacs, attaching great importance to every little detail and exaggerating any deviation from what they consider to be normal. Still others react in an opposite way. They pretend that their disease does not exist at all and try to carry on with their former way of life in every way.

Psychological Disturbances

All of these reactions reflect psychological disturbances and are especially dangerous because they do not exist in isolation. They are closely connected with the physiological functioning of the entire organism. Anxiety, fear and depression inevitably produce physiological and biochemical changes. Blood pressure rises, the heart beats faster, gets less rest, and becomes overburdened. As a result, the blood circulation of the heart, already disturbed by the disease, becomes still worse, aggravating the patient's condition. This is one of the problems being dealt with by a team of specialists at the Institute of Cardiology of the USSR Academy of Medical Sciences.

To speed the heart patients return to normal living the Institute's leading cardiologists keep them under observation, apply various methods to determine the kind and degree o psychological disruption caused by the disease, and prescribe treatment. In addition, the specialists try to and prescribe treatment. In addition, the specialists try to induce the patient to adopt a proper attitude towards his condition and treatment and help him develop certain new habits and patterns of living. There are some patients, for example, who refuse to believe that smoking is harmful—"I've been smoking all my life!"—and cannot part with cigarettes, which are now particularly dangerous for him. If he is not moved by statistics, they seat him in front of a cinema screen so that he can see with his own eyes what happens to the heart and blood vessels under the influence of tobacco, and how the organism benefits from fresh air and activity. The specialists also teach the patients auto-suggestion to relieve nervous tension and anxiety.

Other Problems

All this, of course, is confined to the hospital. But for many patients the critical stage comes after they are discharged. This is understandable: the constant attentive care of the doctors is behind them; they must go out into the world and look after themselves. Despite our advice and preparation, the patient is still beset by many problems. How much should he walk? How much weight may he put on? Will his condition worsen when he returns to work? Can he return to a normal sexual life? Besides, these complex problems, difficulties arise in daily life: how can he bear walk beside his wife while she struggles along under a heavy load of groceries? How should he conduct himself in a crowded bus or train?

Here, a person's mental state assumes great importance. Those who are usually referred to as "man with a strong character can successfully cope with numerous problems of this kind, whereas a self-conscious, inhibited person cannot. The latter must be treated in a special way, particularly by the people close to him. Relatives and friends should discard once and for all any home-grown, outmoded notions such as insisting that he be less active, spend more time in bed, and avoid as much as possible the turmoil of life and people in general.

Wife's Role

The wife's role is especially important. Unfortunately, she is most often moved in the wrong direction by compassion and pity. With the best of intentions she advises her husband not to do this, that or the other thing, thus turning him into a sort of living mannequin. Once a useful member of society, the head and mainstay of his family, he now feels himself an invalid and a burden. This state of affairs must be avoided at all costs. Along with the doctor, the wife must help return not only the patient's physical health, but also his self-confidence and mental balance. This is a fully realistic goal, and one that most of our patients have achieved. Many of them now lead an active life, even including sking, swimming, etc.

Once the patient is free of the mental stresses and resultant heart pains, he is rid of nagging fear and becomes increasingly conviced of the simple truth that with proper living habits he will live!

Naturally, such "proper living habits" differ a great deal from individual to individual. There is no blanket advice covering every recovering patient. There is one general rule that can be applied, however: the fear that follows a heart attack can be overcome, and success depends to a large extent on the patient himself and his near ones.

By
VADIM ZAITSEV
Institute of Cardiology USSR Academy of Medical Sciences

WHY PEOPLE FEAR SNAKES

WHEN THEY DO GOOD TO THE COMMUNITY ?

IMPORTANCE OF SNAKES

What we know about snakes is only one side of the coin ; that it is poisonous and harmful to human beings. The other side of the coin is completely obscured for the fear that we have developed for it. If we have close study with it we will understand the beneficial activities they perform to the community as a whole. Proper understanding of these creatures and their venom can be very useful to humanity and in many ways they help to compensate the losses caused by the loss of human lives by snake bites. The destruction of forests and expansion of urbanisation has already had the effects of bringing snakes out of their hiding and diminishing their number. We must remember at the same time that this loss of reptiles is a great loss to our community.

In the new emphasis on agricultural development and production, the problem of rat control is essential and it is here that the role of snakes shows its importance. Technical observation shows that snakes prefer rodents like rats as food. The vipers brought to research institutes like Haffkine are often seen vomitting a rat or two. The economic value of rattle snakes has been realised in America by reason of their destruction of small animals like rabbits, squirrels and gophers. These would otherwise have caused great destruction to agricultural fields and grazing areas. In fact many specialists caution that before any methods of rattle or other control are adopted except where safety of human life is paramount, consideration should be given to the economic aspect to find out whether depredations by rodents on agriculture are not greater than danger from the snakes themselves.

Importance of Rodent Control :

It is not realised that while the farmer is busy ploughing his fields during rains, it is the snakes who mainly control the rats. These rats do more material damage to food and health in our country than snakes. Dr. Kunhardt has estimated in 1919 that the damage caused by rats to the country in 20 years was about, Rs. 1,241 crores and that the probable " population of rats in India may be 8,000million".

As compared to the damage caused by other diseases and animals death inflicted by snakes or snake-bites is very much less.

Many people in India by custom avoid killing a snake, particularly a cobra. In fact in Kerala in many houses, a part of the compound is set apart for snake worship where the snake is supposed to come and take the offerings. Possibly the idea seems to have originated from the belief that destruction of rodents by snakes prevents damage to property thus preserving and adding to Lakshmi or wealth. Sometimes gardeners ask for snakes for their gardens to keep rats down.

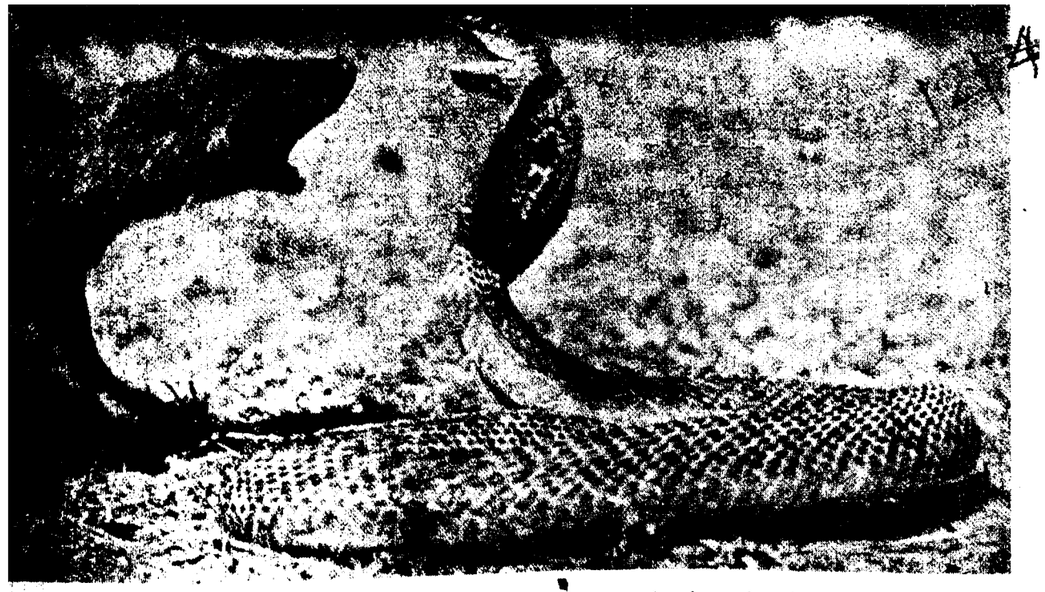
Snakes as Food :

During the last war, " chindwin " expedition survived on phython soup. Snakes, more especially pythons, are eaten as food in China and Burma. Some people in these areas consider it a delicacy. In fact now, even in America and certain Western counties, python steak is served as a special delicacy in many restaurants. Many wild tribes in Madhya Pradesh and NEFA areas also eat snakes. In certain Chinese areas even the gall-bladder is used for making wine and medicinal preparations. Some authorities consider that rattle snake meat can rank with other flesh for palatability, and many consider the meat definitely appetising. While frogs have been put for sale in India as food, snakes are yet to come. They are not yet accepted as a palatable food by most of the Indian community.

A rattle snake normally lays about 70 eggs. These are slightly bigger than the eggs of fowl and they have a softer covering and blunt ends. It has been reported that people in the wilder tribal areas eat snake eggs and like it but definite information is not available about it.

Snake Fat :

The use of snake fat for medicinal purposes is prevalent though not very common. Some Ayurvedic doctors try it for certain medicinal purposes. Experiments with this fat are being carried on for medicinal use as a substitute for other drugs. However, the use of snake oil has been practised from ancient times and was quite widespread. It was considered a well established remedy long before the rattle snake brought it to the attention of the Europeans and Americans.



The fight between a Cobra and a Mongoose is a rare but interesting sight.

Viper snake's oil was commonly recommended for some medicinal uses in India. Later in Europe rattle snake oil was substituted for it and was more favoured.

Among the many uses of the oil are " to absorb tumours or swellings ", " for relief to frozen limbs ", " for bruises, aches and sprains ". Some authorities have however doubts about the real utility of the oil. It appears necessary for this aspect to be further experiented and verified. However, Dr. Klauber who doubted some of the supposed virtues himself tried it as a pain reliever.

Snake skin :—

Snake skins are in demand for making many things like scarfs, belts, shoes and handbags. The skins are more in demand outside India and are not so much favoured here. On the other hand in India the cast-away exuvia (skin) of snakes which is cast regularly every few months, is in demand for various medicinal purposes. It is used in all parts of India though no systematic effort has been made to see whether its use for various ailments is really effective. In Western countries the products of snake skins are quite popular and the uses to which it is put are varied like belts, wallets, purses, handbags, comb-cases, cigarette cases and tobacco pouches. Even articles of sport such as sports jackets, caps, neck-ties are sometimes made of snake skins. Snake-skin covered shoes are considered attractive and are in demand. Sometimes lamp-shades, book-covers, knife-covers are also made from snake skins.

Antivenin :—

In India snake venom is in demand primarily for the manufacture of antivenin. This is mainly manufactured at present at the Haffkine Institute, Bombay and at Central Research Institute at Kasauli.

SNAKES are found all over the world, excepting the Arctic, New Zealand and Ireland. It is estimated that there are about 2,500 species of snakes in the world and they predominate in the warm climate and lush regions of the tropics. About 216 species of snakes are found in India of which only about 52 species are poisonous. The exact number of persons bitten by snakes in India is not known though it has been estimated that about 2,00,000 persons are annually bitten by snakes and about 15,000 succumb every year to snake-bites.

The use of snake venom in relieving pain and certain other muscular disabilities is becoming more common. Experiments are taking place regarding its use in various ways. **The injunction of cobra venom solution has given relief from pain in a large number of patients who are suffering from meural leprosy. The use of cobra venom is also being more and more recommended in chronic pains of nervous and muscular origin, arthritis and in inoperable malignant diseases. Its solutions have even been recommended in the treatment of epilepsy.**

American medical experiments show that cobra venom solution is useful in intractable pain due to cancer, neuritis, arthralgia, neuralgia, migraine and nerve leprosy. The consensus of medical opinion there appears to be favourable about the therapeutic uses of cobra venom. Toxicity of such preparations is not great and the chief point to be kept in mind is that dosage is determined for each patient separately. The main advantage of cobra venom therapy appears to be that it is not depressing for higher centres of the brain. It can also be substituted gradually for opium in cases of narcotic addiction to that drug.

The venom of Russell's viper can be used as a haemostatic agent on account of its coagulating principle. In cases of haemophilia and haemorrhages from other causes, graded intramuscular injections of this venom have been used with encouraging results in haemorrhages from the uterus and the retina. Its solution is frequently used by dentists to stop excessive bleeding. It is also used in a dilution as an intramuscular dose for the arrest of internal bleeding. It has been included in a standardised medicine against haemophilia.

In the homeopathic system of medicine, certain diseases like epilepsy asthma, neuralgia, neuritis, lumbago, sciaticatics, coccygodynia, laryngitis, pleurisy, debility, nerve exhausion and insomnia are considered to be curable by the venon of rattle snake. Even Krait venom is sometimes used for this purpose.

In the Ayurvedic system of medicine, cobra venom is often utilised in preparing certain Rasas considered to be a medicine for T.B.

Venoms of other snakes had also been regarded as of great medicinal value in India though it is the venom of the cobra wich is principally used.

There is popular belief in the medicinal utility and properties of the flesh as well as skin of certain snakes in most Eastern countries. The dried and powdered flesh of 'Tamool' (an inoffensive hill snake) and the Malayan 'Pamboo' have been popularly considered in that country as a remedy against leprosy. The exuvia of snakes powdered and mixed with oil of Dalbergia arborea, when applied outwardly, is considered to be of value in epilepsy. In the Unani system of medicine, the blood of snakes is also used in the treatment of leucoderma. In many parts of North India, a preparation of arsenic and dead cobra is applied externally for leucoderma and syphilitic rashes. The venom of snake also mixed in arsenic, opium and musk is sometimes used as a drug by some addicts and many considered it as a tonic. It is also used as an aphrodisiac and also prophylactic against some diseases. In popular belief, it is used as a hepatic stimulant in cholera collapse.

Enzymes :—

Venoms are a good source of enzymes. Neurotoxin has been separated from crude cobra venom. This caused the augmentation of the heart beat in toad's heart. Neurotoxin also paralyses the respiratory movements. Haemolysin which had been isolated from venom produces augmentation or depression in heart beats without causing cardiac failure. Cholinestrase isolated from the venom in high concentration slightly stimulates the heart of a toad but has practically little effect on blood pressure or on respiration in other animals like rabbits.

Extraction of a Cobra venom. The Snake is made to bite a plastic cloth tied tightly over a vine glass.

A number of other enzymes have been isolated from snake venom for important biochemical research. Some of them are hyaluronidase, ribonuclease, ophip-oxidase, phosphodiestrase, nucleotidase and lecithinase. They have already found their way in the many research projects.

It will be clear that snakes form an important and integral part in the natural structure of things in this world. No doubt there are many poisonous snakes but fatality from snake-bites is not so great as it is thought about in public nor are the majority of snakes poisonous. Moreover, there is a great deal of exaggerated fear of snake and its poison. As already indicated, the majority of snakes are non-poisonous but having no means of identifying them, bite by any snake generally so frightens the bitten patient that he is already half dead with fear. The psychological fear of snake-bite can be removed by some method by which poisonous and non-poisonous snakes can be distinctly identified.

Many normal precautions can be taken to prevent being bitten by snakes. It is first of all desirable for persons going about in areas where snakes possibly abound, to cover their legs properly with shoes. Keeping rats and frogs away from our houses also helps in keeping snakes out because rats and frogs attract snakes as they are their natural food. The keeping of peacocks in agricultural areas, the taming of mongoose and sometimes wherever possible attempts at keeping the bigger owls, falcons and kites in farms would to a great degree help in the reduction of snakes because peacocks attack and eat snakes and mongoose are natural enemies of snakes.

So also are birds like falcons and owls. One method of keeping rats away from houses would be to spray diluted carbolic acid around the houses. A concentrated solution of any insecticide or even phenyle kills a snake. Snakes can also be driven out from burrows and holes by smoke. In Rajasthan it is customary to put onion pieces in tents in the desert areas to keep snakes away though there is no definite evidence of the utility of this practice. It is possible that the pungent smell of the onions might have some effect.

If we take proper precautions and try to understand the distinction between venomous and non-venomous snakes, it will help us in utilising the majority of snake population for useful purpose for which nature has meant them.

Source : SNAKES OF INDIA
by
P. J. DEORAS.

Tamil Nadu Urban Land Tax Measure

NEW EXEMPTION LIMITS FIXED ON REPEAL OF ORDNANCE

The Tamil Nadu Government has decided to exempt the first two grounds from the Urban Land Tax where a person owns a total of five grounds of residential land or less in Madras and the towns of Madurai Coimbatore, Salem and Tiruchi. In case where the holding is more than five grounds, the entire extent will be liable to tax.

In the belt areas of Madras (falling within 16 km. of the City limits), the exemption is given to the first three grounds where the aggregate extent of residential land owned by a person is seven grounds or less. For holdings above this limit, the entire extent will be subject to the levy.

Bill to Replace Ordinance :

These are the important changes made in the Urban Land Tax (Amendment) Bill, introduced by the Revenue Minister, Mr. S. Madhavan, in the State Assembly to day to replace an Ordinance issued earlier.

The Ordinance, promulgated on July 30, sought to make the entire extent of holding liable to tax when it exceeds the exemption limit. It also made a distinction between lands used for residential purposes (including vacant lands) and those used for non-residential purposes, and introduced differential rates for the two categories. It withdrew the concession granted in the principal Act for owner-occupied buildings.

As for non-residential urban land, the Bill fixes the exemption limit at half a ground in Madras and the four towns and makes the entire extent of land liable to tax if the aggregate area exceeds it. In the belt areas of Madras, the exemption limit is fixed at one ground. (The Ordinance granted no exemption to this category).

The Bill fixes July 1, 1971, as the crucial date for the determination of market value of the land.

The following are the rates of tax applicable to Madras (other than belt area) Madurai, Coimbatore, Salem and Tircuhi.

Residential land (including vacant land) : Where the aggregate extent of land is two grounds or less-Nil ; where it exceeds two grounds but does not exceed five grounds—0.7 per cent of the market value on the extent in excess of two grounds which have the lowest market value; 10 grounds or less—one per cent of the market value on the whole extent ; 20 grounds or less—two per cent ; more than 20 grounds—2.5 per cent.

Non-residential land : Half a ground or less—Nil ; 2 grounds or less—0.5 percent on the whole extent ; 5 grounds or less—one per cent ; 10 grounds or less—1.5 per cent ; 20 grounds or less—2 per cent ; more than 20 grounds—2.5 per cent.

Belt Area:—

The following are the rates applicable to the Madras belt area :

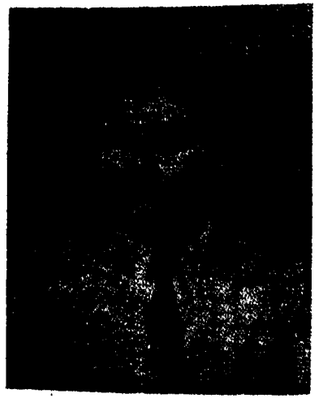
Residential land (including vacant land) : 3 grounds or less—Nil : 7 grounds or less—0.7 per cent on the extent in excess of 3 grounds which have the lowest market value ; 10 grounds or less—one per cent on the whole extent ; 20 grounds or less—2 per cent ; over 20 grounds—2.5 per cent.

Non - residential land ; one ground or less—Nil ; 2 grounds or less—0.5 per cent on the whole extent ; 7 grounds or less—one per cent ; 10 grounds or less—1.5 per cent ; 20 grounds or less—2 per cent ; over 20 grounds—2.5 per cent.

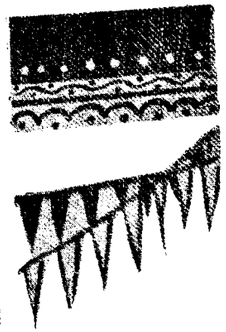
**

HONORARY PHYSICIAN TO PRESIDENT OF INDIA.

Appointment of Dr. KHADRI.



Dr. S. K. KHADRI the famous Unani Physician of our State, the Chief Medical Officer (Unani) Arignar Anna Govt. Hospital of Indian Medicine and the Project Officer, Central Council for Research in Indian Medicine and Homocopathy, New Delhi, has been appointed as the Honorary Physician to the President of India with effect from 7th, October 1975.



Week-long Children's Day Celebrations in Madras.

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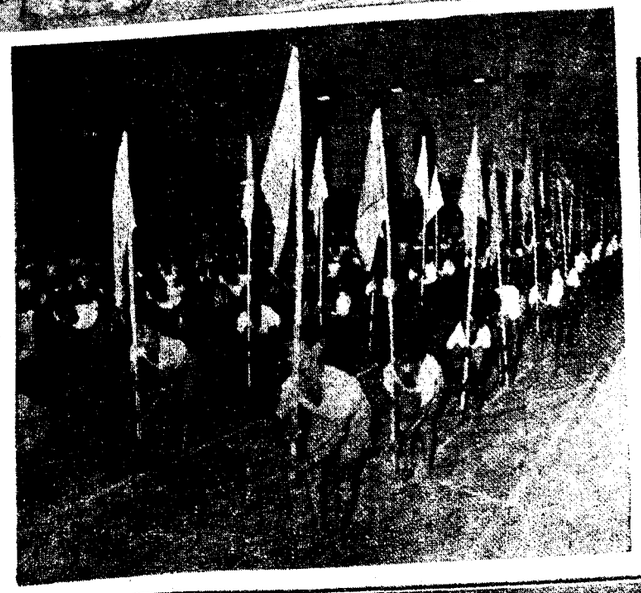


Below

On 21—10—75 the Annual Commemoration Parade of Tamil Nadu Police took place to honour all Police Personnel killed on duty.

LAYING OF PATHWAYS TO BURIAL GROUNDS USED BY HARIJAN COLONIES

Rs. 60 Lakhs Scheme To benefit 6,784 Colonies Sanctioned

In order to provide in a phased manner, pathways leading to burial/cremation grounds for needy villages or hamlets in all the districts of the State, particularly in respect of those used by Harijans, the Government have, in the first sanctioned Rs. 30 lakhs this year. It has been estimated that the State needs 12,425 Kilometers to 20,663 Kilometers of such roads to be formed at a cost of Rs. 310/- lakhs, if all the communities in the villages are to be benefited. In respect of burial/cremation, grounds used by Harijans, it will be sufficient to form 5,790 Kilometers of roads benefiting 9950 Harijan Colonies at an estimated cost of Rs. 115/- lakhs. Out of this, 3166 Harijan Colonies can be provided with this facility by the formation of roads to a length of 1827 Kilometers at an estimated cost of Rs. 55 lakhs, after acquiring lands for the purpose. For the remaining 6784 Harijan Colonies, roads to a length of 3963 Kilometers can be formed at an estimated cost of Rs. 60.00 lakhs without resort to land acquisition.

In the first instance the Government have sanctioned the creation of roads to burial grounds which do not need any land acquisition i.e. 3963 kilometers to 6784 Harijan Colonies at a cost of Rs. 60 lakhs. The expenditure for this year will be limited to Rs. 30 lakhs. The district-wise break-up of the roads to be formed is given in the following statements. It is expected that after formation, the roads will be maintained by the respective Panchayat Unions.

Sl. No.	Name of District	Works not involving Land Acquisition			
		No. of works	No. of Harijan Colonies benefited	Length in Kilometre	Cost in lakhs
1.	Chingleput ..	818	818	416.30	6.25
2.	North Arcot ..	740	740	324.50	4.87
3.	South Arcot ..	1,047	1,047	458.65	6.88
4.	Thanjavur ..	924	924	690.20	10.35
5.	Pudukkottai ..	88	88	34.60	0.52
6.	Trichy ..	495	495	329.29	4.94
7.	Madurai ..	523	523	271.60	4.07
8.	Ramanathapuram ..	1,253	1,253	733.20	11.00
9.	Tirunelveli ..	269	269	158.00	2.37
10.	Coimbatore ..	165	165	136.60	2.05
11.	Dharmapuri ..	82	82	64.90	0.97
12.	Salem ..	324	324	325.10	4.88
13.	Nilgiris ..	8	8	6.40	0.10
14.	Kanyakumari ..	48	48	13.50	0.20
		6,784	6,784	3,962.84	59.45 (or 60 lakhs

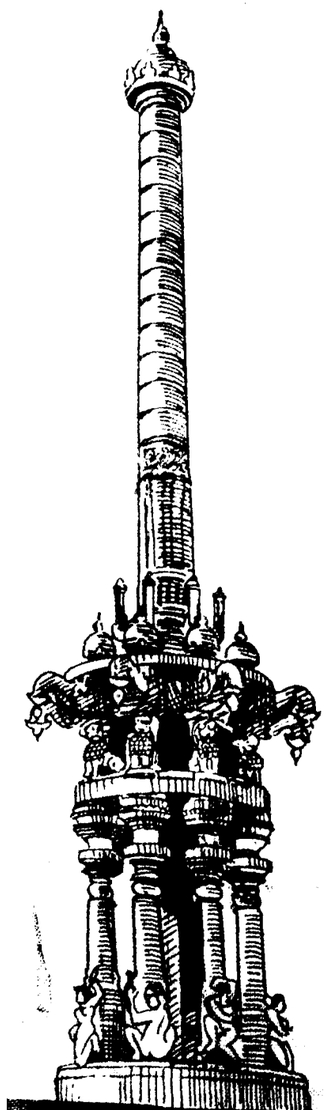
pid Green
volution
Legal
Distribution
of Land to
the Poor
Slum
Clearance
Welfare of
Backward
Classes
Free Education
up to P.U.C.
CAN YOU NOT
HELP THE
STATE
Despite these Achievements
Rising Population Raises Problems
SURELY YOU CAN
PLAN YOUR FAMILY

Regd. No. M. 8676-A

VISIT

THE ART GALLERY AT

POOMPUHAR



- Where the stones tell a tale and recapture scenes from *Silappathikaram*, the ancient Tamil classic;
- Where a city sunk beneath the wave comes glowingly alive!
- A feast for the eyes — and food as well for thought — that's what you get at Poompuhar.
- The *piece de resistance* is the exquisitely carved statue of Madhavi, the temple courtesan.

