

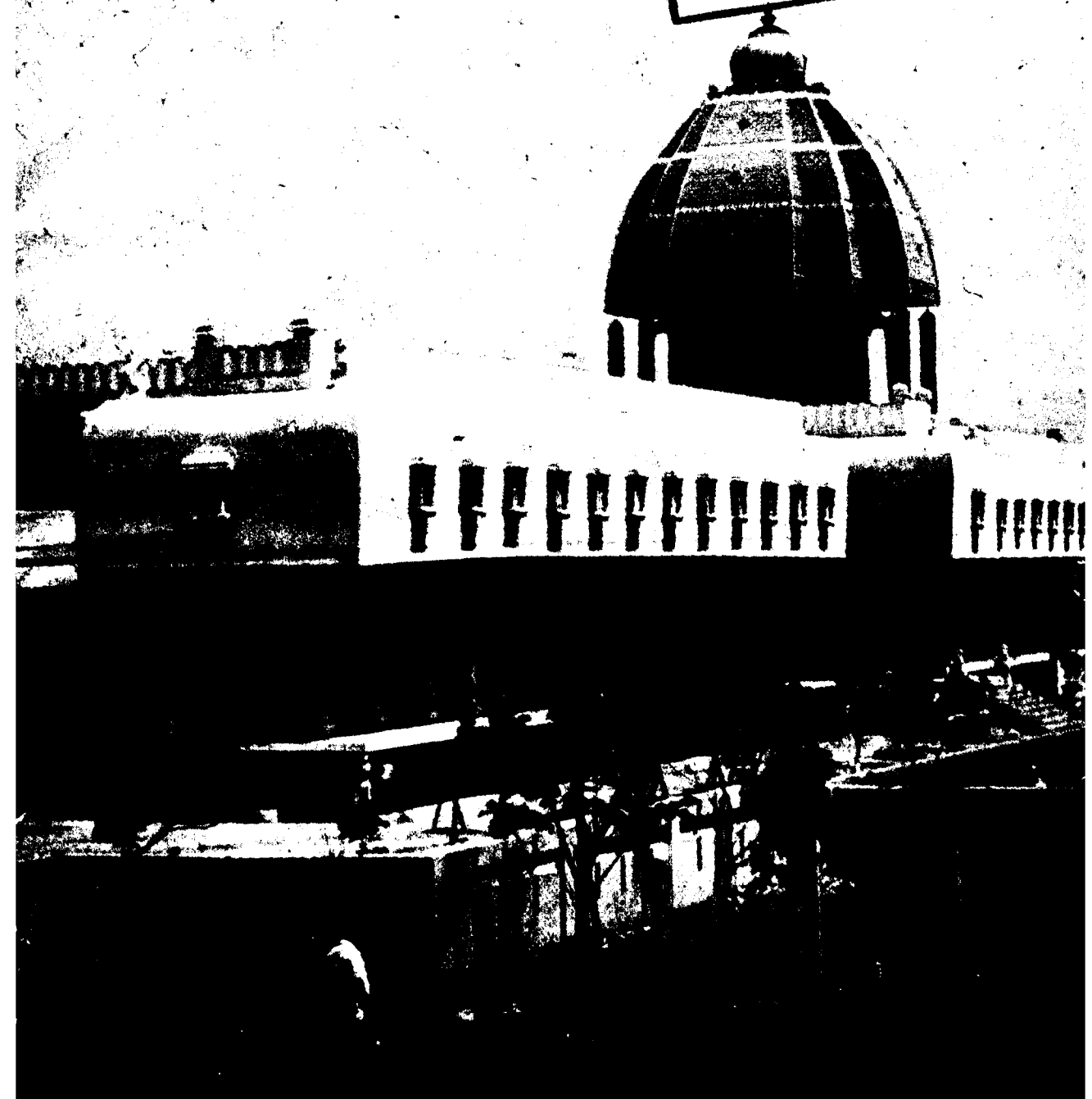
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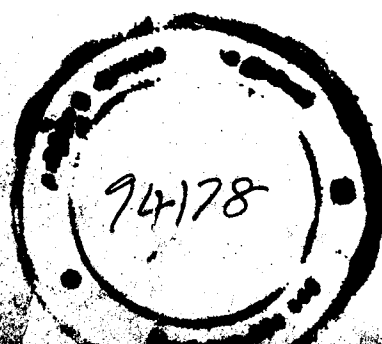


ELEPHANT



AGORATANDAVAM

Courtesy: Tamil Cultural Centre,
Government of Tamil Nadu



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The administration of justice is the finest pillar of Government

Hon'ble Thiru M. M. ISMAIL

Chief Justice of Tamilnadu

I do not think that apart from this I am expected to make or I will be justified in making a long speech or popular pronouncements. I have been closely connected with this Court for the last 35 years except for a brief period of nine months, when I was away at Delhi, and, therefore, I am fairly familiar with its practice and problems of this Court. I have not been a stranger to you or even to the public at large. The way I have lived my life ever since my student days to which the learned Advocate General did make a reference has been such as to take me to the notice of the public who have had an opportunity to assess me and even to know what to expect from me.

The fact that I have become the Chief Justice of this Court, after a fairly long period of judgeship of about 12 years, has got its advantage too. That advantage is that we have come to know each other and with reference to each other we know where we stand. Such a situation will be helpful in preventing the occurrence of deviations, distortions or surprises. However, having regard to the fact that all of us are human beings, there is the possibility of our committing errors of judgment and so long as we mutually appreciate the honesty of the other, there will be no scope for any irreconcilable conflict or avoidable friction. Only when there is misunderstanding with respect to the motive of the other's action, rumours and speculations take the place of facts and judgments. Personally speaking, I have always had the extreme good fortune of enjoying the confidence and even the

affection of not only my learned colleagues on the Bench but also the members of the Bar. But for the unstinted co-operation willingly extended by the members of the Bar, it would not have been possible to do what little I have done in this Court, as a Judge of this Court. From the public also I have received nothing but love and even generosity.

All of you know that there is absolutely nothing either in my mental make-up or in my temperament to behave or conduct differently from what I have been doing and therefore I am justified in expecting from every one of you the same degree of confidence and co-operation in the discharge of my duties as the Chief Justice of this Court.

However, I must refer to one unusual feature associated with and concerning my appointment as the Chief Justice of this High Court. I am referring to the wide public interest that was evinced in this regard. This has added a new dimension to my responsibilities and obligations as the Chief Justice of this Court and the Head of the judiciary in the State. On my part, I welcome such public interest, since ultimately we have to register the impression in the public mind that we are functioning as an independent, impartial and fearless judiciary and in the discharge of our duties, we never swerve from the straight and narrow path of doing justice as between the parties that come before the Courts.

One may feel that such statements are merely repetitions of worn-out formulae or empty slogans and one may also be justified in thinking so. Yet it is not possible to dispense with the organ of the judiciary

or the concept of justice without, at the same time, putting an end to all notions of liberty and freedoms. It is this aspect of justice that made George Washington declare :

"The administration of justice is the firmest pillar of Government."

That is exactly the reason why James Morrison also stated :

"Justice is the end of Government. It is the end of society. It ever has been and ever will be pursued until it is obtained or until liberty be lost in the pursuit."

Consequently, the existence of an independent and incorruptible judiciary administering law and justice without caring for the consequences has become the basic requirement of any modern civilised society.

Cynics and sceptics may point to the flourishing of the unjust and the success of the evil and declare with deceptive joy that justice has never succeeded in this mundane world and it is the pursuit of power and wealth, not caring for the means adopted, that have produced success and happiness. An answer to such cynicism has been provided long ago by Manu when he said :

"Iniquity, committed in this world, produces not fruit immediately, but, like the earth, in due season, and advancing by little and little, it eradicates the man who committed it."

He grows rich for a while through unrighteousness; then he beholds good things, then it is that he vanquishes his foes but he perishes at length from his whole root upwards.

Justice being destroyed, will destroy : being preserved, will preserve it must never therefore be violated."

All of us have seen how temporary and fleeting have been the gains obtained and the successes achieved through means that have not been clean and correct. Such experience of ours should only confirm our belief and resolve that doing justice as between contending parties is a goal worth pursuing irrespective of any provisional failures and unhappiness that may be produced, believing in the ultimate success of the right and justice.