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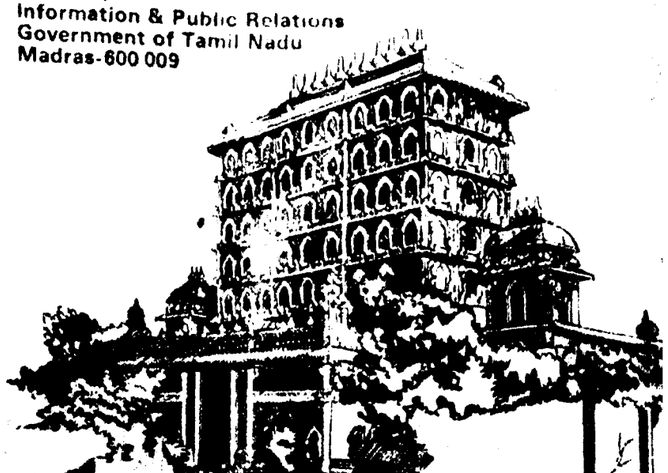

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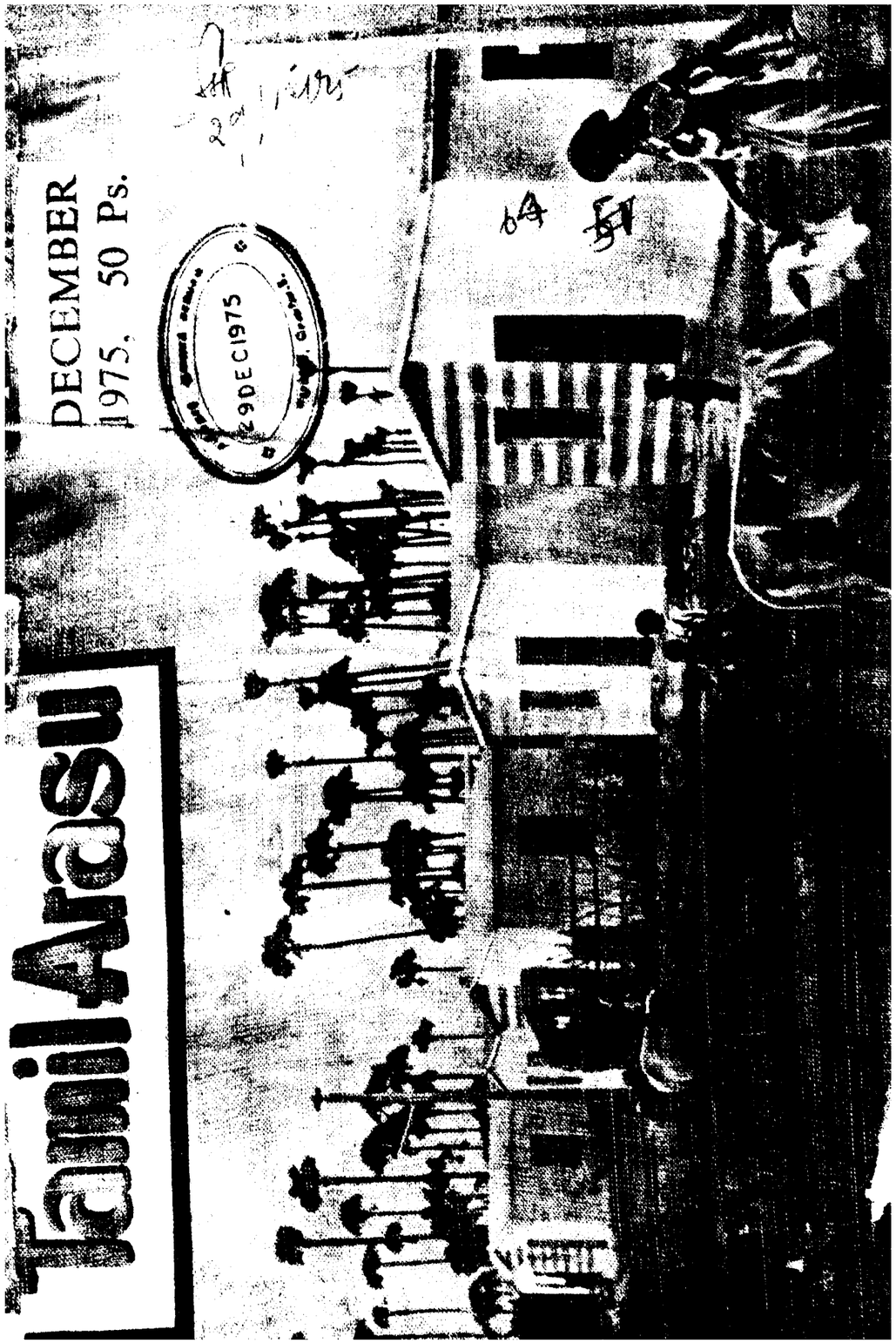

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Tamil Arasu

VOL: VI DECEMBER, 1975 ISSUE: 6

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ARMED FORCES FLAG DAY

The Flag Day has become an institution which reminds us of our duty to our Soldiers and ex-Servicemen.

The Central and State Governments have of course, taken a number of measures for the Welfare and Rehabilitation of ex-Servicemen. The community also has a significant role to play. It has not only to supplement the governmental effort but also to generate an atmosphere in which the Service personnel can feel assured that the entire community is backing them up.

Here, in the two pictures are seen the Governor and Chief Minister contributing to the Flag Day call and giving the lead to the community to rise to the occasion.

WOULD BEGGING ONE DAY BE KNOWN ONLY THROUGH WOOD and STONE CARVINGS

Wishes the

CHIEF MINISTER

The Mahatma Gandhi Birth Centenary Memorial Awards instituted by Victoria Technical Institute for outstanding artists of 1975 were presented to the winners at the Institute at a colourful function on 3-12-75 by Chief Minister of Tamil Nadu, Dr. M. Karunanidhi.

Thiru Mahendra of Kerala, obtained the first prize for his impressive oil painting, 'Music of Melancholy'; Thiru Subramania Achar won the second prize for his exquisite ivory inlaid rosewood table. 'Beginning of a Day' a carving in teakwood won the third prize for Thiru K. K. Valsan. Certificates of merit were given to two Madras artistes Thiru Udayashankar for his oil painting, 'Madurai Temple' and Thiru Thirunaavukarasu, for his terracott a work of "a lady's head".

"It gives me great pleasure to participate in this pleasant function held annually by the V. T. I. said the Chief Minister, and added:

When the word handicraft is mentioned it denotes the skill and efficiency of the local craftsman which results in world wide acclaim and contributes to the further development of the area.

The Government would do its best and take all measures to encourage talented craftsmen and artisans. Steps would be taken to conserve rosewood and ivory available in the State for supplying raw materials to the makers in handicrafts.

The award given for the second prize winner is for a carved rosewood table inlaid with ivory. It depicts scenes from the life of Krishna. This has been bought by a foreigner for Rs. 8,000 which gives me great pleasure since it proves how much our art is being appreciated abroad. Our country is full of legends and puranas that have been handed down to us. Such rich legends and mythology give great scope for the artist and the sculptor to show their skill of which this carved table is one such example. I do not want to go into the authenticity of the puranas. But as an art they are of great use to test the ingenuity of the craftsmen and artisans. The third piece, carved in teak with the title, 'Beginning of a Day', depicts a day in the life of a beggar. First we find him sleeping; next he is seen getting up at dawn and getting ready for the day. This simple carving throbs with life. Looking at this carving. I am much moved by it and would rather have it that the beggary in the country should also become wooden; and begging should not be present in our midxst. This is the aim of the Government. After beggary is wiped out and begging itself becomes a thing of the past, we can have them with us in wood and stone as beings who were with us once upon a time even as one learns from another carved piece that Krishna lived once upon a time; It is also my fond hope that the existence of beggars should one day be known only from carvings of stone and wood and not from life. I consider that this unique carving a harbinger of such a future.

Thiru Mahindra receiving Award

How far has art developed in Tamil Nadu. How much westerners appreciate our art, could be seen in an incident. The Sivapuram Nataraja idol has not been returned to us. This goes to show how much love and affection the foreigners shower on our art. Whether it is a piece of wood carving, or done in gold or silver, the skill with which it had been created by our master-craftsmen, thousands of years ago is valued and treasured, admired and appreciated.

We see foreigners spending over thousands of rupees on our handicrafts. While I am fascsinated by this unique piece of wood carving, I cannot but help recalling the numerous figurines carved in the wheels and panels of the temple cars, the sculptures and carvings, some partly demolished, some uncared for, lying about in the numerous temples all over Tamil Nadu.

When I was in the opposition in the Tamil Nadu Assembly, I had pointed this out to the then Government. In those days, there used to be a practise of auctioning old temple cars.

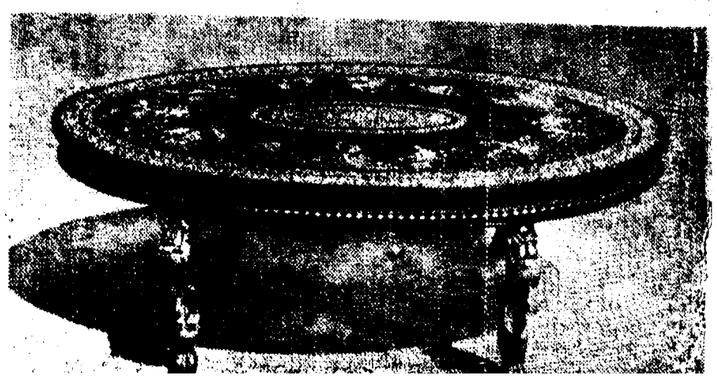
When Thiru Bhaktavatsalam was the Chief Minister, I as opposition member, asked him under which Head of Account the Hindu Religious Endowment Board would be discussed. I was told that it came under "Miscellany". Though it was 'miscellaneous', I considered the subject highly important and made an appeal, that the practice of auctioning old temple cars be put an end to.

During those days, there was a practise to auction old temple cars, all over Tamil Nadu. Twenty or thirty persons used to gather at the auction and saw to it that they were not auctioned for more than five or ten thousand rupees. After removing the timber portions they used to sell the figurines for 20 thousand rupees to persons in Bombay and share the 10 thousand profit amongst themselves. These from Bombay, in their turn would sell the figurines at exhorbitant prices to westerners. Even though we manufacture temple cars more exquistely and even better, the westerners will not go for them. They are particular that the figurines are ancient. They attach great importance to the hoariness, the antiquity etc., the older they are the more readily will they sell.

Such auction resulted in a great loss to the Hindu Religious Endowment Board. The loss is also great, since we find that our beautiful handicrafts are found as decorative pieces in the drawing rooms of millionaries of America, Britain, Germany and Italy. I had made an earnest appeal for the protection of these handicrafts. But it went unheeded.

After the change over of Government, today, the auction of temple cars has been put to an end and the figurines have been given adequate protection and are preserved with great care.

Today, while we admire, the exquistely done paintings and carvings and the beautiful pieces of handicrafts, we cannot help wondering at the aesthetic sense of our talented craftsmen and artisans, through whose skilled hands these have been executed."



FOR THE PEOPLE OF TAMIL NADU...

In the Republic of India, Tamil Nadu has always been renowned for its multifarious welfare schemes for the people. Each programme aims at bearing fruits for a particular vulnerable section of the society. Truly, the Government of Tamil Nadu is building up an egalitarian society. Tamil Nadu is a Welfare State.

MONTHLY PENSION SCHEME FOR THE AGED

A major portion of the public do not have any pensionary benefits. The Government, which has always been concerned with the welfare of the public, especially the lower salaried classes, has introduced a new pension scheme for them. Under this scheme a 30 year old person contributes a monthly amount of Rs. 10 and is entitled to a monthly pension of Rs. 100 from the age of 55 till death. Provision has been made for the refund of principal and interest to dependents in case of death.

SPECIAL FAMILY BENEFIT SCHEME FOR GOVERNMENT EMPLOYEES

A special scheme has been introduced in order to supplement the benefits available under the pension-cum-gratuity scheme. If an employee contributes Re. 1/- every month, in the event of death while in service, a sum of Rs. 10,000 will be paid to his family. In the case of an employee retiring on superannuation or demitting office for any reason, he will be paid back the amount contributed along with interest. This scheme is applicable to all Government servants including temporary and non-pensionable post holders.

SOCIAL SECURITY SCHEME FOR BETTER FUTURE

The Social Security Scheme, 1974, extends principle of Security in old age in return for a small and regular payment during the working life to the public at large. Wage earners and the self-employed, men, women and minor children, the young and the old, can participate in the Scheme. Seven types of subscription plans which are available. Rs. 10 per/-month for 25 years or Rs. 20/- per month for 20 years or Rs. 30/- for month for 15 years or Rs. 60/- per month for 10 years will in each case earn a monthly pension of Rs.100 to the subscriber. Even if death occurs soon after the subscription period is over, the monthly pension will be paid for 30 years. Those who desire to have a monthly pension of Rs. 100 can join any one of these four plans depending upon how much they can subscribe per month and for how long they can make regular subscriptions. Every good scheme serves more than one purpose. This Scheme is a piece of financial engineering designed to promote thrift, provide social security and increase investible funds. It is like a dam which uses water to generate power and thereafter, leaves it free for irrigating.

EMPLOYEE'S PARTICIPATION IN PUBLIC SECTOR PROJECTS

Nowhere in India, a scheme has been introduced, for employees participation in ownership and management in the public sector. The Governmentof Tamil Nadu has taken the initiative in pioneering this. To start with, the Government has introduced the programme of employees'participation in the equity capital of State owned Transport Corporations. The uniuqe scheme of providing incentives in the form of bonus has also been introduced in the Tamil Nadu State Transport Department. Bonus is distributed for collection, punctuality, attendance, performanco etc.

The following is the full text of the speech of Thiru K. K. SHAH, Governor of Tamil Nadu, at the inauguration of the First State Conference of the Tamil Kavignar Manram on the 30th November, 1975.

Bring in once again Era of EPIC POETRY

—oOo—

GOVERNOR'S CALL TO TAMIL POETS

Mr President and Poets of Tamil Nadu

I do not know how I deserved your invitation to inaugurate the First State Conference of Tamil Poets. The great cultural heritage which you, poets of Tamil Nadu, can proudly acclaim is unrivalled not only in India or Asia, but in the whole world. You know my views on Tamizh. You know how I am struggling to remove the poison injected by politician-turned scholars about the difference of Aryans, Indo Aryans and Dravidians. **There are no languages in the world as old as Tamizh and sanskrit but Tamizh is the only language which has continued both as an ancient classical language and also as a common spoken tongue of the people, over an unbroken period of several centuries.** No language in the West has such a long history. Sanskrit has not continued as a spoken tonuge. Greek and Latin had ceased long ago to be the spoken tongues in their native homes. But I am proud to say that Tamizh still continues with all its prime vigour as a powerful language which can plumb the emotional depths of love and devotion, and rise to patriotic heights of selfless sacrifice for the cause of the Motherland.

I have spoken from several platforms that the habit of quoting foreigners to signify scholarship is a sign of weekness. Let us learn as much as we can. That is our culture but let us develop our own individuality. How can we accept the theory that sanskrit came from the West and Tamizh came from absoal ? From the East, being Scythian ? Is our civilizationmerely a few thousand years old ? Has any language developed as scientifically as Tamizh or Sanskrit ? Luckily evidence is mounting about our civilization being more than 10,000 years old. Once it is proved that ours is the oldest civilization, how can our languages be imported from outside.

Both Tamizh and sanskrit possess common striking features which no two other languages of the world possess. Sanskrit owes a tremendous debt of gratitude to South. Shankara, Ramanuja, Madhva, Chola kings, Pandya kings and Chera kings have contributed immensely to its richness. Would they have adopted if sanskrit was a foreign language or did they look upon sanskrit as an improved version of Tamizh for the benefit of the whole of India ? (E. G.) Instead of writing consonant K and using it for K, Kh, g and gh, they invented separate consonants for k, kh, g and gh, etc. **Mohenja Daro-Harappa would have thrown up some evidence to support the contrived theory of some interested scholars. On the contrary, it lends support to the theory that Tamizh was prevalent throughout the whole of India. What I request is dispassionate research and honest conclusions.**

PROPOUNDS NEW WAY OF LOOKING AT HARAPPA

Madras Down the Ages—A City of Poets

You have rightly chosen Madras as the venue of your conference. This city has a long association with poets and poetry. Tiruvalluvar is said to have lived here in Mylapore and written his immortal Tirukkural. One of the 12 Alwars, Pey-Alvar, was born here and wrote his Third Antadi of the Vaishnava canon. The miracle of the young damsel Poompavai restored to life from her ashes was wrought in Mylapore by the Saivite Saint Tirugnana Sambandha more than 1300 years ago. The great poet-Saint, Pattinattar, lived here and attained mukti at Tiruvotriyur. Coming to our own times, Saint Ramalingaswami stayed in Madras and his simple and sweet poetical compositions constitute 'Tiru Arutpa'. Subrahmanya Bharati, the great Tamil national poet, the Bard of Freedom, lived, wrote and sang in Madras and died here. Thus you have a line of poets and continuous tradition of poetry in Madras city itself.

It is remarkable that in the Tamil language all writing up to the beginning of this century had been only in verse. Prose has been a vehicle for the communication of thought even from early times in Sanskrit. Prose and verse or champu had been the common form in the Telugu language. **Only in Tamil, do we have all writing in poetry. The fact that grammar, lexicon, astrology, medicine, architecture, sculpture and similar sciences are also written in poetry proves that Tamizh had developed as a perfect language long, long ago and was nearer to civilization just as poetry is nearer to humanity.**

Tamil Epics Indicate Love of Motherland Comes first with Tamils

Epistolatory verse forms a branch of the literature of the last two centuries. Kalidasa tells us that Sakuntala wrote to Dushyanta in verse form. Silappadhikaram tells us that Madhavi wrote to Kovalan in metric lines. Some centuries later, we have a reference to a note of introduction, said to have been composed in poetry by the Lord Siva Himself to the Chera prince, introducing a songster and asking him to help him. In recent times, many poets have sent their appeals for help to theirpatrons in the form of poetic epistles.

There is no branch of Tamil literature which does not contaiu inherent evidence of a highly developed language. Epics like Silappadhikaram of immortal age, Kambaramayanam and Periyapuranam of the mediaeval age and Panchali-Sapadam of Bharathi of modern age are all gems of purest ray serene. Tamil is very famous for didactic poetry—from Tirukkural down to Pudiya-Attisudi of Bharati. The devotional hymns in Saivism and Vaishnavism are vast and unparalleled in the World.

You have a convention that all epics devote two chapters in the beginning to the description of the glories of the land and of the capital city. You find this feature in all epic poems from Kamba Ramayanam down to the smaller poems of the last century. Puranas in the Tamil language are legion and all of them conform to this convention. Does it not indicate that the Tamil people have been living a full life, in tune with nature ?

What shall I say of Tamil Grammar ? Along with the Sanskrit grammarians, the Tamils are the only people who have scientifically studied the science of language—alphabets, words, syntax, poetic themes, prosody and rhetoric, all these, for the purpose of memorization, have been composed probably 2,500 years ago in verse form in Tolkappiyam. The earlier book Agattiyam has been lost to us. Every effort should be made to restructure it.

Another remarkable feature of Tamil poetry is that a poem is always intended to be sung. That shows that our taste for rythm and alliteration had so developed and that our poetry was intended to touch the innermost corner of the heart. It can be so only if it makes us muse. Even today all verses are sung by learned pandits. Even mendicants hum these songs in the streets.

Women Poets

This is the international Women's Year and it is but fitting we remember the place of women among the poets of Tamilnadu. We have had a galaxy of women poets of repute. Saintly women poets have enriched our cultural heritage. Avvaiyar is the most celebrated woman poet. Even crowned monarchs bowed before her. Avvaiyar today is a household word in this country and is remembered by her ethical maxims which have stood the test of troubled times. Karaikkal Ammaiyar and Andal are besides being women saints are great literary geniuses.

It is the privilege of women to sing lullabies to children in the cradle to put them to sleep. Even today you all know our women folk are using hundreds of lines of the lullabies for this purpose in the melodious nilamburi tune. Some of them have learned the classical songs but there are others who improvise songs at the moment and sing. How many of us were lulled to sleep in our infancy by such creative genius ?

Richness of folk songs is yet another yardstick of a highly developed language. Folk songs of Tamil Nadu are replete with rhyme, assonance and alliteration. The Tamil language is rich in folk-song literature from very early times. There are any number of work-songs among rural folk. As we go along the country roads, in the early morning during the paddy transplantation period, we find music setting the pace for the transplanting work. A leader among the women engaged in the work sings a song and all the other workers follow in chorus. The singing relieves the monotony of the work and ensures quick and uniform execution of the work.

I am mentioning these to indicate how poetry and singing have been closely woven into the fabric of the lives of the people of Tamil Nadu from times immemorial.

Longest, Literary Tradition.

Poetry is something which the common man in the West shuns. What you call the man in the street does not like poetry and would always run away from it. A popular writer has remarked that poetry is the one word which will scatter a crowd more quickly than a hose-pipe, hornets, or the rumour of plague. The average lettered man there says that he does not read poetry. The picture is different in our country. Look at the engagement columns in our daily newspapers ! They are full of engagements of expositions of poetry such a as Kambaramayanam, Maha Bharata, Kural, etc. This shows

EARLIEST GRAMMAR OF THE WORLD IS IN TAMIL

Tamils have the Genius for Listening to Poetical Expositions even to-day

that even today in the 20th century, there are people who can go on expounding poetry and there are many more who can listen for hours to the exposition of poetry. This is a unique tribute to the inherent poetic genius of the people of Tamil Nadu. Exposition of poetry in the West has only an academic value. Poetry there is found only in the classroom. But here in India, particularly in Tamil Nadu, large gatherings of people collect together for listening to the interpretation of poetry. This shows that the people of Tamil Nadu are a highly sensivite, emotional and cultured intellectuals.

Tamil drama occupies unique position in Tamil poetry. We know Shakespeare wrote his plays, directed them, and acted in most of his plays. But they were all dialogues, utterances by actors ; there were only occasional songs. Though whole plays were written in blank verse, they were merely spoken as prose and never chanted. The position is different in Tamizh. The greatest attraction about the Tamil drama is great most of it is in song. If it were prose, attendance would be very meagre in the theatres. The poems in the Tamil dramas are intended to be sung, they are indeed sung and the masses go to the drama and to the cinema, to listen to the verses and the songs that are sung.

All these indicate that poetry is in our blood. Whatever one wants to say, one tries to say it in song. No wonder Tamil Nadu has the longest literary tradition in the World.

Bharathi's Poetry

The era of modern poetry in Tamil Nadu can be said to have started with Bharati. He was the harbinger of the new wave in poetry in his day more than 55 years ago. He was soaked in the literary conventions and traditions of the ancient Tamil language. He chose some easy themes and elegant metres from and adopted them to the needs of the days of the grim struggle for freedom. He has sung on classical subjects such as devotion and mysticism, he has dealt with epic poetry and also ethics ; but we remember him today as the symbol of revolt against foreign rule, the voice of a new emerging resurgent India. The clarion call of freedom is seen in every one of his verses. His greatness lies in the fact that he took the spirit of a resurgent India through poetry to the masses. He adapted classical poetry to the common man and made him feel the urge and the elation of poetry. Only from his day did the writers begin to feel that even the greatest classic could appeal to the average man and poetry divored from the ordinary people, had no future. The Tamil people remember him with gratitude and affection for the impetus which his songs gave to the freedom struggle. The volunteers and freedom fighters fired by his immortal songs like 'Achham Illai' braved lathis and nullets with a smile. Bharathi's songs have still relevance as they can inspire us to work for our economic freedom and remove inequalities in society.

Pattimanrams of Present Day

Pattimandrams and Kaviarangams are very popular with our young men. Many young men participate in these literary gatherings. Some of them easily compose verses on the spot on given subjects to an eagerly listening and appreciative audience. The composer puts a lot of enthusiam in his utterence and adds illustrative gestures and the audience equally responds. Large responds. Large audiences for these Kaviarangams demonstrate their increasing popularity. This cannot happen unless our people have a natural poetic instinct which finds an echo in the poems recited. **How natural this instinct of expression in poetry is can be verified from the many addresses in poetry, both blank and metric, received by me as Governor**] The sentiments that they convey and the literary genius that they present are a high mark of literary perfection.

THE UNIQUE INSTITUTION OF PATTIMANRAM

Poetry and The Common Man

Our ancestors, the Naranmars and the Alwars prayed to God in exquisite tunes, composition of high literary achievements. Even grievances and petitions are presented in verse. Are they not more effective and telling ? To us it is natural to offer blessings in verse. Newly married couples are offered framed addresses in which the Almighty is invoked to bless them with long life and prosperity. Even the marriage invitations are sometimes in verse. There are others who sing welcome addresses in verse and recite their vote of thanks in verse on the spot.

It is uncommon for friends and close relatives to write elegies in verse on the death of dear and near one or on a popular personality on the spot. Some of them have high literary value and are preserved as rare collections.

Puns, conundrms and riddles are an integral part of our classical poetry. Kalamegham and Irattaiyar are outstanding examples of mastering in this important limb of effective poetry. One of the most effective ways of lingering in the memory of others is to use this art effectively.