Every system of law prevailing in any country has as its goal, the maintenance of peace, freedom and justice among the members of the society and any system conceived for the administration of law and justice must be conducive to the achievement of that object. We must congratulate ourselves in having such a system of judicial administration which can stand this test.

Any system of judicial administration for its success imposes an obligation on every one of the actors taking part in the scheme. The presiding officers have their own part to play : the members of the Bar who practice the profession in the Courts have got their duties and obligations; and the litigants in their turn have certain scruples to observe. As in in all other cases, here also Bacon very clearly and practically defines the attributes of a Judge thus :

"Judges ought to be more learned than witty, more reverend than plausible, and more advised than confident. Above all things, integrity is their portion and proper virtue."

Similarly, the members of the Bar must realise that they are playing a dual role, namely, they are advocates of their clients as well as officers of the Court. Their position as Advocates of their clients imposes on them an obligation to espouse the cause of their clients without any fear or favour. Equally their status as officers of the Court imposes on them a duty to be fair to the Court, to the opposite side and to the status of their own profession, and never to do anything which will in any manner or to any extent affect the dignity of the Court or impair its

role and efficacy as the ultimate arbiter of disputes between one citizen and another and between a citizen and the State. The citizens on their part should the machinery of the judicial administration only for the purpose of vindicating their rights and having their grievances redressed and not for the purpose of harassing an opponent or for ruining some one whose prosperity they would not like. They along with their Advocates must make a resolve not to abuse the process of law for unholy ends or unworthy purposes. Only when all these three actors play their part fully and honestly it will be possible to produce a satisfactory and praiseworthy system of administration of justice. If any one of these three actors fails to perform his obligations, to that extent the machinery will fail, but the failure will not be attributed to the particular actor who was responsible for producing the same, but to the entire system itself. Therefore, it behoves every one of the actors to see that he does nothing which will injure and ultimately destroy the very system of which he is a part and from which he draws his sustenance.

I have no personal ambitions. But I can confess with all humility and sincerity that it is my ambition to create an image of the judiciary in the State, a judiciary which is at once independent, impartial and incorruptible. Just as it is said that justice should not only be done but also should be seen to be done, so also these qualities of the judiciary should not only be present but also should be seen to be present. That is possible only when each one of us conducts himself in such a way as not to give room even for a rumour that he has been in any way conducting himself inconsistent with his high obligations to the system of judicial administration and to the society.

It may be that in practice, a disgruntled litigant does not hesitate to attribute motives to a Judge and thereby it may be difficult for a Judge with the best of efforts and intentions to avoid or prevent somebody else writing something unsavoury about him. Yet it is possible to build up and establish a reputation which can survive such baseless rumours or complaints.

It shall be my endeavour to hold the scales even as between all

the parties connected with the administration of justice and I shall be more than rewarded if I ultimately succeed in projecting on the public mind a judiciary which is noble, honest, sincere, hardworking, impartial and independent.

I do not think that I will be justified in saying anything more at this stage. I have to be judged by you and the public only when I lay down my office as the Chief Justice of this Court. That judgment will necessarily have to be based more on what I am able to do and achieve during the interim than on what I say now. Till the moment arrives, all that I can do is to assure you and the public at large with all the sincerity I am capable of that I shall strive my best to conduct myself in such a way as to be worthy of the great traditions and the prestige that have always gone along with the high office to which I have been appointed.

In assuming this high office, full of responsibilities, I am hoping and believing that I shall have the blessings of my elders, the co-operation of my learned brethren on the Bench and the Bar and the members of the judiciary and the good wishes and goodwill of the entire public.

In a congratulatory message sent to me on the announcement of my appointment, Justice H. Khanna, with whom I had the privilege of working in the High Court of Delhi, stated :

"Your Court is the repository since last century of high judicial traditions. I have no doubt that under your stewardship those traditions would have fresh efflorescence."

I may state with all humility that the above message shall be my motto and goal in the discharge of my functions as the Chief Justice of this Court and towards achieving the end I seek most sincerely the ever-nourishing and never failing grace of the Almighty, the generous operation of my learned brethren on the Bench, the members of the judiciary all over the State, the staff, the whole of the Bar of this State as well as the public who has now become watchful, critical and discriminating.

Thank you. May God bless all.

STATE PLANNING COMMISSION 473 AND ITS ACTIVITIES

KOVAI CHEZIYAN

Vice-Chairman, Planning Commission

State Planning :

In Planning for the development of a state like Tamil Nadu, which has yet a long way to go towards the achievement of its economic ideals, we have to take into account not only the needs of the State and the problems which it is facing but also its potentialities for growth and development. Therefore the size of the plan is not merely an aggregate of the cost of the schemes but also an indication of the extent to which its national and financial resources can be utilised in an optimal manner.

State Planning Commission and its objectives :

The State Planning Commission of Tamil Nadu was first constituted in May 1971 with the Chief Minister as Chairman, an official Deputy Chairman, and five non-official members who were avowed experts in their fields of specialisation. A district planning cell was formulated in each of the then 13 Revenue Districts.

The main objective before the Commission was to prepare a Perspective Plan for the socio-economic development of the State over a period of 10 years commencing with the Vth Five Year Plan and ending with the VIth Five Year Plan, 1974-79, after identifying the constraints to the process of economic development and steps to eradicate them. To accomplish this task the Commission identified the following as inputs necessary for the preparation of the Perspective Plan document.

- (i) Sectoral Projects ;
- (ii) District Plans ;
- (iii) Regional Plans ;
- (iv) Area Industrial Complex studies.
- (v) Adhoc proposals to government on current problems.

The District Planning Cells were required to prepare District Plans for the period 1974-84.

The Commission was reconstituted in April 1974 with the Chief Minister continuing to be the Chair-

man of the Commission, a Vice-Chairman, and four economists, three Secretaries to the Government, and one Member-Secretary as the others Members of the reconstituted Commission. The Vice-Chairman visits various parts of Tamil Nadu to study specific problems or situations of those parts and holds discussions with concerned District Collectors and other District Officials. The representations received from the Public during his visit are examined, necessary action initiated on the same and followed up with concerned departments. The information obtained from them are communicated to the petitioners for information and further course of action.

Performance

I. *Perspective Plan and District Plans* : The Perspective plans for the state covering the period 1974-84 was finalised and submitted to Government in December 1973. 23 Development District Plans were also formulated.

II. *Special studies* : (i) The reconstituted Commission besides updating the Annual Plan 1974-75, conducted the following studies and submitted reports to government.

1. Survey of Employment, income, savings and investment in Tamil Nadu.
2. Spurt in food prices in Tamil Nadu.
3. Consumer behaviour in, Tamil Nadu.
4. Handloom industries in Tamil Nadu.
5. Water problem in the city.
6. General price rise and its impact in Tamil Nadu.
7. Modified approval for disbursement of central assistance to States.
8. Taxable capacity of Tamil Nadu.
9. The incidence of Taxation in Tamil Nadu.
10. The unemployment of the educated persons.
11. Nutrition programmes.

12. Drought insurance.
13. Long-term measures to prevent damage due to flooding of the rivers in the city of Madras.
14. Effective utilisation of water in Cauvery basin.
15. A critique on Dry irrigation projects.
16. Note on Sethusamudram Canal Project.
17. Broad gauge link to Tuticorin.
18. Consumption and credit requirements in the state of Tamil Nadu.
19. Indirect Taxation in Tamil Nadu.

(ii) During the year 1977-78 special studies on the following were made and papers sent to the Government :

- (1) Problem of Rural Unemployment in Tamil Nadu.
- (2) Formulation of the Sixth Plan, 1978-83.
- (3) Strategy for Planning in Salem, Cuddalore, Region and Coimbatore-Nilgiris Region with a note on the development strategy enumerated by the Techno-Economic Survey of "South Arcot District."
- (4) Savings of house-holds in the form of deposits in Tamil Nadu economy.
- (5) Employment guarantee Scheme of Maharashtra and its applicability to Tamil Nadu.
- (6) Problems identified by various directorates in regard to certain problems implemented by them.
- (7) Proforma designed for the Health Survey.
- (8) Assessment of planned development in different districts.
- (9) Industrial projects proposed in Tamil Nadu based on data published by Economic Intelligence Service Centre, Bombay.
- (10) Methodology adopted in fixing prices for procurement of rice in the State, by Tamil Nadu Agricultural University.
- (11) Survey on Palngur Industry and Potential of Fibre Wealth in Tamil Nadu.