Even advertisers use verses as their medium for attracting public notice. Hawkers and pedlars go along the streets repeating some kind of rhyme to attract purchasers for their wares. Just as democracy can succeed only if it becomes a mode of living, poetry can survive as an immortal mode of expression

HOLD ALOFT THE PURITY OF TAMIL EVEN IN THE FACE OF THE WRATH OF GOD

if people maintain high intellectual calibre and inspiring emotion and decent taste. Any one with this urge can have entrance into the great brother-hood of poets. Poetry is the real integrating force in a nation. Poetry does not know caste or creed, class or sex. Harijans had been devotional poets throughout history in this land and some of them like Tiruppanalvar are hailed as great saints. In the same way who does not know Tiruvalluvar ? No high caste appendage was necessary for him to be hailed as an outstanding saint. Ruling kings have been known as renowed poets. Poems of some of them have been included in the Saiva and Vaishnava Canons. Jains have been great grammarians and ethical writers. Bhuddhists had also written epic poetry and grammar. On the impact of the Crescent and the Cross, we are having substantial Muslim and Christian poetry respectively. A lady from Cuddalore, Pandit Asalambikai, I am told. had sung during the first quarter of this century the lives of Tilak and Gandhi as a kind of the metrical purana. Physical handicap is no bar to poetry Many blind persons have been eminent poets ; the two poets who goby the name of Irattaiyar (the cople) have been lame and blind. **The gift of poetry transcends all wordly barriers and makes a real poet, respected and adored.**

Heroic Traditions

Tamil Nadu poets are renowned for independence and fearlessness. The story of Nakkirar is an inspiring saga of bravery. When a purse of gold was to be presented to the young bachelor Dharmi in the Pandiya court, the legend says that the poet Nakirar intervened and stopped the presentation of the purse, saying that the verse brought by Dharmi was wrong in content. He said that the hair of damsels was not fragrant by nature, but only the association of flowers imparted fragrance to it and so the verse which attributed natural fragrance to a lady's hair was faulty in content. When the author of the verse zappeared in person as Lord Siva Himself and showed his anger at the affornt of the poet Nakkirar, he would not flinch. He braved the wrath of God Himself and defied Him when it came to a question of holding aloft the literary merit of Tamil. Really heroic, is the tradition of Tamizh poets.

Before I conclude, I wish to dilate on the function of poetry. Poetry is Nada Brahma. Shabha or voice becomes powerful vehicle of emotions when it is in verse. Music is scientific in content and immeasurable in strength. Melodious music represents utmost harmony in nature. Expressions in verse become power as they acquire harmony Once this harmony between thoughts as well as in expression is acquited, it acquires tremendous power and moves the innermost chords of human beings. These chords vibrate and produce indissoluble ecstasy. When emotion and rhythm combine, nature yields its secrets. That is the prime function of poetry. It is a source of joy and perennial inspiration.

Poetry enshrines Discipline

Another equally important function of poetry is the ineluctable ethical code which it lays down. Without such a code, the coherence in any society cannot last. Poetry being harmonious reveals harmony of nature which is nothing else but ethical code of conduct. And that code gives man lasting peace and a faith and a strength to face life's problems. This code is nurtured by poetry to preserve the emotional integration of humanity and nature. **Tamilians have excelled in perpetuating this exquisite art of establishing harmony and preserving the innate basis of truth, love and affection on which humanity survives.** Thus cultural heritage is a vast reservoir or inspiration. Let us be worthy of this heritage and transmit vibration of that heritage through immortal compasitions like Tirukkural for curing the ailing humanity.

TAMIL POETRY IS VEHICLE OF DISCIPLINE

Poetry for Peace and Fearlessness for Facts :

Let your motto be Peace—Poetry for Peace. Man has landed on the moon. He is now trying to probe Mars. No one can foresee if it cannot be proved that life existed on the Moon and Mars. Man thus is able to conquer new realms. But men has not conquered himself. He does not know how to love his next door neighbour and live at peace with him. When he is unable to develop this attitude of what avail is space-conquest ? Hence it is the great and sacred duty of the Poets of today the world over to propagate the gospel of Peace. Nuclear weapons pose a threat of total devastation. Poets endowned with imagination, certainly do have the wisdom to foresee what is coming. Now it is up to them to visualise the future and appeal to the peoples to tread the path of Peace.

I would like to share with you another fundamental thought. Mere lyrical poetry does not make a nation's poetry great. It is only long narrative poetry, which is sustained and which brings out all the inventive and creative genius of the nation, that makes for great poetry. Only such poetry can lay claim to classicism and only that can secure for you a lasting place in the great commonwealth of poets. I do appreciate your efforts to write lyrical Poetry out of an inner urge and an occasion demands. Yet, you should also keep great poetry an view. Generally what has been written is only in the nature of minor poems.

Aim at great epic poetry. Some day, out of all such attempts may perhaps be born a poet of the stature of Kamban.

Let me conclude with the words of Tagore. "May your minds be without, fear, and may you hold your head high." May your poems help to enrich Tamil literature.

I have now great pleasure in inaugurating this First State Conference of Tamil Poets. **

Psychiatry is an Integral Part of our Life and Social Discipline

INDIA CAN GIVE NEW MEANING TO THIS BRANCH OF MEDICINE TO BENEFIT WORLD

GOVERNOR'S CALL AT FORMATION OF PSYCHIATRY ASSOCIATION

While inaugurating the Indian Association of Psychiatrists at Madras Medical College on 1—12—75 Thiru K. K. Shah, Governor of Tamil Nadu said : I am indeed happy that the number of psychiatrists in Tamil Nadu is increasing. Now there is no longer any need for them to go to other States for Post-graduate training in Psychiatry. The Madras University and Madurai University have already started training courses in Psychiatry and Diploma in Psychological Medicine. There is M.D. Course in Psychiatry in Madras ; in addition, the Christian Medical College, Vellore, admits students for Post-graduate Diploma Course. I am glad that Psychiatric clinics have started functioning at the teaching Medical Colleges of Madras, Coimbatore, Thanjavur and Tirunelveli and in the non-teaching district Headquarters Hospital of Tirichirapalli, Salem, Cuddalore, Nagapattinam and Vellore. I feel confident that the remaining districts will take no time in having Psychiatric out-patient facilities. I do hope that this Association which is being newly formed, will promote the study and practice of Psychiatry throughout the State in a phased manner.

Let me, at the outset, draw a line of difference between Psychiatry and Psycho-analysis. Psychiatry is a branch of medicine devoted to the study of the genesis, diagnosis, prevention and treatment of emotional illness and mental disorders whereas Psycho-analysis is an analytical study of the circumstances and factors that have contributed to the mental and emotional disorders of a patient and either preparing his mind for necessary adjustments or correcting his surroundings to restore balance of his mind.

Our Religion is Psychiatry

A question is naturally asked as to why Psychiatry is not so popular in India as it is in advanced western countries. The answer is straight and simple. Psychiatry forms an integral part of our religion, daily life and social discipline. It is so ingrained in us that it has become a habit. It preevents many of us from being willing victims of the evils of material civilisation without knowing what we are doing. We are treated every day by these religious beliefs and social customs and are made to practise the art of stilling the mind as part of our spiritual discipline, since the hoary days of our ancient civilisation.

If today our Yoga system with all its emphasis on mind control has attracted the entire world, it is because it has established and pro its superiority over Psychiatry and Psychoanalysis of the Western type. I do not wish to elaborate this point further because it is common knowledge. I shall, therefore, confine myself to the subject of Psychiatry. **I must, however, admit that, if the scientific facilities of the West become available to us to explain the wonderful curative, preventive and promotional aspect of mental health that the asanas and pranayam bring about, it will open vast vistas of human happiness.**

It is estimated that about 1 1/2 crores of people in America are suffering from emotional conflicts and that they are seeking the help of Psychiatrists for remedy. It is the Psychiatrist who studies the patient's joys and sorrows, hopes and fears. It is his professional duty to find out what sort of patient he has got just as it is important for him to find out what sort of disease the patient has. A Psychiatrist is confronted with the problems of personality, maladjustments, fears, sexual maladjustments, mental incongruities, mental depressions, alcoholism, inferiority complexes and nervous breakdowns. Freud believed that neurotic behaviour stemmed from sexual conflicts. Alfred Adler explained human behaviour with his WILL-TO-POWER theory claiming that every human being strives to overcompensate in one way or another for his basic feelings of inferiority. Carl Jung emphasised man's need for religion as a cure for mental imbalances. It is the conviction of Psychiatrists — and I agree with it — that by learning to understand ourselves by cultivating consciousness, our ability to control our fears and anxieties increases and we develop an urge to be unselfish, and ultimately achieve peace of mind.

Anxiety Neurosis :

It is now admitted that greater the anxiety, greater the strain on brain. Greater the craze for change, greater the pressure on brain to adjust to every changing circumstance. Human beings do not realise that change of habit casts a strain on mind unless the mind is trained to adapt without strain. It is a good development that scientists have in their quest for human happiness are turning to the basic concept

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of religion which is common to all religions. It provides excellent opportunity for them to examine the beneficial effects of several practices to control the mind, cultivate detachment and ultimately enjoy mental peace. **They are agreed that Prayer and Devotional music are therepeutically proved to be possessive of tremendous healing and comforting powers. Music, according to our ancient theory, has a wonderful therepeutic value.** Modern science has tested its efficacy on plants and human beings. That is the reason why our Indian music is becoming more and more popular in the western countries just as our Yoga system is attracting a lot of adherents. We are now entering an era of generating energy through vibrations which are converted into light and vice versa.

As Herbert Spencer said, " it is the Mind that maketh good or)ill, that meketh wretch or happy, rich or poor." Today, the external pressures on the mind of each human being are becoming so heavy that unless he looks within himself in search of some new strength or new wisdom to meet the challenges, he cannot survive for long. Harold Sherman rightly says " Man creates in mind the world in which he lives.'. Does this not demonstrate a perfect agreement with the theory of past life (Purva Janma) influencing the present life. Does not it accept the belief that life is a fight between Destiny and Divinity ? Does it not prove that all happiness and misery spring in mind and that unless you practise the art of controlling those springs, you cannot have peace ? That is why the Rig Veda says " *Ano Bhadrah Kritavo Yanu Vishvtaha* ". That is why Lord Krishna in Bhagvad Geetha preached Karma Yoga. Scientists all over the world are now on the way to the acceptance of Karma theory. They are now convinced that genetics)are the source of many things and that the genetics are pre-ordained. In fact they go to the extent of saying that chance or luck does not exist in a universe which is ruled inexorably by the laws of cause and effect.

Discipline & Detachment :

Yama and Niyama which mean control and discipline are nothing else but mental exercises. We are practising physical exercises without

THE PSYCHIATRIST MUST HEAL WITHOUT HURT

training the mind which is the source of all ailments. Prayer is an attempt to draw strength from Yama and Niyama. That is why the famous Psychiatrist Dr. Simley Blanton whose article appeared in Readers' Digest some time back pleads for prayer and advised thousands of patients who had gone to him to practise Prayer. He says " In prayer, whatever the creed or denomination, one accepts the concepts of a Creator, who is the source of life and to whom one can turn in humility and trust. Here again the surrender of self is the indispensable attitude. " Not my will, but Thine be done." When this attitude is truly dominant, the results can be astonishing. Whether you choose to call it mobilising the unconscious or making contact with God, prayer is a channel through which enormous power can flow." What else is this but our Bhakti Yoga ? It settles the mind and establishes contact with your Creator. If the concepts of Shabda Brahman and Nada Brahman are understood, Psychiatrists will find a new method of treatment. It rests on the theory of your mental vibrations being immortal, wandering all over the world, ultimately grouping together and acting on your mind which has the same frequency as the group of vibrations which are yours.

Qualified and experienced Psychiatrists who handle patients have to bear in mind that even if it is not possible to preventdistrubances, the patient must be taught the art of minimising its pressure and accommodating its existence. The principle he follows is that we cannot stop rain but we can protect ourselves from it. No one can know that this own behaviour shows him as a neurotic or is filled with too much of self-love called Narcissism. He may feel unhappy that he is not getting on well in society or is not popular with people. It is given to a Psychiatrist to make him conscious of these traits without hurting him and make him realise that these traits are responsible for his unpopularity or for his losing friends. That applies to every trait in excess —Selfishness, Sarcasm, excessive health-complaining, conceit, frugality, over-aggressiveness, stubbornness, excessive criticism, shifting moods, unreasonable jealousy, emotional immaturity, vulgarity and bad manners, iIritability, over-sensitiveness, excessive shyness, dishonesty, argumentativeness, untidiness, tactlessness, bad temper, lack of appreciation and unadaptability —these traits have their own reactions. It is for the Psychiatrist to measure their proportion, devise methods of balancing them and inspire the patients to transform or replace or counterbalance them.

Poverty and Mental illness

Most of the mental illnesses in a poor country like ours can be traced to grinding poverty and lack of suitable employment opportunities. Sometimes, a Psychiatrist cannot suggest remedy. In suc chases he must wisely analyse variousfactors of the mental illness of a patient and give him hope and encouragement. This is not a very easy task. It requires enormous patience, tolerance and a helpful attitude. I do hope that this Association which I now have the pleasure of inaugurating, will plan out new paths in the study and practice of Psychiatry and combine them with our age old wisdom enshrined in Yoga. You must always remember that our indigenous systems of medicine and Yoga are perennial sources of wisdom and inspiration. Draw as much as you can on them. They will not fail you.

You have my best wishes.

Help people keep Mind Clear

Health Minister Tells Psychiatrists

PEOPLE MUST BE PREVENTED FROM RESORTING TO ILLOGICAL TREATMENT OF MENTAL DISORDERS

Thiru K. S. Bhushanam, President of the Association in his welcome address observed that though modern science had advanced very much, psychiatry and psycho-therapy have still to make an impact on the common man. People not only in the villages but many in the cities also held on to various vague beliefs such as the existence of evil spirits controlling body and mind. As long as this state of affairs existed, the patient with mental illness would not be considered as having a disease, which could be treated but would be considered as having been afflicted by the "devil." Therefore illogical methods in an effort to drive out the so called "devil" were being practised in various parts of the country. As such he pleaded for wider publicity being given not only for the recognition of mental illness wherever it occurred but also for the spread of knowledge regarding the availability of psychitaric help.

Health Minister's Speech

In his Presidential address, the Hon'ble Health Minister, Prof. K. Anbazhagan stressed the fact that a man is differentiated from the animal world only by the fact that he possesses a mind and can reason with it. **As such, the mind had to be kept free from confusions which directly resulted in mental diseases. Stating that a wide variety of reasons were responsible for the production of mental illness or diseases, the most important aspect of any disease was the study of the mind which was highly sensitive to a reception of ideas, attitude, behaviour, people and to the environment.** As such, the mind had to be kept in a clear state to prevent diseases or illness. It was towards this end that people in the olden days resorted to meditation, prayers and various other means which in later days tended to be abused with overtones of superstition. Observing that modern medicine did not fully cater to the requirements of the mind which got disturbed even during physical illness, he pointed out that in the ancient systems of Indian Medicine, this fact was recognised by the early Indians. The Siddha system of medicine, was unique in that, it took into consideration the fact that the mind had to be nurturned as carefully as the body was being tended. The Minister commended the practice of Homoeopathy and advised medical graduates of allopathic medicine to study the effects of various drugs obtained in the Indian systems of Medicine and put these into use in their day to day practice. He made a special plea for the study of the effects of various herbs and other indigenous medicines in order that they could be made use of. Even accupuncture, he stressed, originated in India but came to be refined in other countries and was making a come-back as a sort of "imported stuff." As proof of his thesis he pointed out that some traditional practitioners of acupuncture could still be found practising in parts of Tirunelveli District.

ELECTRONIC ACUPUNCTURE

An electronic device by two scientists has been jointly developed by Dr. Mathew George, orthopaedic surgeon of the Ernakulam General Hospital, and Prof. M.N. Nampoothiripad of the Department of Electronics of the local St. Albert's College, which not only kills pain but obviates the use of expensive drugs and antibiotics.

Experiments conducted on about 200 patients at the General Hospital so far had yielded "wonderful and encouraging results" in killing pain as well as curing orthopaedic complaints like backache (lumbago), neck pain (spondilities), shoulder pain (periarthritis), knee pain (ostio-arthritis) and the like.

The scientists have named the therapy as "mycrolytic therapy" since it involves electrolysis with a very small measure of current obtained from a dry cell battery. The idea has been derived from the Chinese acupuncture treatment. In acupuncture, electric charge is generated while rotating the needle slowly during insertion into the body.

A searching electrode current of the order of 150 microamperes is applied and points where there is pain are located by the electrode and the measuring meter which is part of the instrument. The experiments are still going on. So far no untoward reaction has been found.

Perhaps this is the only instrument, which monitors the operation visually as well as audibly. All the components used to the sleek and attractive prototype are indigenous as also its design. It costs a little over Rs. 1,000 and can be carried in a brief case.

PROPER COUNSELLING THE NEED OF THE HOUR

We have to look around ourselves and see the plight of our friends and ourselves to be convinced of the fact that human energy is wasted, lives are misspent and misery results from the lack of direction and from the unwise selection of educational opportunities, of recreation, of occupation, of companion and of spouse. Having made a wrong selection, one stands bewildered and perplexed.

Need for Guidance :

A considerable variety of problems and difficulties are experienced by young people, who do not have any source of guidance to find answers to the questions that arise in their minds. The difficulties may be intellectual, arising out of some conflict or contradiction between what they believe and what they hear or see being practised. These may generate doubts, undermine their confidence in themselves or their faith in society. Some times the difficulties may be emotional, arising out of failure to understand how to adjust their feelings and emotional reactions to the demands of their parents, their teachers or their fellow students. The emotional problems may even be deeper, arising out of maladjustments in social life, or in relationships with other people. A third group of difficulties may be in relation to their future. The adolescent is conscious of the fact that he is growing up. He is inevitably assertive, and resistant to parental authority. This resistance may become generalised to even other forms of authority such as the school, the college, the police and the like. There are other factors like the complexity of the society, individual differences, economic disparities, rapid industrialization, urbanisation, technological advancements with their concomitance, employment of women in large numbers, religious and caste prejudices, rapidly increasing population, broken home, changed family pattern, lack of guidance at home, and the realisation of the inadequacy of class room instruction to meet the extra-instructional needs of the students, warrant the need of a guidance programme.

Various reasons have been given in order to highlight the need of guidance. Many critical situations arise in our lives when important and far-reaching decisions should be made and it is very necessary that some adequate help is provided in order that these decisions may be made wisely. We have to look back to ourselves to find the strange paths we have adopted to get to our present professions.

Types of Guidance :

Various authorities have given their classifications. According to Peterson, Williamson and others there are five types of guidance.

1. Educational guidance.
2. Vocational guidance.
3. Personal guidance.
4. Health guidance, and
5. Economic guidance.

Jones in his book "Principles of Guidance," lists six phases of guidance. He calls those as :

1. Vocational guidance.
2. Course, curriculum and School guidance.
3. Civic and Moral guidance.
4. Social guidance.
5. Leisure time and Vocational guidance.
6. Leadership guidance.

Purposes of Guidance :

Erickson has listed six important purposes of Guidance :

(*a*) Careful study of individual.

(*b*) Informational Services.

(*c*) Counselling.

(*d*) Placement and Follow up.

(*e*) Assisting the teachers.

(*f*) Coordination.

It requires a volume, to write on the benefits derived out of a guidance programme. To be precise, the definition given by Traxler and North serves the purpose. They observe, "Ideally conceived, guidance enables each individual to know his abilities, interests and personality traits, to develop them as well as possible to keep them flexible in order to meet the demands of a fluid environment, to relate them to his life goals and to clarify these goals, and finally to reach a state of complete and mature self guidance as a desirable citizen of our democratic social order and of the world."

Benefits of Guidance Programme :

Psychological counselling for the youth aims at the achievement of integrated personality in the youth, enabling him to see that much of what society expects of him, is for his own good and that in essence what is good for others is good for him too. The enlightenment of conscience is thus inseperable from the integration of personality in youth. A constructive programme of youth counselling will thus include actions, individual as well as collective, which promote the common good and foster in the mind of the youth, a desire to engage in socially useful activity. It cannot be forgotten that today, under conditions of modern social life, the problems of the teenager are coming more and more to the forefront.

Hence it is but incumbent on us to realise fully that the need of the hour is to have a psychological counsellor in every educational institution.

By

G. RAJ MOHAN

M.A., D.G.C., D.H.M.S.,

THE INSTITUTE OF NEUROLOGY MADRAS

India, on the threshold of Independence had drawn up plans for the economic and social development of the country. Technology and Science were given priority. Medicine got its due recognition and many medical officers were sent abroad for training in specialized fields.

The Government of Tamil Nadu, known to have many " firsts " to its credit in the various fields, was the first to take credit for starting the speciality in brain surgery in the country as early as 1950. Even at that time, the Government of Tamil Nadu embarked on a policy of expansion of medical facilities, selected medical officers to go abroad for training in various specialities. One such was brain surgery, for which a trainee was deputed to U.K., *viz.*, Dr. B. Ramamurthi.

Until 1950, surgery of the nervous system was practised only to a very small extent in the General Hospital. However, on his return in 1950, Dr. B. Ramamurthi was asked to organise a separate neurosurgical unit. With only ten beds and one half of an operation theatre made available to him, one day in a week, the Department of Neurology and Neurosurgery has now grown into an imposing multi storeyed complex, achieving international eminence.

The neurology institute houses the neuroradiology section. Neuropathology, EEG, EMG, Echoencephalography, Isotopearadiography, Neuro-chemistry etc., a well-equipped library, a well maintained museum, auditorium etc. The nerve centre of the building are the two main operation theatres, the Intensive therapy ward and the E.E.G. and E.M.G. rooms.

All modern diagnostic and operative facilities have been provided.

Today it is well known for the :

1. National and international character of patients with neurological illness.
2. The highly complicated and modern operations that are being performed.
3. The Post Graduate courses of training in surgical and medical neurology.
4. The quality of scientific papers presented at National and International meetings and published in various journals.
5. The research work undertaken under the auspices of the Madras State Research Committee, Indian Council of Medical Research and P.L. 480 funds.

The department has also the following to its credit :

1. The first E.E.G. (Electro-encephalograph) machine to be brought into the country.
2. The first to start P.G. courses in neurology and neurosurgery.
3. The only head injury centre in the country.
4. Intensive and extensive work in the field of stereotaxic surgery, *i.e.*, depth surgery of the brain, which has attracted the attention of workers in the field in Japan, the U.K. and U.S.A.

Extensive basic research is being carried out in the various laboratories. In the neuropathology section, brain tumours have been induced by clinical methods in nearly 300 mice for the first time in India in a strain of mice not used for such experimental purposes before. This work is expected to add current knowledge in the causation of the production of the much dreaded disease, cancer ; another field of work where much research has been done in this section is in the field of neurotoxins. A **detailed study of the changes in the brain in toxins, such as organophospharon, oleander and methyl alcohol poisoning has been made.**

Yet another field of work where newer knowledge has been gained in the study of changes in the brain in head injury. Knowledge gained in these areas has afforded considerable help in the diagnosis and management of patients with head injuries.

These constitute a few examples of the work that is carried on in the Institute in which progress appears to be the byword.

The late Dr. A. Lakshmipathi, denoted a sum of Rs. 1.80 lakh for the Neurology block, and the block has been named after him. The Government of U.K. has donated equipment worth £ 30,000. The U.S. authorities under P.L. 480 and the Indian Council of Medical Research are helping by generous grants for research.

It was due to the keen interest taken by the then Chief Minister Arignar Anna, that the construction of the block was taken up. This farsighted decision was made possible by the keen enthusiasm shown in the project by the present Chief Minister Dr. Kalaignar M. Karunanidhi, who was the Works Minister at that time.

Posterity will remember for ever these three stalwarts (Dr. Lakshmipathi, Arignar Anna and Dr. Kalaignar) who made a dream come true and today, Tamil Nadu is in the forefront in the advancement in the Neurological sciences. —R.B.

MADRAS NEUROLOGY INSTITUTE HOSTS INTERNATIONAL SCIENTIFIC MEET ON ITS 25TH BIRTH DAY

The Madras Institute of Neurology celebrated its 25th Anniversary holding an International Scientific Meet at which several papers of scientific value were read and discussed. In addition to the Scientific Congress the 10th Annual Conference of the Middle East Neurosurgical Society was also conducted at the same time, under the patronage of the Hon'ble Chief Minister of Madras Dr. M. Karunanidhi, the Hon'ble Prof. K. Anbazhagan, Minister for Health and Hon'ble Dr. Nedunchezhian, Minister for Education between 10th to 12th November 1975. The inauguration which was held at Rajaji Hall was marked by an impressive and illuminating ceremony at which 57 foreign delegates from abroad, many with their families and 65 Delegates from many parts of India, participated.

Talented Staff

Dr. B. Ramamurthi, Head of the Department of the Institute of Neurology, Madras Medical College, while welcoming the delegates and other participants, indicated that it was a special achievement on the part of the Institute of Neurology to have not only completed 25 years of useful service to patients but also to have made significant contributions to academic knowledge. The nearly 700 papers published by the various staff members of the Institute testified to the academic achievements of the Institute. He added that it was a matter worthy of note that a large number of trainees in this Institute had not only gone to several parts of India but also to many countries in the world. He was particularly grateful to the enlightened Govt. of Tamil Nadu for having given all facilities for the development of this Institute.