(12) District Planning and Sixth Five Year Plan of Tamil Nadu.

(13) Plan and Non-Plan expenditure on Agriculture and Allied Sectors.

(14) Review of Selected Plan schemes.

(15) Comparative analysis of the extent of implementation of schemes proposed in Task Force Reports Perspective Plan vis-a-vis the plan schemes implemented in the Annual Plans.

In addition to the above, the following special studies were made.

(1) Scope for additional taxation from Agricultural sector.

(2) Implementation of Nutrition Programme by various agencies.

(3) Farmers response to Agricultural prices. (a case study for paddy in Tamil Nadu)

(4) Specific problems in respect of research development and policy formulation relating to different Heads of Departments.

Besides, these, the following reports were also prepared :

(1) District-wise Plan expenditure for the year 1974-75 and 1975-76.

(2) Ranking of the districts based on selected socio-economic indicators.

(3) Block-level Planning.

(4) Demand and supply projections of Agricultural commodities.

Over and above these, various other items of work relevant to planning were undertaken and completed. (iii) During the year 1978-79, the State Planning Commission, in order to formulate the Sixth Plan 1978-83, with the objectives and priorities indicated by the Union Planning Commission and the State Government, set up 23 working groups for each sector, under the Chairmanship of the concerned Secretary to Government with official and non-official Experts in the field co-opted thereon. The working groups were given guidelines in the preparation of sectoral projects and a note on poverty and unemployment situation were also circulated. On the basis of their reports received and after further deliberations with the members of the working groups and also duly taking into account the observations of the Chief Minister, during one state Planning Commission meeting, suggesting deliberate and purposive

allocation of funds to programmes/schemes designed to cater to the needs of those below the poverty line, the proposals were finalised. Draft chapters on 27 sectoral heads were prepared, discussed and finalised and the Draft Sixth Five-Year Plan, 1978-83, was presented to Chairman Chief Minister of Tamil Nadu. The draft proposals of the Five Year Plan, 1978-83, have a special significance in so far as the first of its kind to be fitted in the pattern of Rolling Plan.

The following studies/notes/were also undertaken/prepared.

(1) Salient features of the recommendations of the report of Venkataraman Committee on public sector, companies.

(2) Findings of the study group under the Chairmanship of Thiru Bhoothalingam, on wages, income and prices.

(3) Construction of a multiple regression model to establish the relative significance of the different sectors with the proportion of "population below poverty line."

(4) Industry-wise details on, capital requirements, employment potentials, average capital-output ratio etc. based on data given in credit plans of nationalised Banks for various districts of Tamil Nadu.

(5) Inter / intra - institutional system available in districts for development work.

(6) Employment generation during the VI-Plan period 1978-83.

(7) Report on Alternative sources of energy viz., "Energy from the Seas."

(8) Comparative study and review of multi-point and single point sales tax in the four Southern States and an analysis of their merits.

(9) Position of employment in Tamil Nadu, 1977.

(10) Evaluation of certain Nutrition Programmes in Tamil Nadu.

(11) Physical and financial targets and achievements in respect of the various sectors.

(12) Environmental Pollution relating to cement factories.

(13) As required by the Chief Electoral Officer, the type of data information to be collected in 1981 census.

(14) Mini Health Centres and Central Kitchen Feeding Scheme ; questionnaire for collection of data.

(15) Discussion of the High-Level Committee on Agriculture with members of the Planning Commission.

(16) In-depth, review of Plan schemes for 1976-77 on (i) Special Nutrition Programme and (ii) Special Housing Scheme for Fishermen.

(17) Resource Mobilisation and Investment Planning for Madras Metropolitan Area, along with an analytical study on property tax, urban land tax and Octroi.

(18) Structure of urban growth in Tamil Nadu-1901-71.

(19) Pattern of Urban Development Expenditure.

(20) Block-Level Planning-selection of Panchayat Unions.

(21) Shanarpatti Block referred by Bhoodan Yagna Board-analysis of household and village level data.

(22) Price Trends of Agricultural Commodities-Policy issues and framework.

(23) Schemes for utilising the unemployed youth in the agricultural sector.

(24) Water Resources.

(25) Spatial Planning.

(26) Employment potential in Tamil Nadu.

(27) Growth rates in Agricultural sector.

(28) Critical Evaluation of the achievements relating to Agriculture and Allied sectors during Fifth Plan period.

(29) Zero base budgeting.

(30) Revised cropping pattern for Lower Bhavani project and Parambikulam Aliyar Project for Northern Districts of Tamil Nadu.

(31) Fodder Production.

(32) Importance of maintaining ecological balance in Tamil Nadu.

(33) Diversion of West Flowing Rivers.

(34) Wind Erosion.

(35) Compounding system of entertainment tax and its effect on state revenue.

Various problems connected with irrigation, transport, environmental pollution, large industries, village and small industries, health care in hospitals etc. are referred to the Vice-Chairman by the public from time to time. With a view to find remedial measures to such problems, meetings with the concerned Heads of departments and Secretary to government are convened by the Vice-Chairman and discussions held, and suggestions submitted to the Chairman/Chief Minister of Tamil Nadu.

The Planning Commission is now concerned with taking up Annual Review of Plan Schemes and preliminary work in that direction is being done.

Forest Wealth of Tamil Nadu

G. THIRUMAL, I.A.S.,

Chairman & Secretary to Government Forests and Fisheries Department.

Forests are a self-renewable natural resource and the most economic sources of converting solar energy into useable form. They play a vital role in the economy and general welfare of our people. They yield a variety of produce such as Timber, Firewood, Bamboos, grazing and other Minor Forest Produce which are essential for mankind. They are the source of raw material for various wood-based industries. The protective role played by forests in conserving soil, regulating the flow of moisture, mitigating climatic excesses and controlling hazards of environmental pollution needs hardly any emphasis. Forests provide peaceful habitat for wildlife—our National Heritage.

Forests in Tamil Nadu extend over 22,495 sq. km. It comprises of 17,300 sq. kms of Reserved Forests; 3,544 sq. km. of Reserved Lands and 1651 sq. km. of unclassified Forests and constitute 17.3% of the State's total land area as compared to the all India average of 22.7% and the minimum of 33% advocated in National Forests Policy. Per capita forest area in the State is .05 hectares.

Realising the inadequacy of forests, the Government have taken over about 44,000 hectares of lands in Jagir Forests in the Kalrayan Hills of South Arcot and Salem districts. Under Gudalur Jenman estate (Abolition and conversion in to Ryotwari) Act 1969 about 5,000ha. has been taken over by the Government in Gudalur taluk of Nilgiris district.



Forests are managed in accordance with accepted principles of Silviculture, aiming at dynamically increasing sustained yield of forest produce so as to meet the rural, urban and industrial requirements of the State in full. The productivity of forests is being stepped up by converting the low quality and poor yielding scrub jungles into plantations of economically important species yielding timber, Fuelwood, Pulpwood and other valuable Forest produce. Natural forest areas which harbour wildlife are being preserved. Conservation of forests in the catchments of rivers and River Valley Projects is also one of the objects of Forest Management.

The forest wealth of the State comprises of major forest products like, Timber, Pulpwood, firewood

Sandalwood and minor forest produce viz. Rubber, Cashew, Tea (Green leaf) Gallnuts etc. The State earned a revenue of Rs. 11.25 crores during 1978-79 by the sale of above forest products a glance of which is given. (Page 8)

Timber

Timber is mainly obtained from the natural forests of the State. Teak, Rosewood, Pillaimaradhu Vengai, Silavagai, Kumil, Thadasu are some of the important species available. A quantity of 39,000 M³ is being exploited and sold annually realising a revenue of Rs. 2.01 crores. In order to meet the growing demand of timber, plantations of Teak have been raised over an extent of 9,600 hectares. Red

sanders has also been planted and so far the extent covered is 1350 hectares.

Bamboos

As poorman's timber, Bamboo is put to multifarious uses as roofing, posts, side walls, thatties, mat, basket etc. The poor class earn their livelihood by this. The strength, stoutness, smoothness, lightness, combined with hardness, ease and regularity with which it can be split etc. make bamboos suite a variety of purposes for which other materials would require much labour and preparation. It is extensively used (some times to the exclusion of timber) in house building. It also forms the basic raw-material for the manufacture of paper. M/s Seshasayee Papers and Boards Limited at Pallipalayam mainly depend upon the bamboos exploited from the natural forests of the State.