Dr. Willem Luyendijk (Netherlands), Dr. Watanabe (Japan), Dr. Sorour (Cairo), Dr. Taptas (Greece), Dr. J. B. Foster (United Kingdom) and Dr. B. Pertuiset (France) and Dr. Kelly (United Kingdom) congratulated Dr. B. Ramamurthi on his pioneering efforts in the field of Neurology in India and extended their greetings and good wishes. Dr. P. N. Tandon (Delhi), Secretary, Neurological Society of India reviewing the contributions made by Dr. B. Ramamurthi towards establishment of the Institute observed that in him, young surgeons had a glorious example to emulate.

Dr. N.O. Ameli (Teheran) giving the inaugural address of the 10th Annual Conference of the Middle East Neurosurgical Society recalled that several thousand years ago, Teheran had sent some of their own Doctors to India to learn from the Indian Scientists and also had caused translations of several Indian books of scientific value to be carried out and brought back to Teheran.

Inaugurating the Silver Jubilee Celebrations of the Institute of Neurology, Dr. M. Karunanidhi, Chief Minister of Tamil Nadu observed that in the medical field, Madras State had always been in the forefront of service and teaching. Though 25 years may not be a long time in a nation's history, in the development of science or a man's life, it could be used as a span to measure achievements. He further observed that the growth of advanced specialities of Medicine and Surgery had been commendable in Madras because of the interest and enthusiasm shown by the medical scientists here with the close help and cooperation of the public and the Government. One speciality which developed early had been the speciality of brain surgery and Neurology. The set up of the Institute was largely due to the far sightedness of Agrignar Dr. Anadurai, Former Chief Minister of Tamil Nadu who in fact was mainly responsible for the creation of the Institute.

Chief Minister's Tribute

The Chief Minister was particularly happy that the Institute of Neurology over the years had contributed to the development of Neurology and Neurosurgery not only in the City but also in the whole of Tamil Nadu. He further observed that the uniqueness of the Institute lay in the fact that it housed all the different disciplines of Neurological Sciences under one roof.

The Chief Minister commended the energy, enthusiasm and dynamism of Dr. B. Ramamurthi, which were directly responsible for the growth and development of a small unit into an Internationally famous Institute of Neurology. He congratulated Dr. B. Ramamurthi and his colleagues on the excellent work that had been done over the past 25 years and wanted the delegates who

Resume Furnished by :

DR. R. SARASA BHARATI, M.D., F.I.C.A.,
Professor of Neuropathology,
Madras Medical College

and

Neuropathologist
Registry of Neuropathology
Peripheral Cell-Indian Council of Medical Research.

had arrived from all over India and the rest of the world to make their discussions purposeful and successful.

Prof. K. Anbazhagan, Minister for Health in his prsidential address congratulating Dr. B. Ramamurthi and his staff for their excellent work but for which the Institute could not have either grown or obtained an Interational reputation, pointed out that the arrival of a large number of foreign delegates to the Institute showed the esteem in which the Institute was held by Neurologists the world over.

Dr. M. Natarajan, Principal, Madras Medical College, Madras proposing a vote of thanks observed that the number of publications that have come from the Institute of Neurology was easily the highest in any particular Department in the Madras Medical College.

The scientific sessions got off to a fine start with an excellent presentation on direct surgery of intracranial aneurysm by Dr. Suzuki of Japan who had operated on more than 100 cases of such aneurysms. 12 scientific sessions spread over 3 days were held in different halls simultaneously, where over 50 papers were presented and discussed at length. The feature of this meeting was that the presentation of the various papers were made exclusively by delegates from abroad and the sessions were chaired by notable Indian Neurologists.

Trigeminal neuralgia a condition in which intense pain is felt in various parts of the face by a patient as a result of disturbances in certain nerves, was discussed at length by Dr. Voris from the U. S. A., and Dr. Petty from Australia.

Dr. Walsh, Neurosurgeon from the United Kingdom gave an interesting talk on a subject of current interest "Spasmodic Torticollis" i.e. abnormal movement of the head and neck.

Psychosurgery and Schizophrenia, Stereotaxic surgery and Parkinsons disease (Shaking palsy) and various newer techniques in operative procedures were also considered and well discussed.

Useful and sometimes elaborate discussions followed the presentation of each paper and newer ideas newer knowledge and newer methods of approach in the diagnosis, management, surgery and treatment of patients were obtained. An additional feature was the discussion on certain diseases peculiar to the tropics. An useful suggestion was made by Dr. Adoylye from Nigeria who indicated that a symposium on Nervous diseases of tropical interest would benefit most of them.

An important part of the meet was a Symposium on Neuro Traumatology held under the auspices of the World Federation of Neurosurgeons which was chaired by Dr. O. Sorous of Egypt. The problems in the fields of Head Injury and Spinal Cord Injury were considered at length and the basic aspects raised intracranial tension and other similar important facts were discussed in detail.

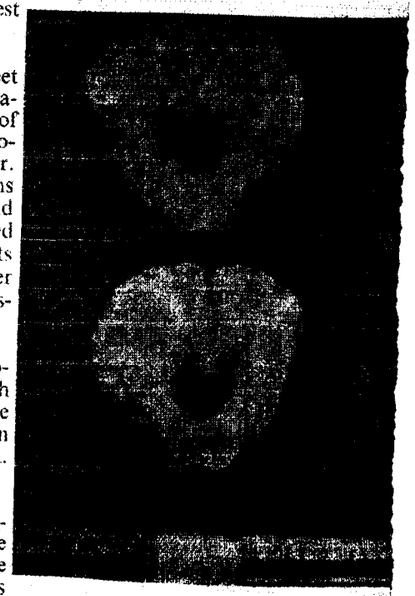
A very exciting film on Microneurosurgery, a technique which involves the use of the microscope to tie up delicate blood vessels in the brain was shown by Dr. K.K. Jain of Switzerland.

On the last day of the Conference the Delegates visited the Institute of Neurology and were taken around the various sections such as Electroencephalography, Electromyography, Neuropathology, Neurochemistry, Neuro-Radiology, Neuro-Ophthalmology and Neuro Physiology. The research work done in these various sections in adition to those in Neurology and Neurosurgery were observed and appreciated by the delegates.

The concluding sessions was marked by an exceedingly thought-provoking lecture on 'The Place of the Academic Unit in Neurosurgery" by Dr. R. Kelly (U. K.), Dean of the Institute of Neurology, Queen's Square, London who observed that the features indicated in his lectures were already available in the Institute of Neurology, Madras and thus the Institute had not only chalked out a place for itself in world Neurology, but in fact had become an outstanding example for other neurological centres to follow.

The Institute Day Oration was delivered by Dr. P. N. Tandon in which he drew attention to the enormous difficulties and handicaps faced by the Neurosurgeons and Neurologists in India despite which much had been achieved.

The Delegates who were feted well were also given useful souvenirs to carry away as momentos of their visit to the Madras Institute of Neurology.



Head Injury with Cerebellar Haemorrhage.

Head Injury with bleeding over The Brain.

Kodaganar Reservoir Scheme of Madurai District

60 T3

Means Water for the "dry" taluks of a fertile district

The Kodaganar reservoir scheme in Madurai District has been completed and awaits formal inauguration.

The surplus waters from the Kodaganar river used to overflow into the Amravati. A major portion of the Kodaganar, traverses the dry areas of Dindigul, Vedasanthur and Karur. If this heavy flow were arrested and utilized for irrigation purposes, additional acres could be brought under cultivation. The agriculturists of Vellianai were clamouring for a reservoir, so that they could irrigate their dry lands. This long felt need of theirs has now taken shape into the Kodaganar Reservoir.

KODAGANAR

The river Kodanagar originating from the Eastern slopes of Tower Palani hills, runs through Dindigul Vedasandur Taluk of Madurai district towards North and traverses in Karur Taluk, Tirichi District and finally joins with Amaravathi near Karur town. The length of the river is about 109 K. M. (68 Miles). It runs through the dry area of Vedasandur and Karur Taluks. The hydrology of the river has been examined earlier and few proposals for utilising the lows have been framed.

The total catchment area of the river is 2,173 Sq. K.M. (839 Sq. Miles). The catchment area of the river is influenced by both South-west and North-east monsoon. The river floods during October and November. After November, the flow dwindles down and upto May the flow is meagre not to speak of uncommon floods. The catchment area of the river is included by the rainfall stations at :—

1. Kodaikanal
2. Dindigul
3. Vedasandur and
4. Aravakurichi.

Existing Irrigation :

The river has fourteen anicuts along its run. They have got a direct ayacut of 1,310 H.A. (3,236.15 Acres). The impounding of water by Kodaganar Reservoir scheme will not affect any lower down irrigation interests as there is a heavy surplus of water available in this basin after meeting its requirements for its registered ayacut.

History of the Scheme :

The People of Vellianai, Karur Taluk were repeatedly requesting for the implementation of this scheme. The Scheme has been finalised after detailed investigation.

Scope of the Scheme :

The Scheme provides for formation of a Reservoir besides excavation of two canals, one on either side with sill at 195.00 M. (639.8 Ft.) to irrigate a new area of 2,080 H. a. (5,140 acres), to bridge a gap of 144 H. a. (356 acres) and to assure supply to an existing ayacut of 331 H. a. (819 acres).

The ayacut benefitted district-wise are as given below :—

	New	*Gap.*	*Stabilisation.*
Madurai District.	2,230 Ac.	..	..
Tiruchi District.	2,910 Ac.	356 Ac.	819 Ac.
Total :	5,140 Ac.	356 Ac.	819 Ac.

Hydrology.

Rainfall :

The catchment of the proposed reservoir is influenced by North-east and South-west monsoons and there are four rainfall stations. Out of which three are within the catchment area and the other one is near the catchment area. The dependable yield for all the rainfall stationed as per dry damp-wet method was prepared and the same is adopted for yield computation.

	Average conch-ment.
1. Kodaikanal ..	0. 18 M. Com./ Sq. K.M.
2. Dindigul ..	0. 10 do.
3. Vedasandur ..	0.064 do.
4. Arvakurichi ..	0.062 do.

The surplus from Kodaganar at the confluence point of Amaravathi river, after meeting the requirements of existing cultivation at a duty of 6 Acres/M. Cft. is 54.9 M.

Cum. the quantity required for the existing ayacut under the Amaravathi channel below the confluence of Kodaganar is about 35.67 M.Cum. for 7.559 acres. By assuming that half of the requirement would be met by the flow from Kodaganar and also taking into account the new proposal as for 7.41 M. Cum., the net surplus is 29.08 M. Cum. The selected site is just near Alagapuri Anicut, the twelfth anicut in the river. Allowing 7.41 M. Cum. for 3 Minor works under execution and three other minor schemes under consideration in the higher reaches, the balance yield available for utilisation is 21.6 M. Cum. (765 M. Cft.) Hence the storage of 21.6 M. Cum. (765 M. Cft.) can be thought of this being the net yields available at the site. The capacity of the reservoir will be 12.3 M. cum. (434 M. Cft) and will have 1-3/4 fillings.

Maximum Flood Discharge :

The maximum flood discharge from the catchment area works out to 1,295 cumecs (45,000 c/s) adopting Ryve's formula with a value of 750 for 'C'. To dispose off the flood, it is proposed to construct Surplus Regulator of Five vents, each 12.2 M x 3.05 M (40' x 10') size. Basin type energy dissipating arrangements have also been provided. The cost of spillway works out to Rs. 67.00 lakhs.

Crop requirements :

The new area proposed for irrigation will have single crop of paddy. The cultivation season is from October to February. The catchment and the ayacut of the Reservoir are influenced by North-east monsoon. The soil throughout the area is clay loam and red earth mixed with clay which is suitable for paddy cultivation. A duty of 7-1/2 acres/M.Cft. for the new ayacut is adopted.

HEADWORKS

Salient features :

The scheme proposed is to form a Reservoir of about 12.3 M. Cum. (434 M. Cft.) capacity across Kodaganar river in Vedasandur taluk of Madurai Dist. The site is about 10 K.M. (6.3 Miles) north of Vedasandur. A metalled road leads to the site proper. The latitude and longitude of the site are 10° 35'-32" east and 77° 58'-24" North. The nearest Railway station is Dindigul, which is at a distance of 33 K.M. (20 Miles) from the site.

ECONOMICS OF PROJECT

Spillway and Earthdam :

Maximum flood discharge	1,295 cumecs (45,000 cusecs).
Crest level of spillway	192.00 M. (628.86 Fl)
Length of Spillway portion	73.15 M. (243 ft.)
Length of Earthdam	2,425.00 M. (7,956 ft.)
Top width	4.7 (M (16 ft.)

Front slope 2:1 and 2-1/2:1 below 6 M from T.B.L.

Rear Slope. 2:1 and 3:1 below 6 M from T. B. L.

Sluice :

	Sill level.	*No. of vents.*	*Discharge.*
Left side Canal.	195.00 (639.80 M. Cft)	One	1.3 cumecs (46.4 cusecs)
Right side Canal.	do	One	4.6 cumecs. (161.5 cusecs.)

Ayacut Proposed :

(Ha./Acres)	*New*	*Gap*	*Stabilisation.*
Right side canal	1,405/3,470	144/356	331/619
Left side canal.	675/1,670	..	

FOOD PRODUCTION

From the new areas o 224 ha. (5496 acres) at 0.8 tonne/acres. (including gap of 144 ha. (356 acres)		4,396.8 *Tonnes.*
From the stabilisation of 331 ha. (819 acres) at 0.5 tonne/acre.		409.5
Deduct for acquisition of land at 0.25 tonne/acre for dry lands and at 0.8 tonne/acre for	$\frac{1089.08 \quad 62.67/4 \quad 0.8}{4}$	(--) 322.4
Total net production		4,483.9 or say 4,484

Total cost of the scheme	Rs. 212.00 lakhs.	
Cost of one tonne of food production works out to :	212.00 lakhs/4484	: Rs. 4,728.00
Cost per acre :—		
The cost per hectare	Rs. 212.00/2555	Rs. 9292.00
The cost per acre.	Rs. 212.00/6315	Rs. 3352.00

Land Acquisition :

The total land to be acquired for the scheme is 466 ha. (1151.75 acres) for headworks, the total land acquisition is 303 ha. (760.75 besides 38 tiled houses, 93 huts and 92 wells are also coming under submersion. For canals the land acquisition is about 153 ha. (391 acres) the nature, classification etc., of land, houses etc., required for the scheme are given in a tabular form below :—

Left side canal :

There will be two supply channels taking off at L. S. 880 M (2,886 ft) and 1,425 M. (4,675 ft). from the Reservoir. The left side canal is 9 K. M. (56 Miles) in length. The canal is aligned on contours so as to irrigate lands on one side only since the terrain permits only contour canal. A balanced depth of cutting is adopted. There are nine nos. of sluices in the left side channel to irrigate 675 ha. (1670 acres) of ayacuts. The first reach of the left side canal is from 0 to 5 K.M. and the section is 3.1 x 0.61 M. and the second reach is from 5 K. M. to 9 K. M. and the section is 2.4 x 0. 61 M. The villages benefitted under the canal are (1) Kalvarpatti and (2) Periamanjuvali.

Right side canal :

The right side canal is aligned as contour canal and it takes off at L.S. 1425 M (4675 ft.) The total length of the canal is 48 K.M. (30 Miles). There are 22 nos. of sluices in the right canal. The total ayacut proposed under this canal is 1830 ha., (4045 acres) which includes a new ayacut of 1405 ha. (3470acres) and gap of 144 ha (356 acres) besides stabilisation of the existing ayacut of 332 ha. (819 acres) under four tanks. The villages benefitted are (1) Pallappati and (2) Koombur.

The first reach of canal is from O to 12 K. M. and the section is 2.7 M x 1 M and the second reach is from 12 K. M. to 43 K.M. the Canal section is 1.9 M. x1 M. The third reach of the canal is from 43 K.M. to 48 K.M. and the section of canal 1.6 M x 0.8 K.M. There are three nos of drops at L.S. 47.2 K.M. 47.4 K.M. and 47.65 K.M.

The right side canal is proposed to be lined with cement concrete 1 : 4 : 8 as the soil is very porous and the length of the canal is as long as 48 K.M. The side and the base are provided with cement concrete libs of 7.5 cm. X 7.5. cm. at 2 M. intervals. The loss in transmission in the right side canal will be utilised for bringing under cultivation a new ayacut of 920 acres.

Estimate and Programme of execution :—

The scheme was sanctioned Govt. on G.O. Ms. No. 1296, P.W.D. dt. 23-8-1973 for Rs. 212.00 lakhs. The scheme estimate is technically sanctioned for Rs. 233.2 lakhs. in Chief Engineer's (Irrigation) Madras No. 7F/1973-74 it is programmed to complete the Head works in 640 days commencing from 1.4.1974 to 31-12-1975. Foundation stone was laid by the Honourable Chief Minister of Tamil Nadu on 25-8-1973 at Uppida Mangalam. The Secretary, PWD, inspected the works on 1-8-1974. The Honourable Minister for works also inspected the works on 2-3-1975. For execution of this scheme a special Division with three sub-divisions with Head Quarters at Dindigul was formed on 19-12-1973 on completion of the office Building at Vedasandur Camp, the Office was shifted on 16-9-1974 to Vedasandur.

Present stage of the Scheme :

All quarters are completed and occupied. Earthdam left and right Regulator are nearing completion. Necessary urgent action are being taken to celebrate the inauguration function of the scheme and to commission the dam shortly. In addition of Special Division for Canals with three sub-divisions with Karur as head quarters was formed on 21-10-1974.

RETURN ON THE PROEJCTS

The total extent of the ayacut benefitted is 2,080 ha. (5140 acres) of new ayacut, 144 ha. (356 acres) of gap and 331 ha. (819 acres) of existing ayacut.

The presentage of return on direct charges without and with betterment levy works out to 0.554 and 0.810 respectively. The return on the Project is, however, only 0.324% at the tenth year of completion of the Project if arrears of interest is also taken into account.

Reservoir.		*MRS Units*	*FPS Units.*
Catchment area	..	1,670 Sq. K.M.	645 Sq. Miles.
M.W.L. and F.R.L.	..	200.25 M.	657.00 ft.
T.B.L.	..	202.75 M.	665.00 ft.
Capacity at F.R.L.	..	12.3 M3.	434.00 M. Cft.
Water spread area	..	492. H.a.	1,216 acres.
Spillway :			
No. of vents and size. 5 Nos.	..	12.2 x 3.05 M/40' x 10'	
Crest Spillway	..	192.00	628.86
Maximum flood discharge	..	1,295 cumecs.	45,000 C/s
General :			
Total ayacut benefitted :			
New	..	2,080 hafi	5,140 ac.
Gap	..	144 ha.	356 ac.
Stabilisation	..	231 ha.	819 ac.

Details.	*Patta*		*Garden Acts.*	*Porom-boke Acs*	*Tiled Houes.*	*Huts*	*Wells*
	Dry acs.	*Wet acs.*					
1. Head works	634.45	62.67	63.63	558.15	38	93	92
2. Left Canal.	49.00	..	..	..	..	..	..
3. Right Canal.	342.00	..	..	..	..	..	..
4. Total.	1025.45	62.67	63.63	558.15	38	93	92

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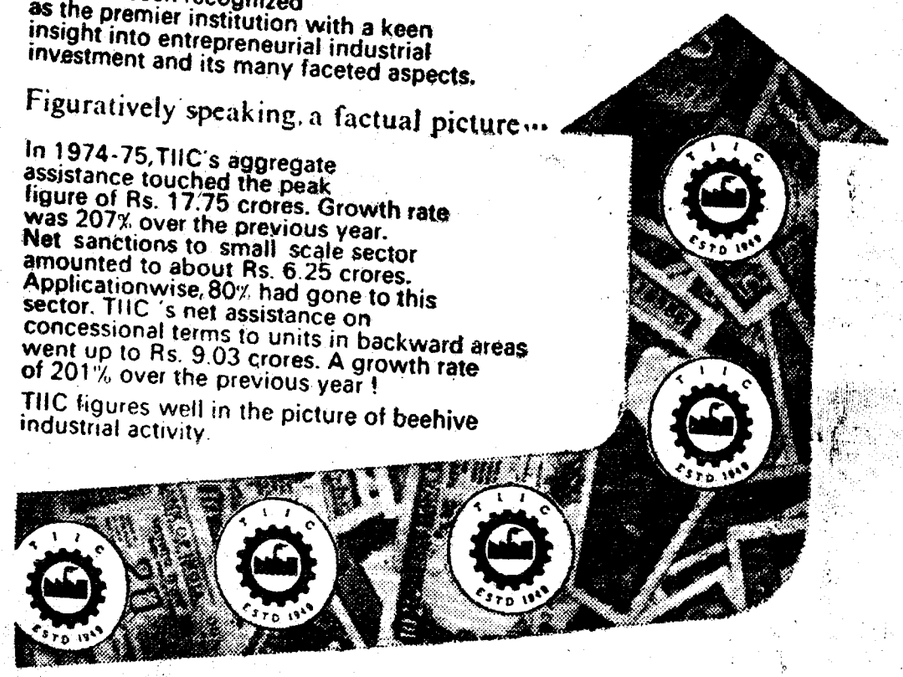

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DIETING WITHOUT TEARS FOR DIABETICS

Madras Doctors Prove Rice is no "enemy" of diabetes

It is still widely believed that rice should be totally avoided by a diabetic and instead, he should eat wheat or ragi. While it is difficult to explain the origin of such a belief, it probably goes back to the pre-insulin era, that is, the Naunyn period, when treatment of diabetes consisted of severe carbohydrate restriction and intermittent fasting. **However, with our present understanding of diabetes and in the light of experience with rice diets at the Diabetes Research Centre, Madras, we feel that the avoidance of rice is hardly justified. In fact by prescribing a carefully worked out rice-diet to a rice-addicted diabetic, the disease is brought under control quicker.**

The fallacy of a diabetic changing over to a wheat or a ragi diet as part of the treatment of diabetes mellitus becomes obvious as we take a look at the food values of major cereals.

Table I, shows very little difference between the various cereals in their carbohydrate content. The diabetic who changes over to a wheat or a ragi diet and then consumes twice his normal amount of food under the firm belief that he is undergoing 'treatment' for diabetes is only deceiving himself. The first step in the treatment of diabetes by diet control is reduction in the total calories of food. It is quite immaterial whether one takes rice, wheat or ragi.

It might be thought by some that wheat contains more protein than rice (11.8 gm per cent in wheat compared to 8.5 gm per cent in rice). While this difference itself is not appreciable, Gopalan and his colleagues at the National Institute of Nutrition, Hyderabad, have shown that the protein of rice is superior to that of wheat. **Experience with rice diets over a period of 15 years has convinced that if the total calories are restricted, a rice diet can be used for a diabetic to achieve easier, quicker and better control of diabetes.**

In India, in the majority of the population, cereals form bulk of the diet and constitute the major source, if not the only source, of nutrients. In South India, people are accustomed to a relatively higher carbohydrate content in the food at the expense of proteins. A typical South Indian meal of the middle income group is of about 3,000 calories, which consists of a morning tiffin of iddlies or dosas, rice meal in the noon and night and coffee in between consisting of the composition as shown in Tables 1 and 2. The respective percentage of carbohydrate, proteins and fat is shown in Table 3.

By

A. RAMACHANDRAN,

M. VISHWANATHAN,

Diabetic Research Centre,

Madras.

The food of an average Indian is quite rich in carbohydrate in the form of rice and wheat and severe restrictions in their diet pattern, is unlikely to be adhered to over a long period of time. In view of of the pattern of food in our country, many workers felt that a higher carbohydrate content in the diet of the diabetics was necessary. Patel of K.E.M. Hospital, Bombay and Vaishnava of the Maulana Azad Medical College, New Delhi noted the usefulness of diets with a higher content of carbohydrate.

In 1968, Viswanathan of Madras reported his results with the high carbohydrate diet that he formulated for diabetics, with carbohydrates constituting about 60% of the diet. The carbohydrate given was usually rice. The total calories was calculated at 25—30 calories per kg. of ideal body weight. It was found, however, that many patients did not have sufficient protein in their diet. The protein content of the diet was then raised, which resulted in a further reduction in the fat content of the diet. While selecting the fat, steps were taken to see that a good percentage was of the polyunsaturated variety.

The protein added was in the form of pulses like bengal gram, green gram and black gram. This helped not only to provide a greater variety of palatable food, but also to achieve easier and better control of diabetes. There was yet another important reason for addition of these pulses. Cochrane and his colleagues in 1956, and Mathur in 1969 from Agra, have shown that bengal gram helps in the prevention of arterosclerosis by reducing serum cholesterol and triglyceride and possibly through some other mechanisms. As is well-known in the diabetic, the arterosclerotic process is accelerated. Hence, in the diet described above, it is felt that addition of bengal gram might help in delaying arterosclerosis and prevent its crippling vascular complications. Gopalan has also stated that the proteins of cereals and pulses have a mutual supplementary effect and the deficiency of one amino acid in one food stuff can be made good by its excess in the other, if both

are consumed at the same time. This makes this diet a well balanced diet for diabetics. It may be called a restricted calorie, high carbohydrate high protein, low fat diet.