Pulpwood

In order to bridge the wide gap between supply and demand of wood, mainly pulpwood, by wood based industries, Forest Department has undertaken large scale plantations of pulpwood species. The area covered so far is 59,470 ha. Besides bamboos, the following pulpwood species serve as valuable raw-material to these industries.

(1) *Eucalyptus Globulus (Bluegum)* It has been extensively raised in Nilgiris and Upper Palnis. The total coverage is about 9,000 hectares. Plantations are being worked on a sustained yield basis. During 1978-79, about 50,000 tonnes of wood was supplied to M/s. South

India Viscose Limited for manufacturing rayon grade pulp. Leaves of this species yield Eucalyptus oil on distillation and support large number of small oil distilleries. Lops and tops obtained by converting trees are used as firewood.

(2) *Eucalyptus grandis (Rosegum)* : It is a medium-elevation Eucalyptus planted in Gudalur taluk of Nilgiris district. This wood is also used for Rayon grade pulp. During 1978-79 about 20,000 tonnes of wood was supplied to M/s. South India Viscose Limited and M/s. Gwalior Rayon Silk Company.

(3) *Eucalyptus Hybrid* :—Plains and foot hills where climatic and edaphic factors were suitable, eucalyptus hybrid has been raised. In all 36,327 hectares was planted. Wood of this species is an ideal pulpwood for manufacture of paper. During 1978-79 about 34,000 tonnes of wood was supplied to M/s. Seshasayee Paper and Boards Limited.

4. *Sandalwood* : Natural sandal occurs on fairly large scale, on the plateau and in the hilly tracts of North Arcot, Salem, Coimbatore and Periyar Districts and to a lesser extent in Nilgiris, Dharmapuri, South Arcot, Ramnathapuram and Tirunelveli Districts. The sandal forests in the State occupy an area of 7,000 sq. kms. The hart wood on distillation yields oil, rich in "santanol" and used in perfumery, cosmetics, soap making etc. Sandal auctions are held by the Department twice a year at Tirupathur in North Arcot District, Sathyamangalam in Coimbatore District and Salem. The annual production of wood is about 2,500 tonnes of final cleaned wood. During 1977-78 the revenue by sale of sandalwood touched a figure of Rs. 4.35 crores. Government have



since decided to distil the sandal oil in six distillation units to be set up by TANSI utilising a portion of sandalwood grown in the forests of the State.

Firewood

Fuelwood forest of the State occupy an area of 454 sq. km. The areas are worked on sustained yield basis and the firewood requirements of villages, towns and cities to a large extent is met by the forests of the State. During 1978-79 a

revenue of Rs. 1.03 crores was realised by the sale of fuel coupes. The annual out turn of fuel wood is placed at 3.0 lakhs cubic metres.

Grazing

The entire forests of the State, except young plantations, worked fuel coupes and a few closed areas are open to grazing at a very nominal cost. Grazing fees is being collected at 2 per cow unit for the entire grazing season of one year. Cattle pens have also been permitted within the forests. The annual revenue from the grazing is Rs. 12.5 lakhs which is equivalent to 25 lakhs cow units grazing in the forest.

Rubber

About 4,700 hectares of natural moist deciduous forests of Kanyakumari district were converted into rubber plantations. Some of these were to rehabilitate the repatriates from Sri Lanka. Rubber is an important product of the *Hevea brasiliensis* plant having varied industrial, technological and domestic use. During 1978-79 Rubber Plantation of the State have been responsible in earning a revenue of Rs. 1.57 crores.

Cashew

Degraded and poor quality forests in Chingleput, Trichy and

South Arcot districts have been planted with Cashew which is a foreign exchange earner. During 1978-79 cashew plantations in the State yielded a revenue of Rs. 6.06 lakhs.

Tea

Tea plantations have been raised over an extent of 1,400 ha. in Nilgiris district again to rehabilitate Sri Lanka repatriates. Plantations have started to yield and during 1978-79 a sum of Rs. 1.08 lakhs was realised by the sale of tea leaves.

Wattle

Grass lands of Nilgiris were planted with wattle, the bark of which yields a good quality tan material. Upto 1979-80, an area of 24,430 ha. has been planted with wattle. The bark is sold to M/s. Tan India Wattle Extracts Limited and the debarked wood is supplied to M/s. South India Viscose Limited for rayon grade pulp. During 1978-79 wattle plantations yielded a revenue of Rs. 76.47 lakhs.

Casuarina

The coastal areas of the State have been found suitable for raising casuarina a fuel species which has the highest calorific value. So far the extent covered is about 5,200 ha. The plantations offer good aesthetic

beauty to the coast, prevent drift of sand and meet the requirement of fuelwood in the nearby towns and villages.

Minor Forest Produce

The forest of the state yield a variety of Minor Forest produce such as Tamarind, Gailnut, Sheyakkai, Avaram and Konnabark, Lemongrass, Nellikai oil seeds, Tree moss etc. Though called minor produce they are of major importance. During 1978-79 the sale of Minor Forest Produce fetched Rs. 3.3 crores.

Social Forestry Plantations

Tamil Nadu has been in the forefront in implementing social forestry scheme. The scheme was initiated in the year 1960 and the area covered so far is 91,300 hectares. The programme envisages afforestation of waste lands, foreshore of tanks, barrenhill slopes, etc. The species raised is Karuvel, Eucalyptus hybrid, odai, Parambai etc. These plantations serve to meet the requirement of rural population in respect of fuel, small timber, green manure, fodder etc. They also conserve soil and moisture and play an important role in maintaining healthy environment. Wherever panchayat lands are taken up for afforestation work the revenue derived is shared with Panchayats. During 1978-79



Sl. No.	Sanctuary	Location	Extant ha.	Animals
1)	Mudumalai Wildlife Sanctuary	67 Kms from Ooty	32116	Elephant, Deer, Sambar, Tiger, Panther, Boar, Malabar Squirrel.
2)	Anamalai Wildlife Sanctuary	Anamalai Hills Coimbatore	95800	—Do—
3)	Mundanthurai	18 Kms. from Ambasamudram,	56700	Tiger, Deer, Sambar, Liontailed Macaque,
4)	Kalakad Wildlife	Nanguneri Taluk Tirunelveli	22358	Liontailed Mucaque, Tiger, Panther, Deer, Sambar.
5)	Guindy Park	Raj Bhavan Guindy Madras City	270.57	Black Buck, Deer, Sambar Etc.

Bird Sanctuary:

1)	Vedanthangal	62 kms. to the South of Madras on G. S. T. Road	29
2)	Point Calimere	Point Calimere (RS) 112 kms. from Thanjavur.	1729

harvest of the plantation yielded a revenue of Rs. 32.77 lakhs.

Wildlife Sanctuaries

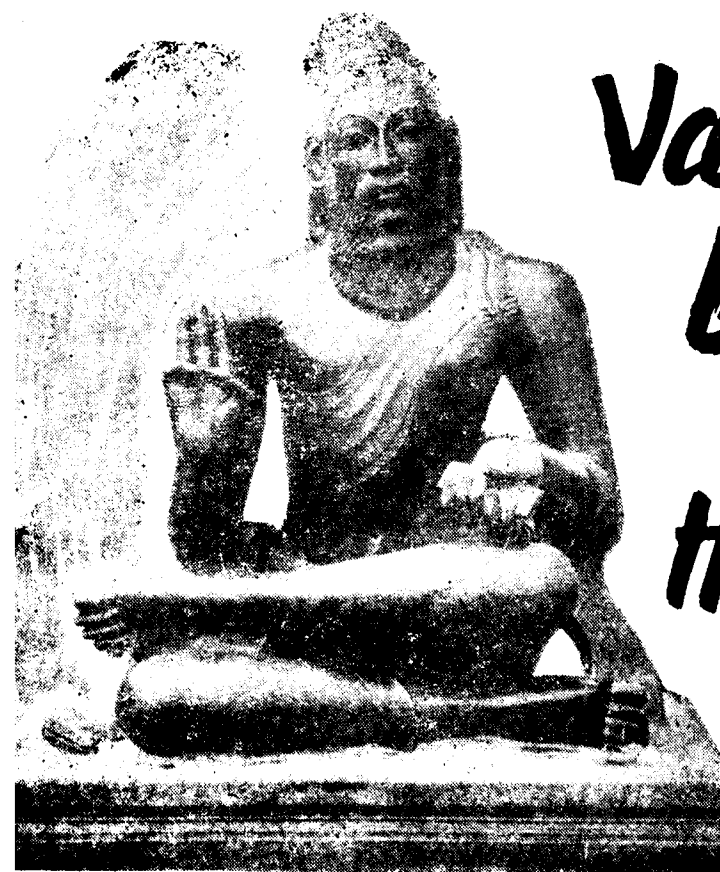
Tamil Nadu is blessed with rich and varied fauna. Long stretches of continuous forests and sheltered valleys provide peaceful habitat to the wildlife. Elephants, Tiger, Panther, Gaur, black buck, Sambar, deer, Tahr, boar and monkeys are worth mentioning. In order to

preserve the precious wildlife of the State and also to conserve the floral, faunal, geomorphological and natural character of the area the following sanctuaries have been constituted.