A break-up of the high carbohydrate-high protein diet is given in Tables 4 and 5.

When patients were put on this diet the fasting blood sugar was reduced and the glucose tolerance test showed improvement. The following observations have been noted during use of this diet over a long number of years.

1. The patients co-operation was more readily obtained, because the pattern of the diet was not changed.
2. The incidence of ketosis (diabetic coma) was found to be low.
3. The control of diabetes was easier and quicker.
4. The dose of drugs used was very low.
5. The serum levels of cholesterol and triglyceride showed a tendency to fall contrary to current belief.
6. The incidence of vascular complications was found to be low on follow up of patients on this diet.

Conclusion :

There is no such thing as an 'ideal' diabetic diet. Any diet that is restricted in the total number of calories, and which is likely to be adhered to by the diabetic throughout his life, and which will not lead to any deleterious effects by increased levels of lipids, which are important risk factors in arterosclerosis, may be considered a satisfactory diet. For the average diabetic in India, who is used to a diet richer in carbohydrate, a diet that is restricted in calories and in its fat content, and is rich in carbohydrate and protein seems to be the best diet. The protein is taken preferably in the form of pulses like bengal gram or green gram. Regarding the carbohydrate content, there is no difference between rice, wheat or ragi. Hence, there is no need to change from a rice diet, which is the usual diet in our country, to a wheat or a ragi diet.

TABLE 1

FOOD VALUES OF CEREALS

Cereal	*In gm. per 100 gm.*		
	Carbohydrate	*Protein*	*Fat*
Rice	78.2	8.5	0.5
Wheat	71.2	11.8	1.5
Ragi	72.0	7.3	1.3

TABLE 2

TYPICAL SOUTH INDIAN DIET COMPOSITION

	Gm	*Carbo-hydrate*	*Protein*	*Fat*	*Calories*
Cereals	550	440	33	2	1,910
Pulses	30	18	6	..	96
Oils and fats	40	..	..	40	360
Root vegetables ..	50	12	1	..	52
Leafy vegetables ..	50	3	1	..	16
Milk	300	14	10	11	195
Meat, fish and egg ..	40	..	7	5	73
Sugar and jaggery ..	60	60	..	..	240
Fruits	50	15	..	..	60

TABLE 3

TYPICAL SOUTH INDIAN DIET — BREAK-UP OF PROXIMATE PRINCIPLES

	Gm.	*Calories*	*Percentage*
Carbohydrate	562	2,248	75
Protein	58	232	8
Fat	58	522	17

TABLE 4 — HIGH CARBOHYDRATE—HIGH PROTEIN — LOW FAT DIET — COMPOSITION

	Gm.	*Carbohy-drate*	*Protein*	*Fat*	*Calories*
Cereals	175	140	11	1	613
Pulses	150	90	36	4	540
Oils and fats ..	30	..	..	30	270
Leafy vegetables ..	150	8	3	..	44
Milk (skimmed) ..	600	27	15	..	168
Meat and fish ..	60	..	12	10	138
Egg white ..	2 Nos.	..	26	..	104
Total		265	103	45	1.877

TABLE 5 — HIGH CARBOHYDRATE—HIGH PROTEIN — LOW FAT DIET BREAK-UP OF PROXIMATE PRINCIPLES

	Gm.	*Calories*	*Percentage*
Carbohydrate	265	1,060	56.4
Protein	103	412	22
Fat	45	405	21.6
Total Calories		1,877	

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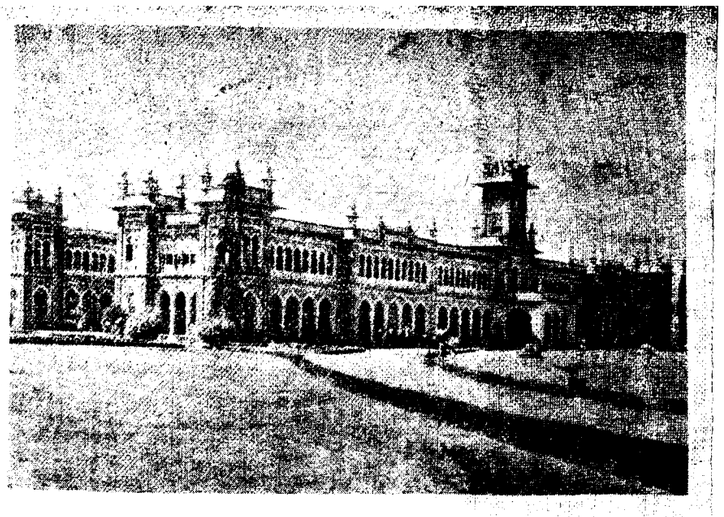
All About Tamil Nadu Agricultural University



The Agricultural College and Research Institute, Coimbatore started in 1907, and one of the oldest Agricultural Colleges in India, became the nucleus of the University when it started functioning on June 1, 1971. The College has to its credit to have been the second post-graduate institution in agriculture since 1958, the first one being the Indian Agricultural Research Institute, New Delhi. The Research Institute at Coimbatore has a reputation for its work on Plant Breeding and Genetics, Soil Science, Agronomy, Plant Pathology, Agricultural Entomology, Horticulture, Agricultural Engineering and a few other related areas. Ideally located in our agriculturally rich area, with typical red, black and alluvial soil types and dry-land, garden-land and wet-land farming systems spread over an area of about 720 acres, the campus is one of the most attractive spots in the State of Tamil Nadu. The research findings of the centre have benefited the farmers of the State to a remarkable extent that every year thousands of farmers from many corners visit the Research Institute. Together with the second Agricultural College at Madurai, started in 1965 the College has trained so far over 5,000 Agricultural Graduates and about 1,000 post-graduates from many southern States, and some of them are to-day's leaders in the fields of Agricultural Education, Research and Extension in several State and in All India institutions. The newer Agricultural Colleges in the States of Kerala, Andhra Pradesh and Karnataka have adopted several of the academic and administrative features of the Coimbatore College and Research Institute. Having played such a prominent role for over half a century, the College got its due recognition from the Joint Indo-American Team appointed by the Government of India, leading to an offer in 1958 from the Government of India for the establishment of the first Agricultural University in India at Coimbatore. Unfortunately this offer was not availed of at that time and the State waited for 13 long years by which time 14 other Agricultural Universities had been established. Today we have 22 Agricultural Universities in India, one in each State, excepting four in Maharashtra, three in Uttar Pradesh and one in Assam serving the needs of the hill States of Assam, Meghalaya, Manipur, Arunachal and Mizoram. The Tamil Nadu Agricultural University is now trying hard to re-establish its leading position as an academic and research institution.

During the first two years of of its existence the University organised its administrative, academic, research and extension education set up, gaining from the rich experience of other Agricultural Universities in the country. The University Statutes, Regulations, Rules and Guidelines were framed and finalised. The services of the employees of all categories who were transferred from the State Government and of those newly recruited by the University were regularised with effect from October, 1974. Of the seven Faculties provided for in the University Act four have already been established and they are : (*i*) Agriculture, (*ii*) Agricultural Engineering, (*iii*) Veterinary and Animal Sciences and (*iv*) Basic Sciences and Humanities. Under each of the Faculties several University Departments have been organised. The Agricultural College at Madurai was also reorganised to fall in line with the set-up at Coimbatore. Barring the Madras Veterinary College, there are 22 Departments, which include Fisheries, Forestry and Food Technology. These latter three Departments would form the nucleus for the Faculties of Fisheries Science, Forestry and Home Economics, provided for in the University Act. Thus, the infra-structure for the integrated, multi-disciplinary activities to cover all branches of Agricultural Science in its broad definition has been provided. Each of the University Departments has been given the responsibility of teaching, research and extension education in an integrated manner and adequate administrative and financial authorities have also been given for the Departments to effectively carry out the functions entrusted to them.

By

Dr. G. RANGASWAMI

Vice-Chancellor

Tamil Nadu Agricultural University.

Teaching :

On the academic side, the teaching programme was thoroughly reorganised with a modern outlook and flexible curricula in the under-graduate and post-graduate programmes. The Trimester system of education, with cent per cent internal assessment and continuous evaluation of students learning capacity in the class room and outside was introduced in 1972 and has been working most satisfactorily both in the main campus in Coimbatore and in the second campus in Madurai. New degree programmes leading to four year professional B.Sc. (Hort.) and five year professional B.E. (Agri.) were introduced in 1972. The new Department of Seed Technology established in 1973, offers a two year M.Sc. Ag. degree in Seed Technology, the first of its kind in India. The Department of Biology of the Faculty of Basic Sciences and Humanities offers a two year M.Sc. programme in Environmental Biology, again the first of its kind in India. The rush for admission to the under-graduate classes have been rapidly increasing ever since the University came into existence. As against about 7 or 8 applications for every seat prior to 1971, to-day we are receiving 10 to 15 applications for each seat, and this is inspite of the fact that the minimum requirements for filing applications have been substantially increased. Thus we have been able to select and admit candidates of high calibre and considering that to-day's students are to-morrow's staff, we are assured of continued improvement in the quality of work in our future teaching, research and extension education programmes of the University and in the State.

Research :

Research in the University has been reorganised to cover not only the new branches of Agricultural Science but also to make it field-oriented, project-based and time-bound. The research activities in the University are formulated under the guidance of a Research Council headed by the Vice-Chancellor, with Deans, Directors, five nominated Heads of Departments and five leading scientists from outside the University, as Members. In order to identify the field problems of regional importance and to review the research results, annual meetings with the senior officials of the State Development Departments are held, when the research findings useful for extension programmes, new problems needing attention and reorientation of the existing programmes to suit the changing needs of the extension agencies and the farming community of the State, are discussed and decided. To-day we have on hand over 900 research projects being carried out at 18 centres spread all over the State in which over 700 scientists and 500 technical and supporting personnel are engaged. About one third of the funds for the University's research activity is received as grant from the ICAR and the rest from the State Government and from the University's revenue. The University has developed a Master Plan for expanding its research activity to cover several branches of agricultural sciences and to strengthen Regional Research Stations so as to serve all the agro-climatic and hill regions of the State. The Plan covers both long and short range programmes and links up with the State Plan requirements in respect of technical man power for teaching, research and extension education in crop production, horticulture, animal production, agricultural engineering, home economics and rural development, fisheries, forestry, etc. Presently, the Plan is being implemented in a rather slow pace due to limited financial resources made available by the State and Central Governments.

"Firsts" to its credit

M.Sc., Ag. Seed Technology

M.Sc., Environmental Biology

The concerted efforts of our scientists during the past four years have yielded rich results and the chief among them are the release of five high yielding varieties of rice, two each of sorghum and ragi, one each of blackgram, greengram and redgram, five new varieties of vegetables, two of fruits, one of groundnut and two of cotton. The extra benefit on account of this to the State in terms of additional income to the farmers is estimated at about Rs. 20 crores per year. There are several innovations such as jasmine oil extraction plant, cultivation of nitrogen-fixing protein-

Tests being carried out in the Chemistry Laboratory

Research to suit all agro climates Planned

rich **Pleurotus** mushroom, use of **Rhizobium** and **Azotobacter** for increasing crop yields and packages of practices for cropping systems for different agronomic regions of the State have been made. Several newer research items such as improvements in seed production technology, design and development of new machines for farm produce processing and storage, formulation of new recipes from minor millets and of beverages from fruits, composite fish culture in inland waters and farm ponds, economic farm forestry practices, reducing the cost of feed for poultry and cattle are being actively pursued.

Extension Education :

The University has a Directorate of Extension Education with an Extension Education Council, headed by the Vice-Chancellor, with representatives of progressive farmers and of the University and State Government representatives as members. This body advises the University on the ways and means of disseminating newer knowledge among the farming community and the public. The extension wing organised 28 training programmes during the past four years for the benefit of the State Government staff and progressive farmers, the subjects covered being Minor Irrigation, General Agriculture, Farm Management, Extension Techniques, Hydrology and Sedimentation, Agricultural Economics, Seed Technology, Floriculture etc. About 500 persons have been trained under these programmes. Adaptive trials for assessing the performance of pre-release varieties of cereals and pulses have been conducted in different parts of the State. In all 74 such trials have been conducted during the past three years. This helps the extension staff to gain first hand knowledge on the newer strains and the research staff to learn about the strong and weak points of their research findings.

The National Demonstration programme had three centres under the University in the districts of South Arcot, Tiruchirapalli and Madurai during 1972—74. Presently, there is only one centre functioning in Madurai district. Under these programmes 151 demonstrations have so far been conducted in farmers' fields. The benefits to the farmers through adoption of modern scientific techniques in intensive farming are reflected in terms of net profits of Rs. 18,000 to 50,000 per hectare in 12 months. The demonstration farms were utilised for conducting Field Days in which over 6,000 farmers have participated.

Water Harvesting Techniques

There is one pilot project associated with dry farming at Kovilpatti. Several new cropping programmes and cultivation practices have been developed for the black cotton soil area of this district. Methods of intercropping and mixed cropping and to conserve soil moisture have been evolved and the same are being demonstrated in the farmers' fields. Techniques for water harvesting and its utilisation in an economic way, have been evolved and are being demonstrated in the pilot project area.

The Communication Centre has been active in publishing literature in English and Tamil covering many subjects pertaining to agriculture. The University Press, under the Communication Centre has already published about one hundred booklets and leaflets and a few books. A quarterly journal in Tamil "Valarum Velaanmai" is published for the use of the public. This journal is meant for popularising scientific knowledge on selected branches of agriculture among not only the farming community, but also the general public.

The University has started 'Correspondence Course' for the benefit of farming community and so far 18 batches have been trained bringing benefit to about 300 farmers in different fields such as Intensive Rice Cultivation, Poultry Husbandry, Vegetable Cultivation, Cotton Cultivation etc.) Lessons on scientific farming are being broadcast through the All India Radio at regular intervals. Thousands of querries from the farmers have been answered so far. The **Farm Advisory Council** consisting of Heads of Departments of the University has been solving some of the most difficult field problems of the farmers. The problems of the farmers are referred to the Farm Advisory Councils through the State Government Extension Departments and through the Farmers Training Centres, two of which are located in the University, one at Coimbatore and another at Madurai. The Specialists of the University attend to these problems and find solutions which are transmitted to the farmers and where necessary, demonstrations are conducted in the farmers' fields.

In conclusion it may be stated that during the first four years of its existence, the University has organised and stabilised itself both administratively and academically, as an institution of comparable high standards. It has geared itself to meet with the challenging needs of the farmers of the State. Several newer departments have been started and through an integrated and interdisciplinary approach scientific data on economic and efficient utilisation of soil, water and other natural resources are being obtained for transmission to the farmers through the various extension agencies in the State. Given increasing support from the State and Central Governments it is poised for more rapid progress in the coming years. **

SIPCOT BREAKS NEW GROUND—A CATALYST OF PROGRESS

State Industries Promotion Corporation of Tamil Nadu Limited (SIPCOT) during the brief span of three years of its working has cut new ground in the sphere of industrial dispersal in backward areas of Tamil Nadu. In just over three years, SIPCOT has sanctioned assistance for 192 industrial units catalysing a total investment of over Rs. 82 crores with an employment potential for over 13,200 persons. The total assistance sanctioned under the various schemes is over Rs. 11 crores excluding the direct investment of Rs. 1 crore by SIPCOT in the development of Industrial Complexes in backward areas. Except for five projects with a total assistance of Rs. 47 lakhs involving a total investment of less than Rs. 3 crores all the other projects are coming up in one or the other of the backward districts of the State. The fact that over 96% of the assistance sanctioned by SIPCOT has gone to units in backward areas and account for 96% of the total investment catalysed in all the projects assisted by SIPCOT brings out vividly how the Corporation has concentrated its attention on the achievement of the much needed industrial dispersal in the backward areas of the State. Adopting a marketing approach and the right strategy of converting backward areas into developing ones instead of pushing industries to the backward areas with mere financing incentives, SIPCOT has been able to achieve these significant results in a very short period.

In the very first year of its operations, SIPCOT assisted the development of a mini Industrial Complex at Anakaraipatti in Ramanathapuram District where one major engineering unit, two medium scale units and eleven small scale industrial units are already in production with a total investment of over Rs. 3 crores and offering employment opportunities to over 1,000 persons. In the last two years the Corporation has concentrated its attention on the development of a major Industrial Complex at Karunanidhinagar, Ranipet. All the items of work connected with the development of infrastructural facilities in Ranipet have been completed and already 31 projects involving a total investment of over Rs. 27 crores with direct employment potential for over 3,800 persons have been allotted developed plots extending over an area of 268 acres. It is significant to note that as many as eight projects have already gone into production at Ranipet and nine more are under various stages of construction and are expected to go into production shortly. The other 14 projects are under the various stages of formulations like arrangement of finance, procurement of machinery, etc. Viewed against the tight money conditions, sluggishness in the capital market and shortages of critical materials the progresss of implementation of the projects in the Complex is very encouraging. SIPCOT is confident that within the next two years the entire Complex would be fully occupied when the total investment catalysed in the Complex is expected to exceed Rs. 60 crores providing employment opportunities for over 8,000 persons. In addition to this, about 100 small scale industries will also come up in the area set apart for construction of sheds for small scale industries by SIDCO. In the development of backward areas the Ranipet experience has been unique and this has encouraged SIPCOT to take up development of Industrial Complexes one by one in all the backward districts of the State.

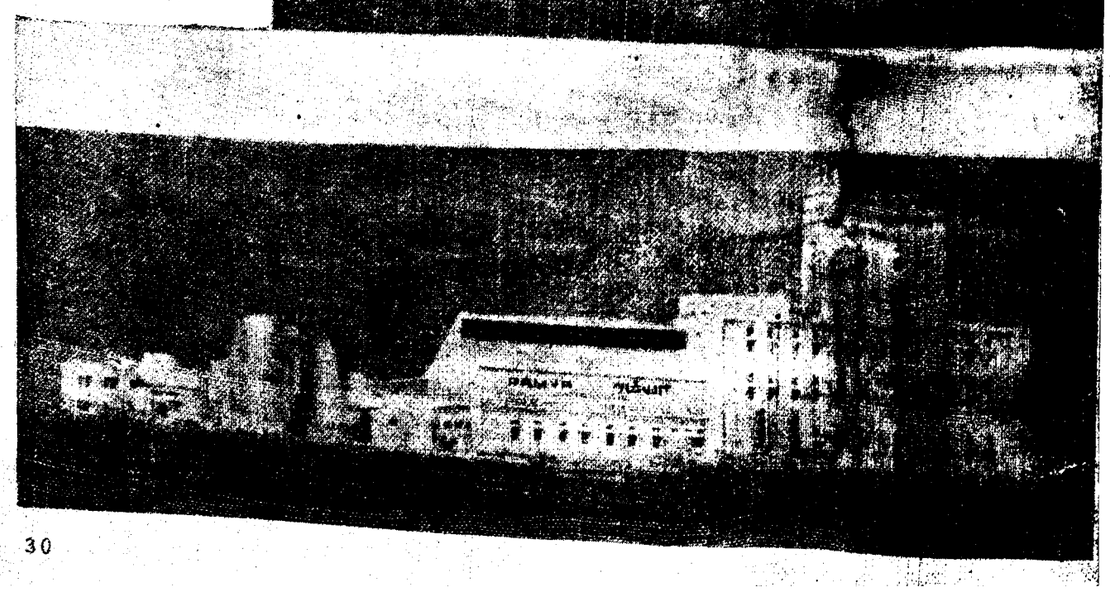
Already SIPCOT has acquired over 500 acres of land at Hosur, Dharmapuri District and preliminary work in connection with the infrastructural facilities have been taken up. Three projects involving a total investment of over Rs. 14 crores with an employment potential for 2,500 persons have been allotted land in the Complex. The construction of these projects is being taken up simultaneously with the work connected with the development of Industrial Complex. 32 applications for allotment of land in the Complex are under consideration by SIPCOT besides 15 small scale industrial units who have applied to SIDCO for allotment of developed plots and sheds. Despite the financial constraints SIPCOT has programmed to complete the development work in this Complex in the course of next two years and by that time the Industrial Complex will be humming with activity with about 10 industrial units in production and a few more under construction. SIPCOT has also planned to take up the development of a third Industrial Complex near Manamadurai where preliminary investigations for tapping the required water and survey of area has already been undertaken. It is SIPCOT's plan to develop Industrial Complexes

SOME FACTORIES IN SIPCOT, RANIPET

Above : **SECALS LTD.** They make precision tools with American collaboration.

Right : **S R P TOOLS** They make gear shaping tools which compete in world market.

Below : **ULTRAMARINES & PIGMENTS** They manufacture "RAMYA" brand detergent soaps etc.



in the other backward districts one by one during the course of the next five years.

In the sphere of financial assistance, SIPCOT has provided the needed supplemental assistance for 47 projects with total term loans of Rs. 4.77 crores and underwriting assistance for Rs. 52.5 lakhs. Already 13 of these projects are in production. While lack of finance has forced us to deliberately restrict our further assistance to the minimum required, SIPCOT will be able to ensure that no worthwhile project is allowed to languish for want of finance as it has developed close liaison with the State Financial Corporation (TIIC), Commercial Banks and other All India Financial Institutions. In respect of projects costing less than Rs. 1 crore it will be possible to ensure that in collaboration with TIIC, and Commercial Banks all the required finance is found from institutions within the State. As regards bigger projects, we will be able to ensure the necessary assistance from the All India Financial Institutions and consider extending underwriting support upto a maximum of 10% of the capital issues subject to a ceiling of Rs. 10 lakhs. Therefore, lack of finance will not stand in the way of new projects coming up in Tamil Nadu especially in backward areas.

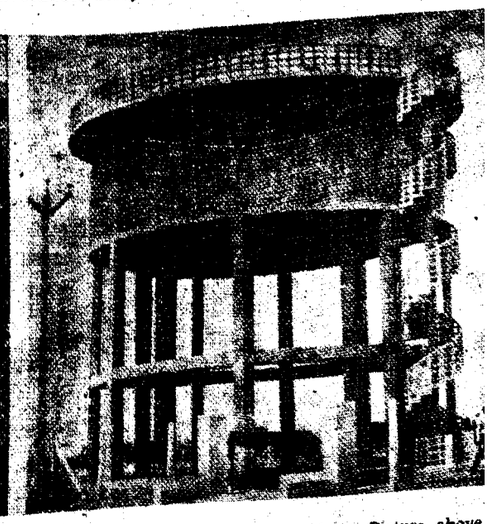
The important incentive provided by the State Government through SIPCOT is the Interest Free Sales Tax Loans. Under the Scheme SIPCOT has assisted 15 projects with over Rs. 2.11 crores as Sales Tax Loan. Of the 15 projects sanctioned assistance under this Scheme 13 have already gone into production. It has been decided at the instance of State Government to provide for a ceiling of Rs. 15 lakhs under Part I of the Scheme in respect of expansion and Rs. 25 lakhs in respect of new units with a view to make the incentive available to as large a number of units as possible without increasing the overall commitment of the State Government. Already over 30units have applied for assistance under this Scheme.

Under the Central ubsidy Scheme SIPCOT has sanctioned over Rs. 379 lakhs of subsidy to 58 medium and major units and 112 small scale units. Together with Rs. 28 lakhs of subsidy sanctioned through SIDCO to 173 small scale industrial units, the total sanction of subsidy is over Rs. 407 lakhs. Over 105 small scale units and 38 medium and major units which have been sanctioned subsidy by SIPCOT have already gone into production. Because of the delay involved in the reimbursement of the subsidy from the Central Government nearly a crore of rupees of SIPCOT's funds including about Rs. 45 lakhs of the State Government's funds with SIPCOT have been utilised for the disbursement of subsidy pending reimbursement by the Central Government. Efforts are being made to evolve a suitable procedure for quicker reimbursement of subsidy by the Central Government and in the meanwhile SIPCOT has been able to meet all the eligible claims to the extent its limited resource can permit. In fact SIPCOT has so far disbursed over Rs. 37 lakhs as bridge loan with a view to see that the assisted projects are implemented without any avoidable delay.

10 projects based on the feasil lty studies commissioned by SIPCC are under the various stages of form lation and implementation. O project for the manufacture Phyto Chemicals is likely to go in production before the end of tl year.

SIPCOT has set up a Const tancy Division (SMACS) to provi technical and management const tancy services to entrepreneu Some of the studies which have be completed by this Division include Survey of Chemical Industries f the Industries Department of t Government of Tamil Nadu, Techno-Economic Feasibility Sut on Cashew based industries arou Jayamkondan, Trichy District f the Collector of Trichy and a pre minary report on ancillary industri around Neyveli for the Industri Department. The Division is al making a preliminary study on sm news print plants. In due course is our aim to make this Division a focal point for all consultan services for State Government age cies as also private entrepreneurs.

Since its inception SIPCC has been rendering a number ancillary services covering the enti spectrum of entrepreneurs' needs the conception, implementation ar management of projects. Besid recommending the applications f Letters of Intent and Licence SIPCOT has been closely followir the implementation of the license projects and such project impleme tation services have been given over 50 projects. Entrepreneu have always been appreciative all non-financial services rendered b SIPCOT.



:ing an essential infrastructure for promotion of industries, SIPCOT Complexes have water aplenty. Picture above shows the water-treatment plant and overhead tank at Ranipet Complex.

TANSI at TEN-
no TENder-feet,
but TENder-hearted!

In just a decade, we've come to be known for our service to the consumers. In new product development, in sales of industrial and consumer goods, in diversification and in consumer oriented down-to-earth approach, we have become a force to reckon with.

Even when it is tough going, we don't suffer from tender-feet. We are renowned for that 'full of feeling' feeling for our consumers.

Our product range—Steel and wooden furniture, Agricultural implements, Hospital equipment, Scientific glassware, Locks, Structurals, Enamelled wires, Forged and Die Cast components, Leather goods.

GOLDTEN YEARS OF TANSI

10

TANSI

TAMILNADU SMALL INDUSTRIES CORPORATION LTD.,
26, Whites Road,
Madras 600 014.

TANSI Towers Receive Space Signal from "Aryabhatta" Australia Buys Tansi Wool

TANSI WILL PRODUCE MACHINE-TOOLS WITH HMT COLLABORATION

SIGNIFICANT GROWTH IN TEN YEARS

Tamil Nadu Small Industries Corporation, popularly known as TANSI is entering its 11th year of existence today. It was exactly 10 years ago that this organisation was brought into being as a result of a decision of the Government to convert into Production Units such of those Units which were started by the Directorate of Industries and Commerce. Government of Tamil Nadu as Service Units, to enable entrepreneurs to start industries in Industrial Estates. The transformation of service-oriented industrial units into the production —oriented industrial units is beset with difficulties and challenge which are not easy to overcome. However, TANSI has greatly fulfilled the faith with which it was formed and to-day from a mere Rs. 300 lakhs of production in the year of its inception, TANSI has reached a production level of over Rs. 10 crores.

There are 56 production units and five sales units under TANSI which are scattered all over the State. The products manufactured and sold by TANSI are so many that it varies from cycles for school boys, fashionable leather goods, scientific glasswares for schools and colleges, cast iron specials for the pipe lines, tractor-drawn trailers and other implements for the Agriculturists, durable door locks for ensuring safety to buildings, copper winding wires for the industry, tanned and finished leather sides for the leather goods industry, processed goat hair for woollen carpets, steel and wooden furniture for the home, office and industry to the steel fabricated heavy structures for the factories and Railways.

In the field of heavy structural fabrications, TANSI's contribution to the various nation-building activities has really been significant. Challenging structural fabrication orders were executed by TANSI for the Bharat Heavy Electricals Tiruchirapalli, Hindustan Shipyard, Visagapattinam, Arkonam Steels, Mysore Iron and Steel Ltd., Bhadravathi, Hindustan Machine Tools, Hyderabad and Southern Petro-Chemical Industries Corporation, Tuticorin. Besides, TANSI has fabricated and supplied transmission towers to the various Electricity Boards in the country and the Middle East. The multitude of Micro-wave towers installed by the Central and South Central Railways and the Post and Telegraphs Department are manifestations of the memorable jobs executed by TANSI. It is a matter of pride for TANSI that one of the Micro-Wave Towers opposite the Madras Harbour has been utilised to receive the signals from the Indian Satellite 'Aryabatta.' TANSI is engaged by the Sugar Corporation of Tamil Nadu for fabrication and erection of some of the Sugar Factories in Tamil Nadu.

The pressure die casting unit of TANSI situated at Guindy makes die casts of non-ferrous alloys like zinc, aluminium etc. The Unit has been supplying die-cast components to many of the automobile manufacturers in the country. The Scooters India Ltd., Lucknow are also buying some of their die-cast components from this unit. The Tool Rooms of TANSI make sophisticated precision tools for various industries not only in Tamil Nadu but also in the whole country. The customers in this line include Bharat Heavy Electricals Ltd., Bharat Electronics, Scooters India Ltd., Hindustan Aeronautics, India Pistons, Chitaranjan Loco Works, etc.

The Machine Shops of TANSI have been supplying machined components for various defence units. The TANSI Forge Shop supplies forged components of high precision to industries like the Scooters India Ltd., Lucknow, the Neyveli Lignite Corporation, The Bharat Heavy Electricals etc. Leather division consists of 5 units of which the Tannery situated at Vinnamangalam, North Arcot District, manufactures finished leather of different kinds of a very high quality. This Tannery has produced a particular type of leather which is known as Vinnamangalam Leather in the whole country. The finished leather is largely exported to European countries earning valuable foreign exchange to the country. It is a matter of pride for us that this Unit has so far exported finished leather and semi-tanned hides to the value of Rs. 116.61 lakhs. TANSI Wool Processing Centre, Vinnamangalam, is completely an export oriented industry. This unit washes and dyes the goat hair and exports the entire quantity to Australia amounting to Rs. 15 lakhs annually. The other three leather Units under the Corporation specialise in the production of footwear and other leather goods, industrial gloves etc.

The wide range of agricultural implements produced by TANSI which include tractor-drawn trailers, cage wheels etc., are in great demand with the agriculturists. To meet the demands of the agriculturists, who are availing the loan under the World Bank Scheme of purchase of Tractors, TANSI has developed a heavy duty Trailer which can haul upto 10 tonnes of load.

The wooden furniture of TANSI very well known both in our own State and in the neighbouring States, are made out of quality wood, using latest techniques of bonding. It has recently developed a Hospital Cot used for heart patients under intensive cardiac care. TANSI's Moped, whose design is completely indigenous and has been evolved by TANSI's own design and engineering staff, will be in the market very soon. Similarly, efforts of TANSI for a collaboration project with the H.M.T. for the manufacture of selected machine tools is in its final stage and a factory for this purpose is likely to be established soon in Ranipet. A TANSI-NID collaboration cell in the field of Industrial design is likely to materialise very soon. **

Tamil Nadu Water Atlas Will show both quantity and quality

The Government of Tamil Nadu has done systematic hydrogeological survey in all areas of the State to assess the ground water potential for further development. We will have shortly not only a water table map but also a water quality map for the entire State.

Aerial photographs covering an area of about 8,460 square miles were used for preparing an uptodate geological map of Cauvery Delta and for planning hydrological studies. Water samples have been collected from different aquifer systems for ground water dating by the Tata Institute of Fundamental Research, Bombay. Electrical Analog studies were done at the Indian Institute of Technology, Madras to study the effect of pumping in order to specify spacing between wells in the Cauvery Delta to avoid mutual interference.

Based on the hydrogeological survey, the aquifers have been demarcated in depth and width and the ground water potential available in Madras City and Palar Basin and it has been ear-marked to the industries established in the Industrial complex at Manali near Madras and for the Madras Atomic Power Project, Kalpakkam. Part of the potential available in Panjetti and Minjur aquifers are extracted and supplied to the various industries.

The Government have approved a scheme for supplying the 11 Mgd. of water available at the Tamaraipakkam aquifer to the various Industries to which the water is allotted. This work is being taken up.

The Ground Water available at Paiganallur in Palar basin has been committed to the Madras Atomic Power Plant. Out of the 6.2 Mgd. available at this site about 4 Mgd. is at present supplied to the Project. As and when the demand increases, the full quantity will be supplied.

Collection of basic data.

Rainfall particulars have been gathered for the past 50 years and the average rainfall is being worked out to arrive at the total quantity of water available in Tamil Nadu. Meterorological information like temperature, humidity, wind velocity, sunshine hours, etc., are also being collected to arrive at the quantity of water which is likely to be lost by evapotranspiration. Fourteen elementary watersheds have been selected in the districts and necessary equipments are being installed to collect information.

CONTINUOUS STUDY OF RE-CHARGE RATE GOING ON.

A net work of about 1,660 shallow observation wells have been selected in the entire Tamil Nadu and water level fluctuations are being studied every month. Hydrographs depicting the water level fluctuations for all the observation wells are prepared and compiled. Water quality study is made once in six months to determine the suitability of water for drinking, agricultural and industrial requirements. Ground water level observation is the key information based on which water table maps and isopleth maps of the entire area can be prepared so as to have a comprehensive picture of ground water depletion and recharge in different basins. **Water table map and water quality map for Tamil Nadu is under preparation.**

Geological mapping.

Geological mapping of an area forms the most fundamental requirement for the evaluation of any resources especially for ground water resources.

At present the existing geological maps pertaining to Tamil Nadu available in the Geological Survey of India, Tamil Nadu Circle, Government of India, Madras have already been copied and the base maps are being prepared on 1" to 4 milescale. With a view to improve upon the existing geological maps, field mapping has already been undertaken.

Preliminary photogeological mapping has been done over an area of about 8,000 sq. kms. in Ponnaiyar basin, while work on 10,000 sq. kms has already been completed in other areas of the State.

Geophysical investigations.

Geophysical investigations comprising of surface prospecting and sub-surface prospecting are being conducted throughout Tamil Nadu.

Systematic resistivity survey in a grid pattern has been programmed and is in progress in each district to obtain areas favourable for ground water extraction. So far 1,800 depth soundings covering about one-seventh of Tamil Nadu have been conducted.

Sub-surface prospecting or borehole logging is being conducted in the exploratory boreholes in which resistivity and self-potential logs of the formations are obtained. This includes also electrical logging.

In the selected taluks of Thanjavur, Tiruchirappalli and South Arcot districts covered by the I.D.A. Programme, ground water clearance has been given for all the units proposed in the I.D.A. Agreement. Based on the clearance, appraisal maps are received from the Banks by the Ground Water Division, Thanjavur and No Objection Certificates are being issued.

In the case of the dug well programme in hard rock areas in 18 taluks of Chingleput, North Arcot, Salem and Dharmapuri districts, the Registrar of Co-operative Societies is responsible for rapid survey in those areas and he sends the recommendations to the ground water Division for clearance.

Though systematic hydrogeological survey takes as long as 4 years for a given area, rapid ground water surveys are undertaken in the areas referred to this Directorate for mulating Minor Irrigation Schemes to be financed by A.R.C. and based on this survey, feasibility reports are prepared and sent to Government. So far, 270 reports have been prepared and clearance has been given for more than 50,000 wells and pumpsets both under the A.R.C. and I.D.A. Schemes.

The FAO Experts in the disciplines of Hydrogeology and Hydrometeorology are working in the Ground Water Division and assisting in the Ground Water Investigations in their respective disciplines. Ponnaiyar basin has been taken for detailed investigation by the Expert on Hydrogeology. Proposals for further work on drilling, pump testing, etc., based on photo geological studies and geophysical traverses are underway. Infiltration tests have been completed.

TO SINK MORE WELLS & DEEPEN DRY WELLS —AGRICULTURAL ENGINEERS HELP TAMIL NADU FARMERS

In Tamil Nadu, out of 6.165 million hectares of net area sown, the area irrigated is only 2.59 million hectares which constitutes about 42% of the net area sown. Again, out of the 2.59 million hectares irrigated area, about 69% is irrigated by canals and tanks, and the rest is irrigated by groundwater. It is roughly computed that there are one million wells which extract 3,800 million cubic meter of water.

The Agricultural Engineering Wing of the Agriculture Department is in charge of the following schemes which aim at improving the irrigation facilities from well water in the State.

1. Private Tube Wells. 2. Boring of Wells. 3. Deepening of Wells. 4. Filter Point Tube Wells.

The Agricultural Department is sinking tube wells (Bore Wells) in ryot's lands with the help of Power Drills and Hand Boring Sets, for tapping underground water for irrigating crops. In view of extensive cultivation and also the receding underground water level, the demand for sinking bore wells is on the increase.

The Boring Sets of the Department are supplied on hire basis. Loans are being granted to the ryots concerned by the Land Development Banks and Nationalised Banks on the security of lands to cover the cost of (1) Sinking charges including hire charges on Boring Sets. (2) Pump sets and accessories and (3) Pump shed.

Till the end of March 1975, 23,411 tube wells were sunk by the department. It is estimated that if a well is sunk successfully, it will irrigate an additional area of 20 acres (gross) resulting in an additional production of about ten tonnes of rice *i.e.*, 1/2 tonne/acre. It is anticipated that the tube wells available in the State irrigate an area of about 5.54 lakh acres. During Vth Plan period (1974—75 to 1978—79) it is proposed to sink 12,500 wells.

In view of the gradual lowering of water table observed in some of the districts, the wells yield very poor water supply or even go dry. This scheme is intended to put deep bores inside the wells with a view to tap aquifers to augment water supply. With the long hold equipment, it is possible to sink smaller dia. horizontal and vertical holes in the well extending the depth by 60 to 80 feet thereby increasing the chances of tapping greater number of springs for augmenting the well supply. Loan assistance is being provided by the Land Development Banks and Commercial Banks for meeting costs of sinking etc. This scheme was started as a separate scheme from 1—4—1966 and upto the end of March 1975, as many as 7,851 wells were sunk. If a bore is sunk successfully, it is estimated to irrigate an additional area of 2 acres (gross). It is proposed to sink 4,000 bores in open wells during Fifth Five Year Plan period.

Deepening of Well Schemes

Deepening of wells is taken up in rocky areas by blasting the rock bed 20' to 40' thick and such blasting exposes fresh aquifers which provide additional water supply to the wells and to increase the storage capacity of wells. This scheme was in operation from 1964—65 and till the end of March 75, as many as 10,636 wells were deepended. The ryots were finding it difficult to get the explosives which retarded the progress of this Scheme. Hence, this Department constructed explosive magazines at South Arcot, Trichy, Dharmapuri, Salem, Coimbatore, Ramanathapuram, Tirunelveli and Madurai Districts. The explosives are purchased and stocked by the department and supplied to the needy ryots who engage departmental Rock Blasting Units. Construction of similar magazines in the district of North Arcot for this purpose is under progress. Vans are also provided to transport explosive materials to these departmental magazines.

It is proposed to deepen 10,050 wells during Fifth Five Year Plan period. If a well is deepened it is expected to irrigate an additional area of 2 acres (gross).

Under conventional method, manual labour is engaged to remove the blasted materials. This method takes considerable time resulting in idleness of equipment and also costs much. In order to utilise the equipment to maximum advantage and to reduce the cost of removal of debris, the department has designed a suitable debris remover (crane). The department has programmed to supply debris removers also on hire along with Rock Blasting Unit as the farmers insist on supply of debris removers with Rock Blasting Unit. Loan assistance is being provided by the Land Development Banks and Commercial Banks for meeting the cost of deepening the wells.

Filter Point Tube Wells Scheme

The Filter Point is a device for pumping out water from sandy water bearing strata found within 25' to 40' from ground level.

In Tamil Nadu, the construction of Filter Point Tube Wells for encouraging irrigated cultivation was initiated in the Fifties, before the commencement of the First Five Year Plan. During the first Five Year Plan, 2,650 Filter Points were sunk in this State.

During the 2nd Five Year Plan, 2,765 Filter Points were sunk. During the IIIrd Five Year Plan period, the tempo was almost doubled and 4,065 Filter Points were sunk. During the last year of the 3rd Five Year Plan a Crash Programme for Filter Points was initiated in Thanjavur district in order to sink a large number of wells in a shorter period to tap ground water to supplement the canal water during the lean periods. These filter point tube wells help farmers to raise nurselings well ahead of the opening of Mettur Dam Canals; if the farmers have to entirely depend upon Canal water even for raising nursery, generally the harvest coincides with the onset of North East Monsoon resulting in loss of valuable paddy crop. If nurseries can be raised before release of canal water transplantations can be done immediately after release of canal water. As the crop will come for harvest much earlier, it is possible to raise second crop by supplementing canal water with the help of Filter Points and Tube Wells. To get maximum yield and to bring more area under second crop, it is programmed to sink a large number of Filter Point Tube Wells and Tube Wells with the assistance of World Bank. This scheme is to be jointly executed by the Agricultural Engineering Wing Agriculture Department, the Ground Water Directorate and the Co-operative Department. During this plan period, it is proposed to sink 7,000 Filter Points and 1,190 Tube Wells in Thanjavur District.

So far, 29,299 Filter Point Tube Wells (upto March, 1975) have been sunk. If a Filter Point is sunk, it is expected to irrigate an area of 10 acres (gross). 10,000 wells are proposed to be sunk during Fifth Five Year Plan period.

MANKIND'S MOST USEFUL DISCOVERY—THE SOAP

Soap is one of the greatest discoveries dating back to the very ancient times. The earliest known records show that Babylonians, Sumerians, Eygptians and Phoenicians (2,800 B.C. to 500 B.C.) were using a salve-like preparation obtained by boiling together oils and ash. More generally used cleaning agents in those days were natural soda ash (called natron), natural earths and wood plant ashes. The word soap is poss.bly derived from Latin "Sapo" which means a pasty mass, a pomade. The Greeks and Romans (800 B.C. to 500 A.D.) who were very fond of taking baths, whether cold, hot or vapour baths, rubbed oil on their bodies and cleaned them with mechanical agents like bran, sand, ashes, pumice, clays and juices of plants.

Pliny in his book "Nahorates Historia" (79 B.C.) has described the boiling of goat's tallow and beach ashes. This and such other preparations were used as a cosmetic and a pomade for application of hair and skin.

The credit of discovering soap goes to the Germans or the Tartars, about the beginning of the Christian era. By the 9th century, Marsielles in France and Genoa, Savona and Venice in Italy had already become active centres of soap manufacture. The industry was flourishing in many countries in Europe by the 12th century. The animal fats were gradually being replaced by vegetable fats, especially by olive oil which was abundantly available in the Mediterranean region. Alkali was available in the form of plant ashes which were rich in potash, and sea-weed ashes which were rich in soda-ash. These were used in the preparation of soft and hard soaps. The availability of soda ash by the progress of chemical technology and later of caustic soda gave a very great impetus to the soap industry.

Soap making was a house-hold industry, especially in the rural areas up to the 20th century. Later it had to decline as a natural sequel of several factors such as better and more uniform quality of the factory product, its low price, intense advertisement by soapmakers and changes in the fuel used at home.

Science could not Improve Upon Experience!

Soap-making involved the boiling of large quantities of fats and the alkali in such correct proportions and to such well-timed temperatures that it called for skill and long manual experience, nourished by critical observation of each and every detail of the boiling mixture in the pan and subsequent procesing of the boiled mass. On the basis of such observation, the early soap-boiler came to learn the properties of the raw materials, to devise the most suitable equipment-pans, furnaces, coolig frames, cutting tables etc. and to fix up the sequence of the operations. It is indeed remarkable that such a process has been evolved without any scientific information and remains the same in its fundamentals till today though substantiated by the scientific researches of the century. The art of soap making is thus far, far, ahead of science.

Inspite of a large number of flourishing centres in Europe, the factory-made laundry-soap, was not within the reach of the public, even as late as 150 A.D. Toilet soap was a luxury to be enjoyed by the nobility. Specially perfumed and coloured soaps were very highly-prized gifts to be exchanged among the royalty.

With the turn of the 19th century, however, the pace of development has been remarkably speedened. Several factors like economic, technical, political and social, helped to hasten this process. The discovery of Le Blanc in 1787 of how to make soda ash from common salt, an abundant supply of alkali was assured. Trade by sea to other countries increased. This made an abundant supply and new sources of oils and fats easily available. Due to their political influences many European countries had easy access to far off places in Africa, America and Asia which were rich in Oleagenous materials such as copra, palm, cottonseed and tallow. With the increasing industrial activity in Europe and the change in the pattern of living made the use of soap a prime necessity. Thus, the expansion of the soap industry was the result of rapid industrialization.

The real development in the soap industry, has however, been in its technological aspects. Discovery of new raw materials and of new methods of processing the older materials has widened the field of selection and has made the industry more flexible. Progress in the different branches of engineering has had its beneficial repercussions on the soap industry as on any other industry. Use of non-rusting and non-corrosive alloys in plan construction has led to improvements in the quality of the products. New techniques, continuous operations, novel designs and automation have brought the industry to a high pitch of efficiency and economy. High pressure saponification, centrifugal separation of soap, counter-current washing, press-cooling, chilling on rolls, continuous drying, dehydration of spraying and vacuum plodding are instances of novel applications of equipment and operations.

THE SOAP IN VEDA AND AYURVEDA

To mix up Vedas and soap might appear incongruous. Yet the Veda being the earliest records of the Ancient Indians give a clue to the then knowledge of chemical and practical arts. The use of metals, alloys, fermented liquours, dyes and several drugs obtained from the vegetable kingdom for the preservation of health and for the curing of diseases are mentioned therein. The smruti, are codes of behaviour on daily routine, laying emphasis on personal cleanliness. The daily routine, any ceremonial or function has to be started with the bath.

Ayurveda, the Indian Medical system discusses the ways and means of keeping the skin clean, soft and healthy. Daily bath with water was naturally essential, but it was to be preceded and followed by the application of Saponaceous, fragrant or soft plant materials. The methods were broadly classified as 1. Astringent plant materials : Amla. 2. Aromatic plant materials : Nagar Motha 3. Oily materials and oils (Pastes made from almonds or sesame or sesame oil 4. Lather producing materials (Ritha, Silkakai) 5. Miscellaneous materials : clays, gram flour, milk, honey, lime juice. Even to this day, many such powders and oils are used in large quantities on festive and ceremonial occasions.

For cleaning of garments, in addition to acqueous extracts of saponaceous plant materials, clays both neutral and alkaline—and extracts of plant ashes were used.

Although the ancient Indians possessed some knowledge of carbonates, caustic alkali and the vegetable oils which must have been available in plenty, they were not led to the discovery of soap making while under similar circumstances the contemporary Gauls and Germans discovered that art.

It is presumed that the art of soap-making came to be acquired in India after the contact between East and west first through commerce and later by conquest. However, the first recorded evidence is that the first modern soap factory in India, was established in Meerut in 1897 under the name of the North-West Soap Company.

The "Swadeshi" movement of the year 1905 and the First World War gave some impetus to soap manufacture in this country in a small way. The "thirties" of this century saw the establishment of big organized units, and this was the first phase of expansion. The second phase of expansion was during the second world war during the "forties" which gave a fillip to the industry. Imports of soap which stood at the value of Rs. 2 crores in the year 1920-7, dropped to Rs. 18 lakhs in the year 1940-41, indicating a rapid growth of the Indian industry. Today, there is a complete ban on imports of soap.

Structure of the Indian Soap Industry

The Indian Soap Industry is made up of four sectors 1. registered organized units, 2. Unregistered organized units,3. Cottage scale units and 4. Cooperative village units. The first sector consists of large scale manufacturers who produce full-boiled settled washing soaps and milled toilet soaps. The soap making units are generally attached to oil mills or vanaspati plants so that the soapstock obtained as a by-product during refining of soft and hard fats serves as a cheap raw material for soap.

The unregistered organized units produce mostly washing soap and utilize both the full-boiled as well as the semi-boiled methods.

Factories in sector 1 produce high quality soaps and maintain a uniform standard. Products of many of them are known all over the country. Units in sector 2 produce both unfilled and filled soaps of a standard quality. Market for their goods is usually restricted either to a district or the State, Factories in sector 3 almost invariably produce heavily filled soaps for the cheapest market. The products cannot be expected to be of high quality or uniform standard. They have only a local clientele.

Raw Materials :—

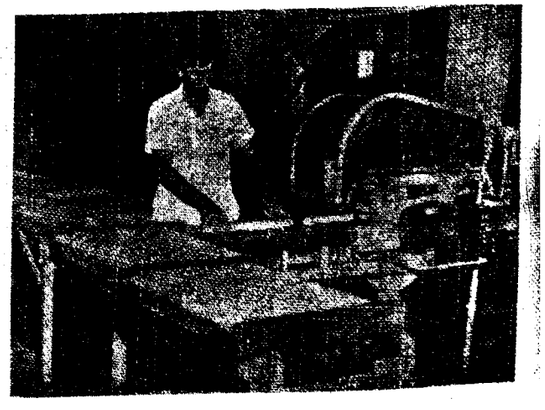
The fatty raw materials used in the soap industry are coconut oil, groundnut oil, cottonseed oil, castor oil, Mowrah fat, Palm oil, Animal tallow, Hydrogenated oils, Linseed oil, Soapstock and acid oil, fatty acids and Rosin.

Caustic soda, caustic potash and soda ash are also used in the manufacture of soap. Some of the other additives are common salt, perfume, colour, sequestering agents, optical bleaches, germicides etc.

The toilet soaps are made from coconut oil, groundnut oil, palm oil and tallow, while for washing soaps, additional fats like mowrah, fat and castor oil and soapstock are used.

The most common filling material is sodium silicate and mainly silicated soaps may contain as low as 20% fatty matter. A low grade soap which is very popular with the dhobies and therefore called the dhobi soap is prepared out of the

SOAP PLODDING



Automatic cutting of plodded soap

filter mud (spent bleaching earth) available from the refining and vanaspati factories. Soap is also available in other forms such as chips, flakes, powders, etc. They have a limited mrket, that too in the urban areas.

Soap-making as a Cooperative Village Industry :—

The production of vegetable oils and soaps has been taken up as one of the village industries, and therefore, a separate section was established in the Khadi and Village Industries Commission to look after soap manufacture. The commission has commenced establishing oil pressing cum-soap making centres in different parts of the country. These centres are given financial assistance—a part as a grant and the rest as an interest free loan. Training centres have been established to train operators, chemists and supervisors in their respective jobs. Regional Testing Laboratories and a central Research Institute for Village industries have also been established. It is their responsibility to render technical aid, maintain quality control on the products and develop methods of analysis, methods of production and equipment suitable for this type of manufacture. Thus these units are able to turn out soap of very high standard for washing as well as toilet purposes.