The above are the tangible and direct benefit the State derives from the forests. Intangible benefits, however overweigh all the direct benefits. It has been well recognised that Forestry is the foster mother of Agriculture and the role played

by it in regulating moisture thereby controlling floods, mitigating the climatic excesses, maintaining clean environment and providing better quality of life, cannot certainly be expressed in terms of money value. How can one forget that—

Forests mean water
Water means bread
and Bread is life — SAGA



Valluvar's Blue print for the evolution of man

S. MAHARAJAN,
CHAIRMAN,
Official Language Commission.

Tiruvalluvar has a fascinating blue print for the evolution of Man. He knows that the average householder is usually self-centred and narrow in his vision. He must, therefore, dangle before him an ideal which he would think worth achieving. He places before him the ideal of 'Puhazh' or fame and prescribes certain virtues by practising which the house-holder can achieve fame.

By the time the house-holder has achieved fame, he has, by practising the prescribed virtues, become less self-centred and more fit to work for a higher ideal than fame. At this stage Valluvar places a greater ideal before him. He wants him to become a man possessing perpetual inner joy and peace. For that purpose, he wants the householder, who has achieved fame, to become a contemplator, a meditator, a man of sacrifice, a renunciant who will be in perpetual joy. After he achieves this ideal, he becomes fit to play a significant and fruitful role as a member of the community, as a citizen of the State and as a universal man. At this stage Valluvar places before him the ideal of the sage or the Superman and calls upon him to achieve this

ideal by practising certain loftier virtues.

It would indeed be edifying to study how Tiruvalluvar takes us kindly by the hand and persuades us, by resorting to all the tricks of psychiatry, to rise from a lower stage to the higher, till at last we achieve the ideal of becoming a Sanror.

It is difficult to translate the Tamil word 'Sanror' into English because 'Sanror' is a man who possesses many different but great virtues. According to Tiruvalluvar, 'Salbu', that is to say, the virtue of the Sanror consists of a group of five distinguished virtues, namely, universal love, sensitivity, helpfulness to all, compassion and truth speaking. (Kural No : 983)

As has been pointed out elsewhere, Tiruvalluvar thinks that every man must be sensitive enough to realise that it is his duty to raise himself to the level of a Sanror and that it is the duty of every Sanror to do all those good acts which time and place require him to do.

Before becoming a Sanror, the individual is required to undergo probation, first as a house-holder,

and then, as a self-denying renunciant.

The loveless men belong all to themselves ;
but men of love
belong to others-their bones and all.

Having emphasised the importance of love, Valluvar calls upon the house-holder to show hospitality to guests. 2000 years ago, there were not many inns or hotels in Tamil Nadu. It was full of villages of varying sizes. Pilgrims, men of business and scholars in pursuit of Truth and poets would be performing their long journeys by foot, breaking their journey, at dusk and resuming it by dawn the next day. The climate of Tamil Nadu is such that except for two or three months in the year, anybody could lie down under the open sky on the pials of houses without having to pay any rent for such user. It is against this background we have to understand the great emphasis that Tiruvalluvar has placed upon hospitality to guests. The guests might be known or unknown persons and if they come within the house, they should be warmly and respectfully taken in and looked after. They

were not all mendicants who lived by taking alms. Ordinarily, they would be hypersensitive persons like poets, artists, philosophers. So says Kural No. : 90 :—

If we smell the Anicha flower, it will wither and wilt away ; like wise, if you look at the guest with an un welcoming face, he will wither and wilt away.

Sweet speech lubricates the wheels of life and keeps the atmosphere positively creative. In fact, a hearty gift with an unsmiling face is much less productive of good than sweet speech with a beaming face.

Valluvar is surprised that people who reap rich dividends by indulging in sweet speech, should be so un-business like as to use harsh words and incur certain loss.

Another virtue, which Valluvar wants the householder to cultivate, is the virtue of gratitude. He knew the liberating influence of gratitude upon the human mind. He says :

It is not good to forget the good done to us, but it is good forthwith to forget the evil done to us.

Another quality which Tiruvalluvar calls upon the householder to pursue is impartiality. It is the ornament of the wise to remain impartial without inclining to either side like the level rod of the balance loaded with equal weight on both of its pans.

Next in order comes the possession of humility. Tiruvalluvar says :

Humility will place you among the gods but the lack of it will engulf you in the deepest darkness.

This idea goes counter to Hazlitt's statement 'Humility is the worst of virtues.' Evidently, Hazlitt must have confused timidity with humility. Humility is the mark of the man of learning, who has realised how ignorant he is. As Valluvar says :

Humility is good for all, but when it is shown by the rich it shines like a special wealth.

The man, who has no humility, may get angry, easily wag his tongue needlessly and thereby come to grief. That is why Valluvar says :

A wound caused by a burning fire may heal internally, but not a wound caused by a blistering tongue.

Valluvar next asks the householder to cultivate character. He does not say that character will give him postmortem paradise. All that he says is "Character gives a man an honourable place in Society and, therefore, it should be valued more than life itself."

In Kural No : 137, he says :

A man of character achieves greatness ; but a man who has no character achieves infinite disgrace.

Valluvar persuades us to cultivate good character by saying :

"Character alone produces happiness." Kural No. : 138 says :

Good character sows the seed, out of which happiness sprouts forth, but bad character will give eternal sorrow.

Valluvar is particular that a man, who lives the life of a house-holder, shall not covet another man's wife. He says :

Of all the fools that stand on the out-skirts of virtue, there is no fool greater than the one who stands on the outskirts of another man's home.

Hospitality and forbearance go hand in hand in this Kural. In Kural No. : 160, he says :—

Those, who endure fasting as a penance, are great, but they are next only to those, who endure the evil words of others.

Valluvar next asks the house-holder to be free from jealousy, which Shakespeare points to as that "green-eyed toad." In Kural No. : 165, Valluvar says :—

To those who have envy it is punishment enough ; even without enemies it can bring them destruction.

Valluvar pours contempt upon the back-biters by wondering :—

Is it out of charity that the Earth bears the burden of the one who slanders people behind their backs. Next, Valluvar proceeds to instruct the house-holders, not to indulge in profitless words, and to learn to dread even the performance of evil deeds. In Kural No : 205, he says :

Don't commit evil, saying, "I am poor" ; if you do, you will become poorer still.

In a separate chapter, Valluvar commends benevolence to all :—

Benevolence seeks not any return ; how can the Earth repay the clouds for their benevolence !

If it were said that evil will emerge out of benevolence, it is worth procuring such benevolence even by selling oneself (Kural No : 220)

Valluvar pities those hard-hearted misers, who hoard their riches all life long and then die leaving all their hard-earned riches behind. He asks with smiling sensitivity :—

Don't they know the joy of giving—these hard-hearted men who hoard just to lose their hoarding ?

Kural No. : 240 embodies the ultimate verdict of Thiruvalluvar :—

They alone live, who live without infamy ; and they alone live not, who live without fame.

It is true that love of fame is not entirely an unselfish virtue. But then Valluvar knows that is a sufficiently sound psychological incentive for the ordinary man to practise such graceful and unselfish virtues as hospitality, gratitude, impartiality, humility, character, patience, etc

After tempting the house-holder to cultivate these virtues and to secure fame in the eyes of society, Valluvar places before him the loftier ideal of living in the world with eternal and incessant joy. In order to achieve this ideal, the house-holder must renounce, not the world, but certain egoistic habit

and tendencies. He appeals to the house-holder to become a Thiravi or a renunciant by cultivating certain special and difficult virtues. First he must acquire spiritual grace :—

Acquire grace by pursuing the path of goodness : whatever system you may explore, you will find that grace alone is your companion.

Cultivation of grace necessarily leads, in the view of Valluvar, to compassion for all lives. That is why he calls upon the house-holder to renounce the eating of meat, in order that he may become a man of grace, Kural No. : 251 Says :—

How can he be possessed of grace, who, to swell his own flesh, eats the flesh of others !

The next thing that Valluvar commends is the practice of Thavam or meditation. Performance of austerity and non-infliction of injury to other lives are said to be part of Thavam. A man who has increased his spiritual power by Thavam, gets enormous powers of changing his very environment :—

Those who perform Thavam are really those who perform their proper duties the others get entangled in desire

and toil in vain.

All souls will worship him, who, losing his Ego, gets control of his own soul.

The have-nots have increased and multiplied, because those, who practise penance are a few, and those, who practice it not, are many.

While commending the practice of penance, Valluvar takes care to denounce those wicked men who pretend and pass off for men of piety.

It is here that Valluvar warns us against being misled by the outer shape of things :—

Though the lute (yazh) is crooked, it produces wholesome music, unlike the arrow, which, though straight, is cruel in the effect it produces.

So says Valluvar :—

We must judge men, not by their appearance,

but by the actual deeds that they perform. The renunciant is next required to practise truthful speech (Vaaimai)

If you ask what truth-speaking means it is speaking words, which are untainted by the least trace of evil.

It may be remarked that Valluvar tests even truth on the touch-stone of goodness. Supposing the uttering of truth is likely to produce evil, what shall we do ? Valluvar anticipates this question and answers it in the following Kural :

Even falsehood belongs to the realm of truth if it can produce faultless good.

External cleanliness can be procured by a wash with water ;

but internal cleanliness can be secured only by truth-speaking.

In the concluding Kural on Veracity, Tiruvalluvar gives a magisterial summation of his entire life's experience in the following words :—

Of all the verities we have scrutinized, there is nothing more productive of good than truth -speaking.

The sage next asks us to refrain from anger. A man may not be angry with his master, because he dare not, but he may lose his temper very often, while dealing with his servant. So Valluvar tells us which kind of restraint is proper :

He is the real restrainer of anger who restrains it where it can hurt ; where your anger cannot hurt, what does it matter if you restrain it or give it free rein.

The next Chapter on non-killing embodies the central concept of Thiruvalluvar. He thinks that man should have reverence for all lives and that if he shows irreverence to life in any form, he will be sowing the seeds of vice. In Kural No : 323 it is said :—

"The greatest good is, without doubt, 'Non-killing'.

next to it in rank comes freedom from falsehood."

After calling upon the householder to practise these virtues, he reminds him of the evanescence of things so that he may not procrastinate and postpone the practice of the recommended virtues. In Kural No 331, he says :—

To mistake the evanescent for the Eternal is the quality of the meanest intellect and has to be disdained.

Referring to the transience of wealth, he says :—

Accumulation of great wealth is like the accumulation of a vast crowd in a dramatic theatre ;

wealth disappears as quickly as the crowd that melts away

after the theatrical play ends.

Though wealth itself is impermanent, Valluvar tells us that that works of permanent value can be rendered with the aid of wealth.

Perishable is the nature of wealth ; if you obtain it,

forthwith do something imperishable.

And what about the passage of time ? Every day that passes brings death closer by a day :—

To the wise, that which appears to be a day is but a saw which cuts down the term of human life.

Hence the need to do the right thing and that, too, quickly :—

Do virtuous deeds quickly, before the tongue becomes powerless, and the fateful cup supervenes.

A bird's eye-view of the Thirukural shows that Valluvar had the wisdom to see the part not in isolation, but in the light of the whole and to suggest methods by which the tempo of the individuals evolution could be accelerated. The blue print he has handed down to posterity is both bold and detailed in conception. **

LINGUISTIC PROBLEMS IN DRAFTING ADMINISTRATIVE DOCUMENTS

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Law and Administration have been with us for ages. We are proud of the three Kingdoms in our part of the country from pre-historic times; we read that they had a panel of Ministers, a 'Council of Five Elders', and an august 'Advisory Body of Eight'. At lower levels also, the Chieftains and the Village Headmen must have had some similar advisory bodies. We do not know fully what laws they promulgated, nor what kind of Administration they had, nor the machinery they had devised to execute and implement these laws in those early times. But we have several books on codes of ethical conduct which have imposed rules of behaviour on all people. We have references to some of them in the earliest literature, and much more in some what later works like *Tiruk Kural*, *Naladiyar*, etc., and later too in the works of the Jains and Buddhists, who laid great emphasis on morality and good conduct. We have reference to offences in *Nilakesi* and there is an amazing definition there of murder which almost corresponds to its definition in the Indian Penal Code.

Coming to later times still, we find that greater and greater attention was paid to administration. We find many references in the inscriptions and epigraphs of those days and some administrative terms in use some of which have been taken up and put to use at the present day. When the British Ruled over the whole of India, they framed the laws in accordance with their idea of the sense of justice. The British administration faced a multitude of languages in the country. They had to carry on their administration through the medium of English which was their native language. Macaulay was aware of the deficiencies of the 'vernacular languages' as they were then called in the fields of modern science and administration. Hence he suggested that Indians should be 'educated' through the English language, so

that they could enrich their own language in course of time, by ideas acquired from the west.

This continued to be the situation till 1947. From time to time, as the needs grew and the population grew, and the participation of the people in the Administration developed, newer and newer rules and laws were framed for purposes of administration. In the Tamil Nadu as elsewhere, these laws were framed only in English. But gradually as the people were given more and more part in administration and Government, they allowed these laws mostly, and accepted the English language for a time. At the same time, the then Government had formed a department of translation which functioned to communicate the laws to the people in their regional languages. But the process had to be mostly mechanical because the legal implications had to be conveyed in strict conformity with the original laws. The translations were often too close and against the genius of the Tamil language. They cannot be wholly blamed for this, and they took the best advice available then. That old translation department which existed right from the days of the British rule has been restructured about a decade ago, and functions now in the Secretariat, Public Department.

Every day the fields of administration and Government are growing wider and wider in response to public demands, and in order to protect public interest, as the main emphasis is on 'the Government of the people, for the people and by the people.' As a result of this attitude, the interests of the people have become paramount. Undoubtedly, it would be best if all laws and rules are thought of, and expressed in the language of the people. But this is hardly possible for two reasons. Firstly, we are the inheritors of the traditions, which we have to follow, if not wholly, at

least in large measure, since they have been tested by time, and by the decisions and interpretations of the courts of law. Secondly, the majority of the people are still incapable of understanding the nuances, implications, connotations, ramifications, involvements, and precision and of the accuracy of legal phrasing and terminology. Accuracy demands a narrowing of wider meanings, the mention of exceptions and limitation and these necessarily involve some obscurity in construction.

Further, all this work has to be done on two planes, one involving the laws from the centre, which are common to all the Indian people and as stated before, have to be framed in English language, and tested by discussion word by word, and phrase by phrase and every clause subjected to the white light of reason and logic in the legislative bodies in the States and by the Parliament. After this process, they will have to be translated in each of the regional languages most accurately and precisely, without any trace of ambiguity, as well as the translation machinery can do it.

The next level is the State level. Each State too frames laws for its own administration, which vary a little from State to State. The problems of administration are not the same in every State, though some of them often are. But even here the solution may be different. The State acts could, of course, be framed in the regional language itself initially, and yet this has not been attempted. But the basic concepts are governed mostly by our inheritance of the traditions laid down during British Administration. Here too the English language exerts a long pull. This naturally leads to some kinds of translation. So the old English rules still govern us, even now dressed in the mere garb of our regional languages. This is another illustration of the statement of Bates, the authority on translation

who commences his book *Intertraffic* with the sentence 'nothing moves without translation.' The process of thinking out these concepts and expression therein one's own language should not be further delayed. The sooner we start doing it the better for all of us.

We find therefore, that as a result of these impacts, the old rules of grammar laid down by the old experts are sometimes *broken*, sometimes *forgotten* and often *slackened*, to facilitate easy expression and understanding. New terms and phrases and expressions not thought of nor sanctioned, nor even approvable by the old grammarians, are being coined, used, and accepted almost without demur, every day and in every field.