Today, the village soap industry is competing with the large-scle manufacturers by using non-edible oils. But it will not be isolated from the impacts of modern facilities like transport, power and communications, nor will it be restricted to age-old methods. New methods, new implements and new techniques will be adapted accordingly. As a result of experience and continuous experimentation, the method of soap making and the equipment employed are bound to be improved.

Soap Products :

For ease in its handling or according to the customer's preferences and specifications, or by the ingenuity displayed by the manufacturers in attracting customers, the final product is marketed in all kinds of shapes, sizes, and forms.

Increase in soap production :

Soap production has recorded a 25 percent increase in 1975. During January—September this year, production amounted to 2,01,406 tonnes as against 1,61,281 tonnes during the same period last year. A significant rise in the production in the organized sector contributed to this increase.

A new variety of low-priced toilet soap 'Janata' soap was introduced during the year by many units in the orgonised sector and production of this variety totalled 5,454 tonnes, between January and September 1971.

The Indian standards Institution (ISI) is now working out ISI specifications for this variety of toilet soap for protecting the interests of the consumers as well as improving its quality and packaging.

The import of tallow, except for marginal quantities against export licences, was discontinued by the Government following negotiations with the Indian Soap and Toiletry Maker's Association, representing the organized sector of the industry. The country is expected to save Rs. 9 crores in foreign exchange annually as a result of this measure.

The organized sector of the soap industry is now increasingly using minor oils like rice bran, neem karani and mohwa oils. Use of such minor oils by the soap industry has not only reduced the pressure on the edible varieties of oil earlier used by them, but has also given employment opportunities to a large number of people.

—RAJALAKSHMI BHARATI.

The Association of Writers for Children had awarded the Gold Medal donated by AVM Charities for the best Tamil Children's Literature to the manuscript copy of his book entitled "ஆடுவோமே, பள்ளு பாடுவோமே," entered by P. V. Giri, of the editorial section of 'Tamil Arasu'. The Award was presented as part of Children's Day Celebrations on 14—11—1975 at Rajaji Hall by Thiru K. Anbazhagan, Minister for Health.

STEPS TO IMPROVE THE EFFICIENCY OF WOMEN LABOUR FORCE

By

Kumari R. Padmavalli, M. A.,

Director of Statistics, Govt. of Tamil Nadu.

A study initiated by the Committee on the Status of Women in India in 1973—74, covering a sample of 200 undertakings in both private and public sector, has reaffirmed the position, that the practice of relegating women to limited and lower levels of employment, discriminatory wage payment, and retrenchment is quite pronounced, in spite of a spate of labour legislations. It is therefore needless to review the experience of the vast majority of women working in the unorganised sector. But it is recapitulated for the purpose of examining what would be done to improve their lot.

Farm labourers including a sizable number of women labour perhaps number about 47 million and they form approximately 38 per cent of the total Agricultural Workers in the country. In a far flung country with cultural diversities, complex tenure systems and strange feudal relationships, it is difficult to conceive of anything like a uniform pattern of minimum wages. The social and economic status of labour varies from region to region. For instance in Punjab, Haryana, Jammu and Kashmir and Assam, the proportion of farm labourers is relatively small, whereas it is very high in southern States and in U.P., Bihar, Orissa and West Bengal. In certain Stateslike Andhra Pradesh, Bihar, Maharashtra, Uttar Pradesh, Tamil Nadu and Madhya Pradesh there is a concentration of agricultural labour accounting for around 70 per cent of the total number of farm workers. Andhra Pradesh, Madhya Pradesh and Orissa have been consistently paying miserably low rates of wages. A relatively better record is to be seen in Haryana, West Bengal and Assam. The economic conditions of the agricultural labourers or the landless labourers, in general, has been continuously deteriorating in India.

The major difficulty is that no accurate information regarding the living conditions of landless labour, their indebtedness etc., is available. The information available on these aspects, is either inadequate or very old.

The two All India Agricultural Labour Enquiry (ALE) conducted by the Ministry of Labour and Employment for 1950—51 and 1956—57 revealed 28 paise and 27 paise, respectively as per capita income of agriculture household. This level tallies with that observed in West Bengal Surveys in 1972—73. It reveals the deplorable and continuously deteriorating economic condition of the rural labour, during all the years, despite the growing prosperity of the agricultural sector.

This situation has been an outcome of the continued negligence of most of the State Governments in the revision of minimum wages and the meticulous observance of its implementation. Since 1969, only very few States have revised wages. **It may be gratifying to note that Tamil Nadu revised the wages during 1973 and has now again set up a Minimum Wages Committee for revision.**

It is therefore observed that with the meagre wages, the labourer is forced to have a hand to mouth existance. Fortunately Prime Minister's recent directive has come in time to tackle this problem relating to this vulnerable section of the society which can look forward for improvement in their living conditions in the near future.

Nutritional Status :

Nutrition is an important factor in the development of "Human Capital". It works in two ways :

1. reduces the loss in man-days due to sickness and other nutrition — related ailments ;
2. improves the quality of the labour.

It is all the more true for the women labour force because, their nutritional status is comparatively neglected. Sex preference and preferential treatment has resulted in a comparatively poor nutritional status for women.

A diet survey conducted by the National Nutrition Monitoring Board of the Indian Council of Medical Research has shown that caloric intake is inadequate in all the States in the 'very low' and 'low' income groups. The details of intake by women is given in the table below :

TABLE I

INTAKE OF FOOD BY WOMEN—ALL INDIA

Food	*Actual intake gm.*	*Recommended Allowance*	
		Non-vegetarian gm.	*Vegetarian gm.*
(1)	(2)	(3)	(4)
Cereals	333	450	450
Pulses	15	65	80
Leafy vegetables	9	150	150
Other vegetables	23	75	75
Roots & Tubers	3	75	75
Fruits	4	30	30
Milk & Milk Products ..	23	225	325
Fats & Oils	12	55	50
Meat & Fish	18	30	..
Eggs	12	30	..
Sugar & Jaggery	15	50	..

FAMILY PLANNING FACILITIES STRETCH MORE MEDICAL FACILITIES TO WOMEN WORKERS

The survey has also revealed that protein inadequacy is invariably associated with caloric inadequacy in both these income groups in all States except Kerala where a small percentage of households (1.9 per cent) of the 'very low income' group had protein inadequacy with caloric adequacy.

Medical Facilities :

Through the implementation of Five Year Plans, the Government have managed to extend medical facilities throughout the length and breadth of the country. The labour under the Organised sector have the additional advantage of treatment under Employees State Insurance Scheme. This scheme provides the following six benefits to the labourers coming under its purview :

(*i*) Sickness benefit,
(*ii*) Extended sickness benefit,
(*iii*) Disablement benefit,
(*iv*) Dependents' benefit,
(*v*) Maternity benefit and
(*vi*) Medical benefit.

Maternity benefit as cash benefit payable to a female insured person for the specified period of absence from work, for a confinement. The daily benefit rate is double the sickness benefit rate and is thus roughly equivalent to the full wages. Benefit is paid for Sundays also, covering a period of 12 weeks.

Medical benefit is provided to the insured persons and their families under the medical benefit scheme. This consists of out-door treatment, inpatient treatment, all necessary drugs and dressings, pathological and radiological investigations, domicilliary visits, ambulance services, specialist consultation and care, antenatal and post-natal care, emergency treatment etc.

It is gratifying to note that the medical facilities provided for the labourers in organised sector go a long way to maintain them in good health and efficiency. While, on the other hand, the unorganised labour mostly working in the rural areas, suffer for want of the minimum medical facilities.

Another welcome feature is, that family planning services are made available to the people much more widely then hitherto. The various family planning programmes like sterilisation, IUCD insertion, application of conventional contraceptives have made good progress in India. It is needless to say that labourers, and in particular, the women labourers will be much benefitted by this programme.

Housing Condition :

Next to food, housing is an essential factor that affects human life. This is all the more important in the case of labour force who return after a day's hard work. But in practise, most of the labour force in India, are yet to be provided with adequate housing facilities. In the rural areas, they live in kacha houses (small thatched huts) and in urban areas, they live in slums which are extremely insanitary and over crowded. Labour employed in plantations, though assured of statutory protections in this regard, are also subjected to inadequate housing facilities or complete denial of such facilities, particularly where casual labour is involved. The problem of labour housing has to be tackled more efficiently.

Social and industrial laws have been worked out on a sound basis ; but due largely to ignorance, illiteracy, die-hard traditions and customs and superstitions, honesty and obstinacy and indifference on the part of the people and lack of official implementation, the laws have not been satisfactorily implemented in many cases. Villages and slums especially have to be visited by officials and voluntary workers, and the people should be made aware of the laws ; if we are to assure women workers be they in factories or farms, all the rights they derive from these Acts.

Besides the facilities offered under the above major schemes and legislations the following factors are worth examination

Provision of essential commodities through family cards :

Essential commodities comprising of food and non-food articles may be arranged to be supplied at nominal rates to the labour force working under the organised and unorganised sectors. The Rural Co-operative societies and the urban consumer societies, may be entrusted with the distribution work.

Provision of adequate cheap transport:

Majority of the labour force working in the unorganised section of Agriculture Industry, live in rural villages and therefore the transport problem does not affect them to the extent as it affects their counterpart *viz.*, the labour force in organised sector who live in semi urbanised and urbanised areas. For this portion of the labour force, steps may be taken to provide cheap transport facilities. They may be paid some transport allowance wherever housing facilities adjoining to the work spot have not been provided for, by the management.

Establishment of Day-care Centres :

In the Factory Act, 1948, provision has been made to compulsorily establish creches wherever more than 50 women employees are involved. In the case of organised sectors, strict implementation of the provisions of the above Act should be observed. In the case of unorganised sectors, the management should be made obliged to provide facilities for those women labour with children of 6 years and below. A high level committee may be set up by the Government to assess the extent of help to be provided in this regard.

Provision of Recreational Facilities :

No provision is available to provide recreational facilities such as games, cultural programmes etc., at periodical intervals, to the labour force working both under organised and unorganised sectors. There appears to be hardly any recreational facilities for the women labour force. Cultural programmes, educative lectures, good film shows, provision for games will certainly go a long way in improving the efficiency and the outlook of the labour force. This aspect has also to be studied..

In our country the women's role continues to be that of wife and mother whether she is a wage earner or brings additional income to the family. Her responsibilities both physically and mentally are ever increasing in the changing times of today.

In this International Women's Year the need for an overall uplift of women has been accepted by one and all. Indeed a worthwhile policy on women would bring about a transformation not only in the fortunes of women but in their role in the family and thereby in the social fabric in its entirety.

NUTRITION AND GROWTH OF INDIAN GIRLS

By
RAJAMMAL P. DEVADAS

The fascinating process of human growth and development are influenced by a number of factors which constitute heredity and environment. The type and quality of the interaction between heredity and environment determine the all round development of the individual. From the moment conception takes place with the fusion of the parent cells, a pattern for future growth and development is laid. To what extent and in which direction a child's potentialities will be realized depend upon the environment in which he grows and develops. The pattern of growth though genetically determined is strongly influenced by the dietary intake. Nutrition is essential in childhood for optimum growth. The growth pattern of a child is useful index for judging his nutritional status. Body measurements, such as, heights and weights, if properly obtained and interpreted, help to evaluate nutritional status.

Growth spurt :

From birth onwards the baby grows in height and weight but the rate of growth is different in relation to sex and other factors. Growth in height like all other human measurements, is not uniform throughout life. The maximum rate of growth occurs before birth, in the foetal life, and thereafter it is progressive slowing down, though at birth the baby is still growing very fast when compared with the infant and child. In the first year of life, the body length increases by about 50 per cent (from 50 cm to 75 cm) and in the second year another 12 to 13 cm are added. Thereafter, growth in height settles down to a rate of about five to six cm every year until adolescence. Although the pattern of growth is similar in boys and girls from birth till adolescence, the rate of growth differs considerably, after the girl reaches puberty. During adolescence a marked rate of increase in height occurs suddenly and remains fairly steady. The growth spurt starts at the age of 10.5 to 11 in girls and at 12 5 to 13 for boys although wide variations are possible. The steady increase in the rate of growth is maintained for about two years in both sexes.

During the growth spurt, boys add something like 20 cm to their height, mostly because of the growth of trunk (10 cm/year). Girls gain about 16 cm height. The spurt is followed by a rapid slowing of growth. Indian girls reach 98 per cent of their final height on an average by the age of 16.5 years, whereas boys reach the same stage at the age of about 17.75 years.

By the end of the first year, the birth weight is approximately trippled. By the end of the second year, it gets quadrupled. After the second year, the increase is steady at the rate of about 2.25 to 2.75 kg a year until the adolescent spurt occurs. During the adolescent spurt, boys gain 20 kg and girls 16 kg weight respectively. Table I shows the heights and weights of Indian girls and boys from the first year of life till 18 years.

The heights and weights of girls are slightly lower than those of boys at all ages, except from the tenth to thirteenth year during which the adolescent spurt occurs in girls. During this period of three years, girls are ahead of boys in height and weight, but show a low rate of growth thereafter.

Birth-Weight :

Although there is not much difference in height at birth, the weights of Indian babies at birth and their subsequent growth pattern from birth to adolescence, are lower than that of their Western counterparts. The American children are taller and heavier than the Indian children of the same age group.

ADEQUATE NUTRIENTS

Sufficiency of food and nutrients is essential for normal growth and prevention of malnutrition. Indian girls who are well-fed grow taller and heavier than those who are poorly fed.

Records of heights and weights should be kept regularly to help parents and teachers to assess the growth of children. As a large section of the population will not have facilities at home to record the weight of children the records should be kept in the school.

Mid-day meals or nutritious snacks in schools improve the growth of children of the school-going age Apart from the formal education the children get in the schools, nutrition education and supplementary feeding programmes should be conducted in order to improve the growth of undernourished children.

Until recently, girls were married immediately after the attainment of puberty or before, which imposed a strain on their growth pattern The census data of 1961 showed that the marriage age of girls was 12.5 years in 1891 and 15.5 in 1961 Many of the girls are likely to become mothers when they are still in the adolescent age which shows there is an extra nutritional demand on the adolescent girl. A food habit survey conducted in Tamil Nadu shows that only 74 per cent calories and 92.97 per cent protein needs of adolescent girls are met, while the extent of fulfilment for the other age groups was higher. Table II shows the calorie, protein requirements and intake of females.

An intake of 600 to 630 IU of vitamin A, 300 to 515 mg of calcium and 26—31 mg of iron by adolescent girls was also recorded in this study.

Adolescent girls :

The weak link in the segment of life-cycle appears to be the adolescent girl, in spite of the fact that it is the health and proper nutrition of this part of population, that will upgrade the quality of future children and adults. A weakened, undergrown, ill-nourished young woman at marriage is already at a disadvantage for producing the kind of children that are desired. Conversely, a strong well-nourished girl will be much better able to withstand the effects of subsequent nutritional stresses she may encounter. Hence attention should be concentrated on this particular age group to prevent infant and maternal

and child health as malnutrition has a definite impact on fertility and reproduction. The studies of the National Institute of Nutrition have shown that 16—19 per cent of pregnancies among poor lead to wastages which are also common in women belonging to the low socio-economic groups subsisting on 1850 calories and 44 g protein daily.

Preferential Treatment :

Unfortunately in the tradition bound societies in India, preferential treatment with regard to diet is always given to the man of the house and the sons, as they are the "wage earners," "more valuable economically" and bear the burden of the family. As soon as a baby boy is born, great importance is given to him and he gets great attention from all the family members. The educational and medical facilities given to boys are also better than what the girls get. That is the reason why boys outnumber girls in schools. The girls are needed at home to perform household work and to look after the younger children, while the boys are sent to school for education. Thus from childhood, women are trained to serve the family and make sacrifices throughout their life-time. These discriminations are reflected in the life expectancy of females in India. According to the Planning Commission's Projections for the period 1971—76, it is 49.6 years for females and 51.3 years for males, and for 1976—81 it is expected to be 52.6 years and 53.8 years respectively.

This is the opposite of what is prevailing in other developing countries, where the life expectation is more favourable towards women. The female life expectation relative to male, expressed in percentage is 97 for India and ranges for 100 to 111 in all other developed and developing countries.

The reasons expressed are the intra-family distribution of nutrition and the incidence of maternal diseases and deaths which are higher in India than in other countries. Female undernutrition in general and maternal deaths from infections, and unhygienic conditions, adapted during child-birth and other diseases are strongly linked with poverty. Some of the bias in the intra-family distribution arises from deliberate self-deprivation by women because they tend to believe that the earning members are more valuable than those who do domestic work and child rearing which they consider is devoid of economic value. Even when a family is not poor and its food supply adequate, the women may still suffer from nutritional deficiency on account of customs, wrong beliefs, undesirable food preparation practices and restrictions in the amount, composition and number of meals on certain days.

All these practices influence the nutritional status of Indian girls and young women. It is indispensable that women are educated on all these aspects. This will help them change their attitudes to bring about a normal growth pattern among Indian girls and boys of adolescent age.

TABLE I

Heights and Weights of Indian Boys and Girls from 1 to 18 Years

Age in Years	*Height in cm.*		*Weight in kg.*	
	Boys	*Girls*	*Boys*	*Girls*
(1)	(2)	(3)	(4)	(5)
1	72.5	72.5	8.5	7.5
2	87.5	86.6	12.6	12.3
3	96.2	95.7	14.6	14.4
4	103.4	103.2	16.5	16.4
5	108.7	109.1	18.4	18.4
6	118.9	117.3	22.1	21.4
7	123.3	122.7	24.5	24.8
8	127.9	126.8	26.4	26.1
9	133.6	132.3	30.0	29.7
10	138.5	138.5	32.4	33.5
11	143.4	144.1	35.3	36.5
12	143.4	144.1	35.3	36.5
13	148.9	150.3	38.8	42.6
14	154.9	153.0	42.9	44.4
15	161.7	155.1	48.3	46.7
16	165.3	155.3	52.2	48.2
17	168.4	155.4	55.5	49.8
18	168.9	156.4	59.0	49.9
	169.9	156.8	61.1	50.1

Ref : ICMR 1968.

TABLE II

Calorie, Protein requirements and intake of females per day per Individual

Age Group	*Calories*			*Protein (g)*		
	Need	*Intake*	*Need met %*	*Need*	*Intake*	*Need met %*
1	2	3	4	5	6	7
MONTHS—						
0— 6	530	445	88	8.5	8.1	95
7—18	980	635	65	12.0	10.3	86
19—30	1,100	790	72	13.0	13.1	10
31—59	1,230	945	77	15.0	15.9	106
YEARS—						
5— 9	1,530	1,225	80	20.0	21.8	109
10—14	2,150	1,615	75	30.0	29.1	97
15—19	2,560	1,895	74	38.0	35.0	92
20—24	2,400	1,920	80	38.0	36.9	97
25—29	2,255	1,985	88	38.0	37.2	100
30—39	2,120	1,885	39	38.0	37.2	98
40—49	2,010	1,910	95	38.0	38.0	100
50—64	1,890	1,795	95	39.0	36.1	95
65—	1,770	1,715	96	38.0	35.0	92

THE CHALLENGES FACED BY WOMEN TO SUCCEED IN THEIR CHOSEN CAREERS

'SARASIJA'

A COMPARATIVE STUDY OF, CAREER WOMEN IN INDIA & ABROAD

All over the world, women, today are entering various professional areanas, even those considered to be virtually male preserves. This becoming increasingly evident, even in the so-called backward areas and the ill or poorly developed nations. In India, this trend has become marked, after Independence, especially, after the adoption of the constitution which provides for equality of sexes in all things including job opportunities. The reasons for such an entry are not too far to seek.

The main reason which is perhaps true the world over, is monetary. Women have taken to work not as a result of any compulsory inherent need but rather as a necessity. Given a chance most women would perhaps choose to remain at home, making every effort to run a happy home. It is only less than 10% of the women who would like to take up a job as a career. The rest of the women in various professions are there as a result of a variety of reasons the chief amongst which is the need for substantiating the family income. Faced by the ever-spiralling rise in prices of most commodities essential for every day life, and the ever shrinking value of money, women from all walks of life are forced to lend a hand to supplement the family budget. In a large percentage of cases, women are found to act as the bread-winner as well. This is becoming increasingly true in a number of countries and equally true in a country like the U.S.A. where the girls and boys opt to live away from their parents even at such as early age as 18 years, when it becomes a necessity to find a job for a living.

If one sets monetary considerations aside one is appalled to find that hardly 10% of women really desire to take up a profession. This applies to women both in India as well as other countries. In India the percentage of working women to the total working population is appxoimately 19% and most of these are in agriculture and other unskilled jobs. Considering the vast potential of women power available in India and the State of Tamil Nadu *i.e.*, 49% and 49.4% respectively this amounts to a huge national waste of enormous material of value-controlled harnessing of such powers could certainly lead to more prosperity and better growth of the nation. In contrast the literacy and employment rates are very much higher in the countries abroad. Lack of motivation appears to be the main factor responsible for this state of affairs.

Brain-washed into Marriage

Lack of motivation in its turn due to various factors such as upbringing, false values, misleading impressions, differences in education and the existing social patterns of life and human behaviour. Only 2.3% of all educated women are employed as against 18.72% of illiterates. Thus both in India and abroad, almost all girls are brought up with the idea that marraige is their goal in human life, all other things being secondary. Even talented young girls with enthusiasm, interest and driving ambitions are brain washed into believing that a career is only of secondary importance. Thus we find that few students go on to take up any important profession.

If we now turn to the type of professions taken by women, in India, this can be divided easily into professions of major importance and others. The work of the rural women and the industrial women have been already considered at length by the Altrusans from Nagpur and Bombay. (The major professions would include such as that of Doctors, Lawyers, Executives in the Administrative service, Industries, etc.) I will come to this presently.

The different types of careers available to the woman in the U.S., are too many to enumerate and yet there are certain striking features which merit mention. One of the most impressive difference is the paucity of women in the higher professions such as either Doctors, Engineers, Administrators etc. Most women act as Stenographers, Secretarial Assistants, Sales Girls, Telephone Operators, Receptionists, Shop Assistants etc. Teaching and Nursing attract a dedicated lot of women and one finds few women in senior executive professions. The reason for these are not too difficult to understand the major reason being the fact that even in the U.S., women are expected to marry and have a home with the associated responsibilities. As a matter of fact, the mental outlook of women is completely moulded in such a fashion that they are expected and required to get married before the age of 30, so that, the working woman who is unmarried, is looked upon as someone who is not mainly interested in her job but as a person who is marking time, till her time of mariage.

The Big Impediment

Though this is true in more than 70% of women, the other 30% who would like to have a career are also made to believe that a career apart from home life is un-

Indian Society gives Better Scope to Women for some Professions.

necessary and at best can only be considered to be something of secondary importance in the life of a woman. This attitude is present even in such an enlightened country as the U.S.A. Such being the case the women who still wish to take up a job as a career are at a very big disadvantage. The entire mental outlook is completely changed and the man in the office also regards her as a potential candidate for deserting the office any time after marriage.

As far as the medical profession is concerned, I can speak with confidence regarding this unequal treatment given to women in the U.S. If a lady doctor wishes to be a Surgeon and applies for a Surgical residency in the U.S., even in this englightened year, more questions are asked of her rather than of her male colleagues and she is made to feel that it is too difficult for a mere woman to train as a surgeon and practice surgery. Rather than face such gruelling questions and the hard time given to them, the girls opt for other openings conceded to them. **Thus we find that choice of a particular type of profession also depends upon a number of variables. Similar attitudes prevail in India, and choice of profession by women. However, surprisingly, certain professions attract and absorb more women in India than in the U.S. ; for example the professions of Doctors, and Lawyers. Here again it is not perhaps the Indian woman's eagerness to be a Doctor or a Lawyer that matters, rather, that, the Indian Society tolerates even permits and recognizes the need for women Doctors and thus does not make it difficult for her.**

One Swallow does not make A Summer

Though, when it comes to the higher specailities such as Medicine and Surgery one finds that women are discouraged from such careers and thus we find women Doctors permitted to be Obstetrician, Gynaecologist and Paediatricians. However if a woman feels strongly motivated and inclined to spealise in a particular speciality, she not only does very well, but manages to outshine others. I am not here referring to exceptions and Nobel Laurettes like Madame Curies but to the doctors at present in India. Dr. Padmavathi is a case in point, as a result of her own efforts, she has now become a renowned Cardiologist not only in India but abroad as well. Dr. Padmavathi has just been elected to the Indian Academy of Medical Sciences. Sister professions such as Chemistry boast of the eminent services of Dr. (Mrs.) Ashima Chatterjee, President of the Prestigious Indian Science Congress for the past year.

The academic world as a matter of fact can easily boost of the presence of a large number of women on its rolls. In India, alone there are over 20,000 doctors, lawyers, architects, engineers, writers, artists and sculptors. In addition there are nearly 23,450 women teachers in the Universities and graduate women teachers in schools, account for 94,200.

The Indian Administrative Services have had an increasing number of women in the recent years and women candidates have been seen to top the lists of compeitive examinations held in the country.

We have women in the Armed Forces, — a contingent of Parachute jumpers is a recent addition ; — in the Police and even in the constabulary. Women in executive positions are found in Broadcasting and T.V. and various women have lead or taken a large part in the U.N. Delegations. Women Ambassadors, Prime Ministers and Chief Ministers may be few, but they have been and are in India.