The rules quoted by Mrs. Andry Hennekson are worthy of acceptance. They are (1) that the translation should give a complete transcript of the ideas of the original work (2) that the style and manner of writing should be in the same character with that of the original (3) that the translation should have all of the ease of the original composition (4) that a person must translate into his own native language. The rules of brevity are given the go-by as ambiguities are to be avoided, as they should be; and so paraphrase and expansion are the rule, rather than compression. It is noteworthy that these rules which were laid down by an English man in 1790 are still followed in America.

Old Tamil what is known to many as 'Sangam Poetry' uses a "dense adjective packed, participle crowded" language which even the old commentators found difficult to understand and sometimes understand and explain differently, when they expand into classes for ease of expression and clarity of understanding. Though Tamil is much more flexible now, it poses some difficulties in translation. The idioms are different. Some basic qualities of the languages themselves as used by authors, poets and the common people too, as written and spoken are noticeable in the two languages, we are now concerned with. English is a language which revels in understatement, and often used litotes, while Tamil is a language in overstatement or hyperbole, and prefers positive statements. The restraint, and measured control of English could not be very easily rendered in Tamil

whenever the translation has to be the replacement of textual material from one language by an equivalent material in another language. These equivalents have to be achieved at various levels, two of these are important. The translator often meets with two different levels of linguistic structure. One is the grammatical or word structure, and the other is the content or lexical structure, which also depends, but differently on words. Correct translation involves competent understanding and competent expression. These involve, as Dr. Pattanayak once remarked, 'a competent manipulation of the culture content manifested by the language one translates. In this connection I would like to point out another difficulty which Mrs. Maheswari Balakrishnan has remarked, namely, the inadequacy of words which have been so far used in the translation into the regional languages. She says, 'In the preface to the Oxford Dictionary it is stated that it was compiled and edited from materials amounting to over five million quotations, and that nearly half a million words, are recorded with more than one and a half million illustrative quotations. In contrast, the entire Tamil Lexicon comprises 104,405 words with a collection of about 20,000 words published as a supplement. In short the English language has the pride of possessing a vocabulary comprising of four times the number of Tamil words. The reason for this growth is not because of any intrinsic and exceptional properties in the grammatical structure of the English language but simply because it has developed, over a long period of time, the necessary vocabulary for the various branches of knowledge with distinctive and precise definitions, whereas the Tamil language during this period remained static in certain fields of development—particularly in the administrative field for various reasons. Thus even in upholding the view that the Tamil language is at a stress as a medium of administration what is meant is that the vocabulary now available is not adequate to cope with the rising needs and demands of the new notions, and not that the whole structure of the language is any way deficient or inadequate.' Much water has flowed since then, and a large number of words have been coined and are being used, and the vocabulary is richer, though it is still possible to say we should have more words. Very often one meets

in administrative documents framed in English, such words such as project, plan, scheme and programme, law, act and statute, or other words like submit, produce, furnish, table, file. Some of these words occur frequently but in different contexts. We are still trying to find out the inevitable words expressive enough to bring out these nuances and shades of meaning. Strictly speaking, there can be no absolute perfect translation from one language to another. Words have not merely a single meaning but many, vary according to the context and usage. The main aim of translation of administrative documents is communication to those concerned most. However the words such as board, corporation, committee, commission, institution, centre, organisation are well translated as *வாரியம், நிறுவனம், அமைப்பு, கழகம், மையம், ஆணையம்*.

Very great care and vigilance have to be expressed in the drafting of administrative laws, rules and regulations. A loose word, or a wrong mark of punctuation, might ruin the operation of a well-meant law, and crowd the courts with litigation. The translators now are more and more conscious of their duty in providing more and more terms with appropriate shades of meanings. Of Course we should not, I feel, pick up some old, diseased and rusty word out of its context, and use it to explain a new and modern concept. Danger lurks at both ends, It would be best to coin a new word with the help of linguistic experts. At the same time usage of non-Tamil, misfitting alien words, terms traditionally drafted unintelligibly is to, be carefully avoided. It is better to be incongruous than to be incorrect; and to be awkwardly dressed rather than to be nude.

There are bound to be a certain losses in the process of communication. In no two languages do we have set of identical terms. Fully equivalent words for word correlation is not possible. Even if it were, the meaning will be twisted and changed. If we succeed in communicating our meaning in very large measure to the people for whom it is intended I feel we can rest satisfied, at least for a time.

Coming to the questions of coinage of terms, there are three schools namely cosmopolitan, Pan-Indian and the puristic. In each

school there are extremists and moderates. Now the trend is only towards purism in Tamil on which we of the younger generation are very zealous. Unless a coordination between a legal draftsman and a literary craftsman exists as conceived by G. C. Thornton, the translation of legal enactments will not be through. In this connection Fowler's observation is relevant. He suggests that any one who wishes to become a good writer of English should endeavour to prefer the saxon word to the foreign. But he warns that simple saxonism alone is folly. We should take note of the fact that Tamil people have made their homes not only in Tamil Nadu, but also Ceylon, and Malaysia. Further, there are large pockets of Tamilians in South Africa and in other areas of Africa and elsewhere. Glossaries of Technical Terms in Tamil have been published in Ceylon, Malaysia and here, but uniformity has not been maintained and not even attempted. This can

be remedied and corrected by a body of members representing each of these countries who have received the impact of Tamil.

It is necessary that we should consider it our duty, to communicate the programmes, projects, knowledge and details relating thereto drafted in English in the field of administration in simple language clearly and unambiguously so that there may be no misunderstanding of these by the people for whom specially intended. This task is a different one and belongs to the region of socio linguistics and must be regarded as of the highest importance.

It is not possible for anybody to acquire the highest competence of understanding and expression in two or more languages at the same time. If a person has knowledge enough, by the source language to understand it with an occasional help from competent dictionaries,

and to express it efficiently satisfactorily and precisely in target language, he can achieve very good results. The recipient is the person who ought to obtain the greatest benefit by the translator's competence. In respect of a translation of a technical legal or scientific work the translator should have a very competent knowledge of that subject (and need not necessarily be a practitioner thereof.)

Considerable assistance in this field which is growing more and more important every day can be given by such bodies as schools, colleges, Universities, by such mass media as Radio, Television and Newspaper and journals of many kinds.

Finally as Hillaire Belloc has observed in a similar context the problem of a Translator or Draftsman is not to ask how shall I make this English sentence seem like Tamil but to know how a Tamilian would express his idea in his own tongue.

SUBSIDY FOR SMALL UNITS IN BACKWARD DISTRICTS

To pep up industrial development in backward areas, the Tamil Nadu Government has come out with a scheme to provide capital subsidy for small units on the same basis as the Central scheme now in operation in 33 taluks of the state.

The large and medium scale industries are undertaken by the SIPCOT and the small-scale industries by the SIDCO.

Bearing in mind the following factors such as population, industrial units, the number of labourers and the prospects for agricultural growth, the Government of Tamil Nadu has selected 24 taluks.

The subsidy given by the State Government is based on that of the Central Government.

This scheme will be implemented through SIDCO in the following taluks.

Tirunelveli	1. Villathikulam	Pudukottai	15. Aranthangi
	2. Nanguneri		16. Avudayar Koil
Trichy	3. Musiri	North Arcot	17. Polur
	4. Ariyalur		18. Chengam
Tanjore	5. Orathanadu		19. Vandavasi
	6. Peraurani		20. Cheyyar
South Arcot	7. Tittakudi	Chingleput	21. Madurantakam
	8. Chidambaram		22. Ponneri
	9. Kattumannarkoil		23. Gummidipooni
	10. Gingy		
	11. Tirukoyilur		
	12. Ulundurpettai		
	13. Kallakurichi	Madurai	24. Periyakulam
	14. Tindivanam		



The President Thiru N. Sanjeeva Reddy released a publication "Annamalai University 1929—79" during the Golden Jubilee celebrations of Annamalai University on 6—12—'79. The first copy was received by Thiru M. G. Ramachandran, Honourable Chief Minister of Tamil Nadu.