Only 2.3% educated women are employed

Though the various different professions enumerated above appear to yield a satisfactory picture, the number of women so employed is woefully small. If one recalls the statistics, I will reiterate once again that it is only less 2.3% of educated women in India who are employed as opposed to 70—80% in countries abroad.

If we now turn to the impact of a professional woman in society and the nation, we will have to logically consider it under several heads.

The woman in profession while carrying out her duties, at the same time raises problems, faces problems, and also causes changes in herself, her home, office, in her community, society and ultimately to the nation. These are of varying magnitudes, depending necessarily upon the type of profession, the number of women in such profession, the intensity with which she performs her various jobs and the restraining or constraining influences of herself, her family, her neighbouring community, social attitudes and other factors.

If we consider the married women, the married woman in the office has certain problems to face. No doubt she resorts to more frequent leave taking than the unmarried woman but these leave takings are viewed very kindly — the general attitude being that one cannot expect anything better from women, especiallyif, they are married.

She exerts more to prove herself

Though the woman might be talented in her work, the fact that she is married, is taken into consideration and she is usually disqualified from hard work or work demanding much precision , and regularity. This might be true to a certain extent in a small percent of cases, yet these leave the working woman with an ambition, at a disadvantage, so that in order to prove herself to be capable of good work, she has to exert herself more than her male colleague. Additional worries and responsibilities at home, problems faced regarding up-bringing of children and tending to the wants of a husband and other elders in the family, are all part of the life of a working woman. This of course is common to the working women in the rest of the world but in countries like India working women have help in two ways. One, the presence of elderly relatives at home which a joint family system, ensures in a country such as ours and secondly the availability of service. The working women in the U.S.A. cannot afford service. Indeed servants are a rarity and the entire responsibility of running a home falls on the woman whether she has a career or not. Secondly there is no joint family system in the U.S.A. It is only extremely rarely that father and son and their families live together. When a boy or girl is 18 years of age, they prefer to deal with all matters themselves, rather than depending upon their parents. This is true of, over 95% of families in the U.S.A., under such circumstances, it is important to obtain any help they can muster, from any source. **Therefore the working woman in the U.S.A. is at a far greater disadvantage than the working woman in a country like India.**

The working woman in the U.S. has to maintain her apartment in addition to cooking, cleaning dishes, doing her laundry (for there is no dhobi in the U.S.A.). In addition she has to go to the markets for groceries and vegetables and to look after the various needs of the children and the husband in the family. Her husband probably would help but this may not be adequate. By the time she has finished all this work and resorts to official work, she is no longer interested in maintaining any ambition regarding success, promotions etc. in her career as a working woman.

Promotions :

One other problem confronted by the working woman is the fact that people in general are more likely to consider her on the merit of her sex rather than on her abilities. However smart, brilliant and talented a woman is, the minute she comes forward to work in any capacity as a wage earner, the fact remains that the first impact she produces is as a result of her being a woman and her talents and merits are only secondary. This is a statement which is true trhoughout the world even in such an enlightened society as in the U.S.A. This leads to various problems and a number of impossible situations. One example is seen when promotion lists are being considered, in a given department, it has been the experience of a number of women to find that given equal chances and equal qualifications it is always the man who is preferred rather than the woman. The woman has to be at least twice more efficient to prove her worth before she can obtain a promotion. This is an incongruous situation and yet it is true for a number of jobs especially in the higher categories. As it is, it is difficult as a general rule for a woman to be either appointed to these jobs or even be considered worthy for these jobs. For however ambitious and couragenous a woman is, she is still considered too delicate, for certain jobs.

Transport Etc :

Generally the married working woman is found living in the outskirts of the city as living here, is much less expensive than living in the heart of the city, the house rent is cheaper and the prices of various groceries is much cheaper. The disadvantage here is the distance and transport is a problem. Therefore in these cases, the car which is needed by the family is taken by the head of the family and the working woman is to resort to the tube or bus. Naturally this ~~adds to~~ the stress of modern living, since travel in these modes of transport in New York and other big cities is extremely tiresome because of the crowd and because of the non-availability of service in time. This naturally results in some delay which is taken as an expression of inefficiency in work and lack of interest and enthusiasm and as such women are not considered suitable for important and responsible work.

More women work in the U.S.A. compared to India, perhaps because job opportunities are greater. Life is set at a brisk pace and people, (women not being an exception) work harder. Perhaps the women are happier, because the majority do not have such vital problems as we in India face — food, clothing and education for the children. They are certainly more independent.

At the intellectual level however, working women all over the world face the same problems—struggling for recognition against many odds—the most significant being the male 'ego.'

The Professional women therefore while facing a number of problems at the same time earnestly contributes to the betterment of humanity and therefore one can assume that with the entry of increasing number of such professional women, the nation undoubtedly stands to benefit from their services.

JOINT FAMILY GIVES INDIAN WORKING WOMAN A BETTER DEAL THAN HER COUNTERPART IN ADVANCED COUNTRIES

BUT ALL OVER THE WORLD

WORKING WOMEN HAVE TO STRUGGLE HARD FOR RECOGNITION

ARE YOU 1 OF OVER 25,000?

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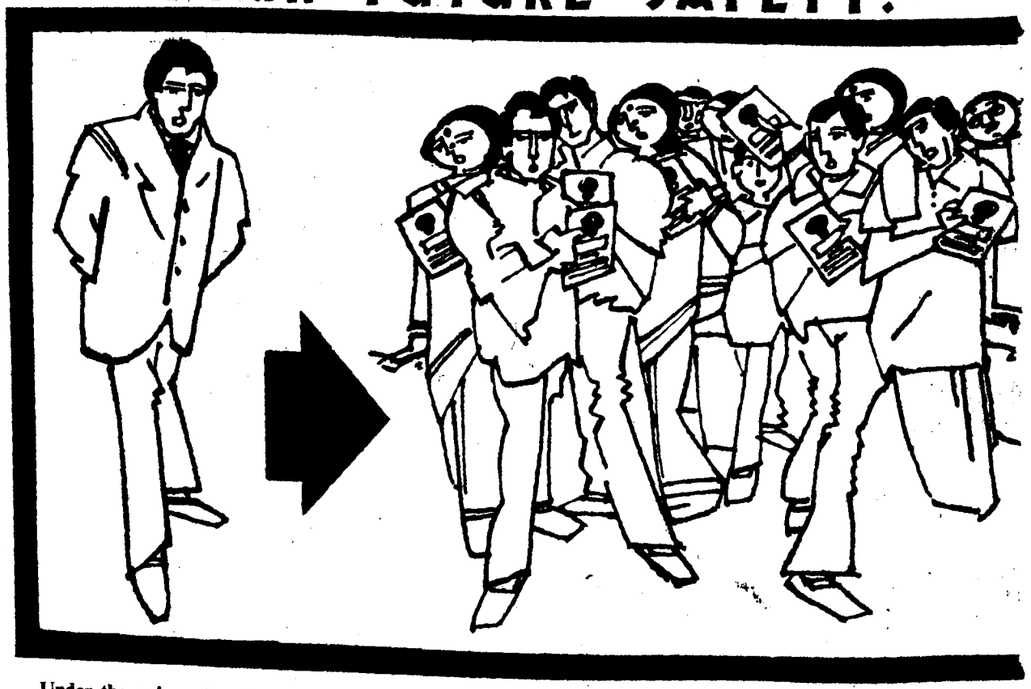

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PLAN	A	B	C	D	E	F	G
Monthly Subscription (Rupees)	10	10	10	10	20	30	60
Subscription period (Years)	10	15	20	25	20	15	10
Monthly pension for 30 years (Rupees)	20	35	60	100	100	100	100
Lumpsum at the end (Rupees)	1500	2500	4000	5500	8000	8000	9500

Subscription can he paid into sub-treasuries or participating banks.

The Director,
Social Security Scheme, Government of Tamilnadu,
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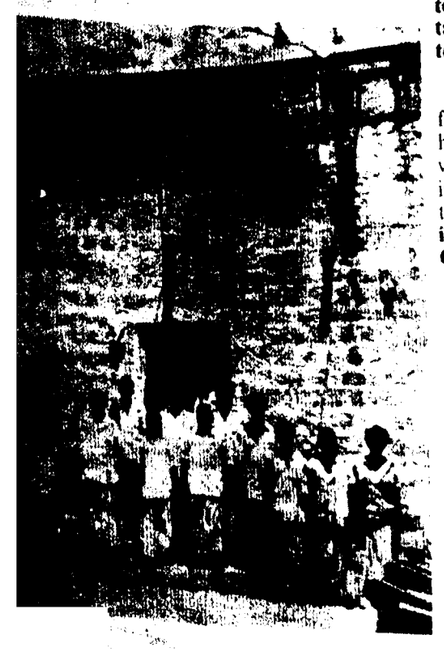


Award - Winning Gramasevak The Country's Best Panchayat of 73—74 Competition A. Mallapuram is shown along side, while the members of the Panchayat are to be seen in front of the Panchayat Office in the picture above.

TAMIL NADU GRAMSEVAK BECOMES COUNTRY'S BEST

Thiru A.P. Subramaniam of Palacode Panchayat Union, Dharmapuri District was adjudged the best Grama Sevak for the whole of India for the year 1973—74. The Prize has been awarded after a country-wide assessment of the work turned by Gramasevaks.

The first prize winner Thiru A.P. Subramaniam has put in 13 years service as Grama Sevak. He has been working in Marandahalli area of Dharmapuri District for the last 2 1/2 years. This circle covers 26 villages spread over an area of 8,006 hectares and has a population of 43,815.

Before taking the job of Grama Sevak in 1962, Thiru Subramaniam was a School Teacher. He gave up that job to become a Grama Sevak as he felt it gave him wider scope to serve the people. **Perhaps his will to work for the welfare of people takes him to 4 villages in a day and to block office twice a week.**

Activities like popularising family planning and small saving, helping the people keeping the villages clean and helping the farmers in getting loans from the co-operatives keep him busy. **He is specially interested in serving the Harijan Community.**

Prize Winning Village

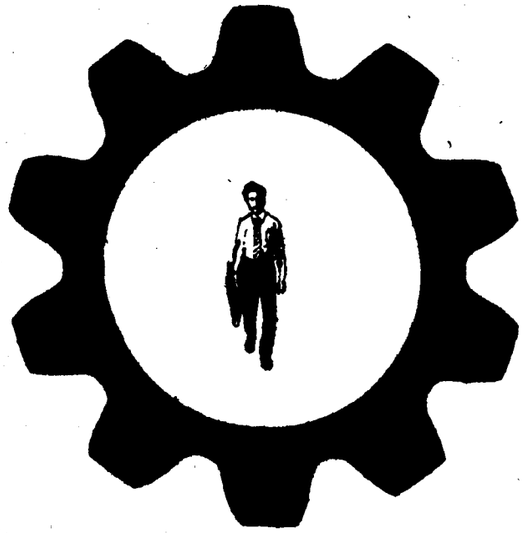
The village A. Mallapuram in Palacode Block of Dharmapuri district was adjudged the best village at the National Level for 1973—74 and awarded a prize of Rs. 7,000/-.

Spread over an area of 1,601 hectares, this village has a population of 8,194. Out of the 896 households in the village, 563 are engaged in farming. Gross cultivated area during 1973—74 was 1,500 hectares out of which 950 hectares were irrigated. Another 112 hectares were brought under irrigation during the year.

All the households engaged in farming took up HYVP in both Kharif and Rabi. Gross area under improved seeds was 986 hectares and under double or triple cropping, 1,543 hectares. Production of compost was 7,250 tonnes, and 950 quintals of fertilisers were distributed in the village.

Of the 896 households in the village, 543 were covered by co-operatives, 542 adopted family planning methods while 114 sterilisations were done, 430 particpated in people's contributions amounting to Rs.860/-. During the year of competition 173 pucca houses were constructed, 178 houses had smokeless chullahs, and three new drinking water wells and hand pumps were provided. 15 kms. of new katcha roads were constructed and 30 sq. meters of lanes were paved. 1,213 children were in school and 364 adults were made literates.

ENTREPRENEURS! SIPCOT OFFERS YOU A PACKAGE DEAL



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A New Trend in Education Launched

Institute of Co-operative Education Tiruchi

The State Institute of Co-operative Vocational Education, Tiruchirapalli is yet another example of the progressive policies of the Government of Tamil Nadu in the field of education. Our revered Chief Minister who has already set an example to other States by bringing about a number of progressive programmes to better the socio-economic-conditions of the people of the State has added yet one more by approving the scheme submitted by Thiru M. Vaithialingam, Collector of Tiruchirapalli for the establishment of this Institute at Tiruchirapalli for the promotion of Co-operative Programmes of Education. Dr. Navalar Nedunchezhian is the Chairman of the Governing Council of this newly established Institute.

Why Co-operative Education ?

It is widely accepted and acknowledged by all these days that the central problem of our present day system of education is its lack of relevance to the rapidly changing socio-economic needs of the society. What is urgently needed today is to reorganise our system of education and reorient it so as to make it more responsive and responsible to the changed and continually changing society with all its scientific, technological, industrial, economic and social implications. This can be achieved only by exposing the students of our colleges and universities to the various activities of the society by providing them with ample opportunities to gain direct experience and better understanding of the adult world into which they will enter at the end of their studies. In other words, their class-room education should be linked meaningfully with the activities of the society in which they will live and work after their formal education. Co-operative programmes of education aim at achieving this end and well-designed co-operative vocational programmes of education meet this purpose most eminently.

What is Co-operative Education :

(*a*) **Philosophy** : Co-operative education is a plan of education that integrates class-room study with planned and supervised work experience. It is called co-operative education because it is dependent upon the co-operation of outside agencies and educators in combining to produce a superior total educational programme for the students. The students participate in such programmes because they wish to acquire qualification for a pre-determined area of competitive employment.

The following factors are to be adhered to as closely as possible in all programmes of co-operative education :

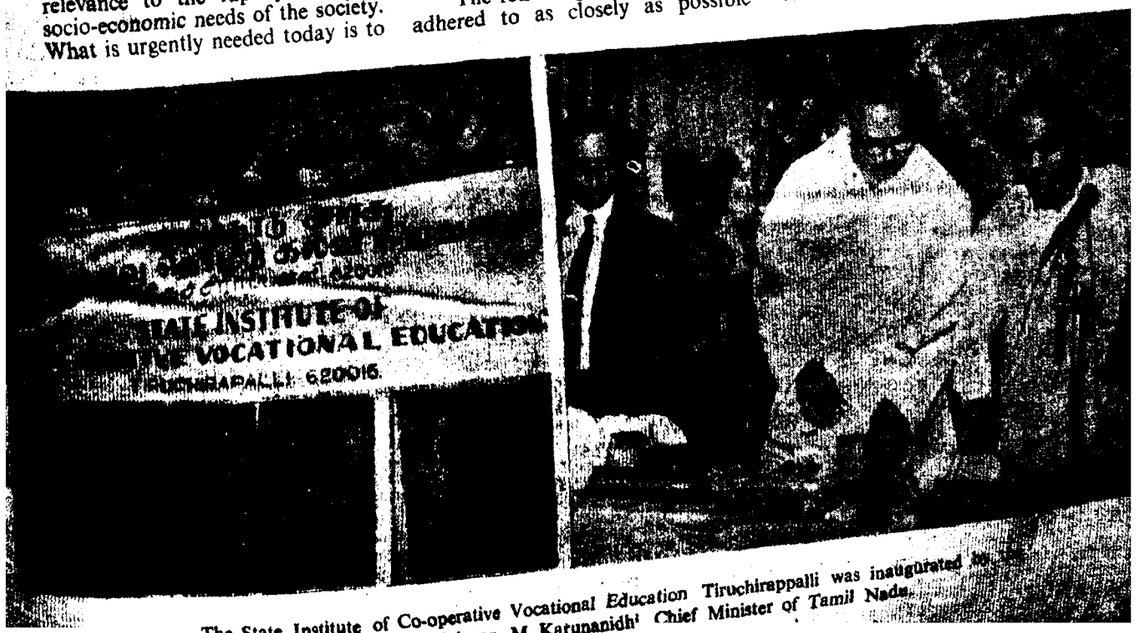
(1) The student's off-campus experience should be related as closely as possible to his field of study and individual interest within the field.

(2) The employment must be a regular, continuing and essential element in the educational process.

(3) Some minimum amount of employment and minimum standard of performance must be included in the requirement for the degree or certificate presented by the Institution.

(4) The working experience will ideally increase in difficulty and responsbility as the student progresses through the academic curriculum and, in general, shall parallel as closely as possible his progress through the academic phase.

(b) Calendar Patterns : Programmes of co-operative education can be developed around a number of different calendar patterns. Usually students alternate periods of study with periods of employment on the quarter, trimester, or semester calendar of the institution. Under this plan of alternation, the summer is also used for study or work. The utilization of a twelvemonth calendar for both work and study reduces the extension of the total time to



The State Institute of Co-operative Vocational Education Tiruchirappalli was inaugurated by the Hon'ble Dr. Kalaignar, M. Karunanidhi Chief Minister of Tamil Nadu.

complete the academic courses and makes it possible to keep co-operative jobs filled on a year-round basis by pairs of alternating students.

(c) **Advantages** : The following are some of the major advantages of a co-operative programme of education :

(1) By co-ordinating work-experience with campus education, theory and practice are closely related.

(2) Work experience brings greater sense of responsibility and a greater dependence upon the student's own judgment.

(3) Students of this programme develop greater human-relations skills because their work experience involves them with co-workers coming from a variety of backgrounds.

(4) Co-operative education gives the student contacts which are useful in later occupational placement.

(5) A number of firms would find that the programmes help maintain a steady flow of trained personnel.

(6) It gives many students a head start in salary and position when they go into full-time jobs.

The co-operative education is thus highly valuable not only for the students, but also for the employers, institutions and the society at large.

Details of the Institute :

(a) **Management and Finances** :

The Institute is financed by the Government of Tamil Nadu, and to ensure speedy development, the administration and management of the affairs and finances of the Institute have been entrusted to an autonomous Governing Council, registered under the Society Registration Act, with the Minister for Education, Dr. Navalar V.R. Nedunchezhian as Chairman, the Collector of Tiruchirapalli Thiru M. Vaithialingam as Deputy Chairman and Prof. P. S. Mani Sundaram (Principal, Regional Engineering College, Tiruchirapalli), Thiru V.R. Deenadayalu (General Manager, Bharat Heavy Electricals Ltd., Tiruchirapalli), Thiru S. Vaiyapuri (Additional Director of Technical Education, Madras), Thiru T. N. Narayanasamy Pillai (Former Vice-Chancellor of Annamalai University, Chidambaram) and Dr. K. P. Jacob, (Professor of Physics, Regional Engineering College, Tiruchirapalli) as members.

(b) **Location**: The State Institute of Co-operative Vocational Education is at present located at the Regional Engineering College, Tiruchirapalli. Detailed plans for the development of a separate campus for the Institute are being worked out.

(c) **Courses Offered** : To start with, the Institute offers the following courses from the academic year 1975—76 and the number of students to be admitted in each course will be 20.

(i) Architecture and Interior Design.

(ii) Electrical Appliances and Systems.

(iii) Textiles and Fashion Design

All these courses are of 3 1/2 years or 42 months (14 quarters) duration. The courses are designed so that all the students will receive 24 months (8 quarters) of institutional training and 18 months (6 quarters) of work experience in the fields for which they are preparing.

(d) **Admission requirements** : (1) Candidates must have passed the Pre-University Examination of the Madras University with Mathematics and Physics or Physics and Chemistry or Commerce and Mathematics as two of the subjects under Part III or an examination of some other University/Board accepted as equivalent thereto and must have obtained not less than 50% of the marks in the concerned subjects.

(2) Candidates who have passed B.Sc. or B.Com., with Mathematics, Physics, Chemistry or Commerce of a recognised University are also eligible for admission.

(3) Seats are reserved for the candidates who belong to backward class, Scheduled Caste and Scheduled Tribes, as per rules.

(4) The selection of candidates will be on the basis of their marks in the qualifying examinations and an aptitude test and their performance in an interview.

The establishment of this State Institute of Co-operative Vocational Education will not only be a milestone in the history of the development of education in the State of Tamil Nadu but also serve as an example for the other States in the Country to emulate.

PUBLIC HOLIDAYS IN TAMIL NADU DURING 1976

The Government of Tamil Nadu have declared that in addition to 'Sundays' expressly defined as Public Holidays in the 'Explanation', to section 25 of the Negotiable Instruments Act, 1881, the following days shall be Public Holidays during the year 1976 :—

Thursday, the 1st January, 1976	— New Year's Day
Tuesday, the 13th January, 1976	— Muharam
Wednesday, the 14th January, 1976	— Bhogi
Thursday, the 15th January, 1976	— Pongal
Friday, the 16th January, 1976	— Thiruvalluvar Day
Monday, the 26th January, 1976	— Republic Day
Monday, the 15th March, 1976	— Meelad-un-Nabi
Wednesday, the 31st March, 1976	— Telugu New Year's Day
Tuesday, the 13th April, 1976	— Tamil New Year's Day
Friday, the 16th April, 1976	— Good Friday
Saturday, the 1st May, 1976	— May Day
Wednesday, the 30th June, 1976	— Half Yearly closing of Bank Accounts
Saturday, the 28th August, 1976	— Vinayaka Chathurthi
Saturday, the 25th September, 1976	— Ramzan
Friday, the 1st October, 1976	— Ayudha Pooja
Saturday, the 2nd October, 1976	— Mahatma Gandhi's Birth Day
Friday, the 22nd October, 1976	— Deepavali
Friday, the 3rd December, 1976	— Bakrid
Saturday, the 25th December, 1976	— Christmas
Friday, the 31st December, 1976	— Annual Closing of Bank Accounts

As Independence Day falls on Sunday and one holiday for Ayudha Pooja which falls on Mahatma Gandhi's Birthday they have not been shown in the above list of holidays.

Government have also directed that all offices under the control of Government of Tamil Nadu will be closed on all Second Saturdays in the year 1976 and holidays mentioned above except Wednesday the 30th June, 1976 and Friday, the 31st December, 1976.

Welfare of Backward Classes
Free Education up to P.U.C.
CAN YOU NOT HELP THE STATE?
Legal Distribution of Land to the Poor
Slum Clearance
Despite these achievements
Rising Population Raises Problems
YOU CAN
PLANNING YOUR FAMILY
DEPARTMENT OF HEALTH SERVICES AND

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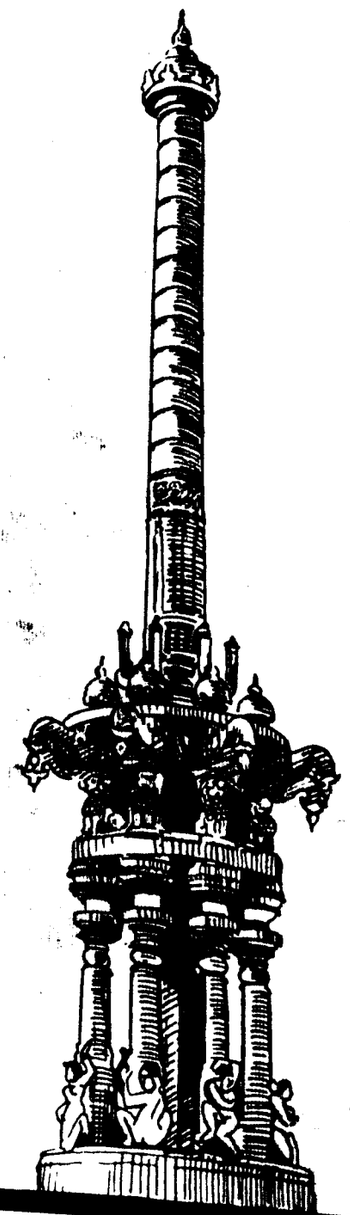
VISIT

THE ART GALLERY AT

POOMPUHAR



- Where the stones tell a tale and recapture scenes from *Silappathikaram*, the ancient Tamil classic;
- Where a city sunk beneath the wave comes glowingly alive!
- A feast for the eyes — and food as well for thought — that's what you get at Poompuhar.
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COME... SAVOUR THE SCULPTURAL DELIGHTS OF THE POOMPUHAR ART GALLERY

Poompuhar is 21 kilometres from Sirkali and 29 kilometres from Mayavaram

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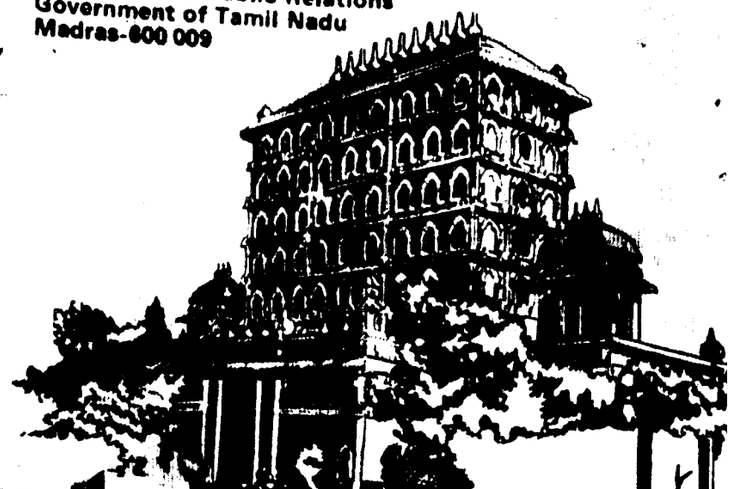

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