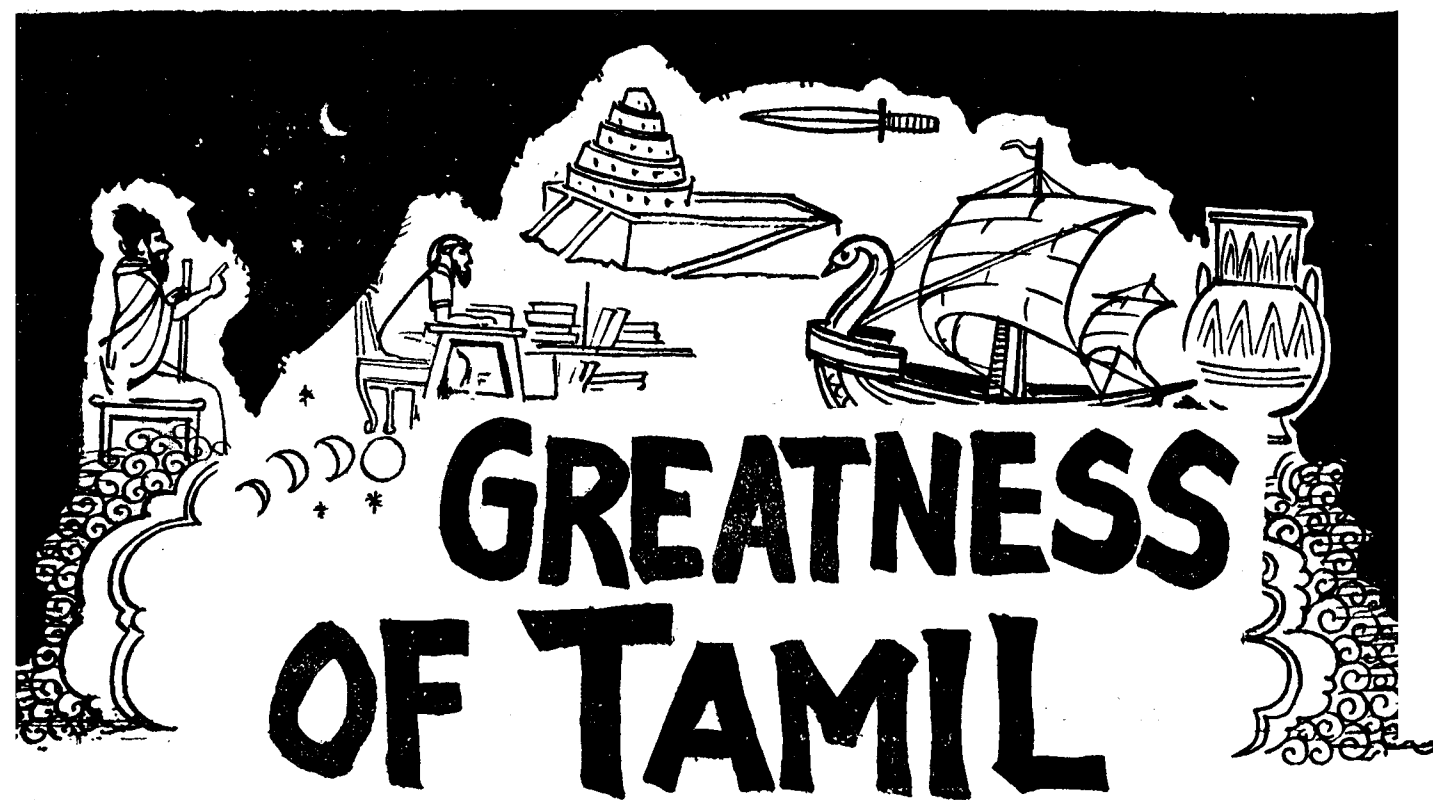
The Vice-president, Thiru M. Hidayatullah, declared opened, a cyclone shelter at Muttukadu, built by the Indian Red Cross Society in collaboration with the Government of Tamil Nadu on 19—12—'79.



The All-India Tourist Trade Fair at Fair lands was inaugurated by His Excellency Thiru Prabhudas Patwari, Governor of Tamil Nadu on 2-1-'80. The Honourable Minister for Information, Tourism and Religious Endowments presided over the function.



Thiru M. M. Ismail, Chief Justice of Madras High Court, unveiled a portrait of Rajaji, on 9—12—'79, on his 102 nd birth anniversary. Thiru K. A. Krishnaswamy, the Honourable Minister for Co-operation is also seen in the picture.



GREATNESS OF TAMIL

'TAMIL Language is one of the principal Dravidian languages, spoken in South India and perhaps the only example of an ancient classical tongue which has survived as a spoken language for more than 2,500 years with its basic structure almost unchanged.

Tamil language occupies an important place in the Dravidian family of languages. It is the oldest of the family and also the oldest language spoken in the continent, now lost in the Indian ocean. It seems to be one of the earliest languages existing in full form, with rich possessions of Literatures and grammatical works. Though attempts have been made to connect the language and its family with other families of Indian languages, such attempts have not proved successful and Tamil is proclaimed as an independent language with a lot of individualities. Tamil is admittedly the more ancient of the cultivated languages of the Dravidian group and in one sense the most representative of this group.

Though we gather from inferences that Tamil had existed as the language of the Indian peninsula in the hoary past, now it is spoken mainly in Tamilnadu. Because of emigrant Tamils, now the language is spoken in many parts of the world. Nearly 25 percent of the Tamilian population are found in Srilanka. Before the first deluge Lanka was a

Dr. S.V. Subramanian,
Director, Tamil studies.

portion of the old continent Lemuria, which was the ancient home of the Tamils. Tamil is one of the three major languages of the Federation of Malaya. In the Malagasy Republic, Burma, Indochina, Thailand, South and East Africa, Fiji islands, Mauritius and West Indies also, the Tamil language is spoken by the Tamilian settlers.

Among the many Dravidian tongues, Tamil is the earliest to develop into a cultural language with literatures of its own. Tamil literature falls into three great divisions: iyal (poetry), isai (music) and natakam (drama). Such a division is not found in any other language of the world. Isai and natakam have no representative works left after the two great floods, though their names have survived them.

Tolkappiyam, the earliest work available in Tamil is a rich and full representative of 'Iyal tamil.' The very name Tolkappiyam signifies 'ancient book' or the preserver of ancient institutions. It is considered to belong to the last centuries B.C. and is thus the oldest extant book not only in Tamil but also in the Dravidian languages. Though it is the most ancient book now available, it has a lot of refer-

ences to more ancient authors and their theories. From these we understand that this great work was preceded by centuries of literatures and grammatical treatises. The work deals with phonology, Morphology, Syntax and Semantics like any grammatical work, but also has a third chapter named 'Porul', denoting 'matter' or 'subject' on which a discourse of any kind is formed. This division of grammar is original to the Tamil language. It lays down rules for different kinds of poetical compositions deduced from examples furnished by best literatures of the preceding period. Prosody, rhetoric and rasa theory find place in this section. At least five to ten thousand years of rich literary growth would have existed before the flowering of such a glorious grammatical treatise. It is also interesting to note that Tamil is the only language where the most ancient book available is a grammatical treatise.

The earliest available literatures of the Tamils belong to the Sangam period, which is roughly estimated to be from the last years of the B.Cs. to 2nd century A. D. There is a tradition that three literary academies of the Tamilians flourished one after the other in ancient Madurai, Kapatapuram and later Madurai, and the literatures available to-day belong to the third academy or Sangam, while the works of the earlier academies were lost in the floods.

Love and war formed the themes of the ancient Sangam classics. The language employed here is rich, dignified and plainly direct, clothed in appropriate metre and apt verification suitable to the themes handled. They reflect the ancient culture, refined emotions and noble aspirations of the Tamils.

From these poems we gather that the Tamils had trade contacts with the Greeks and Romans. We have references to 'Yavanas' and their life in the Tamil land as warriors and guards. Because of such contacts, Tamil words like arici (rice), cantanam (sandal), tokai (peacock), etc., have found entry into Greek and Latin. One Tamil scholar, Thiru Gnanagiri Nadar has proved that more than 800 basic words have gone from Tamil to Greek language.

Innumerable works are produced in Tamil in the last twenty centuries. Great writings like the Tirukkural, Cilappatikaram and Kamparamayanam are now known all over the world. These have been translated in verse and prose into English and many other world languages. Many foreign scholars have worked on, and appreciated the wealth of Tamil language and literatures. Dr. Caldwell, Dr. G.U. Pope and many others have made the language and its literature known to the world.

Because of literary, political and mercantile contacts and influences the Tamil language suffered many changes. Though many neighbour and foreign languages crept in and mixed with the native tongue, Tamil never lost its independence and natural flavour.

Sanskrit seems to be the first language that influenced Tamil. A large admixture of Sanskrit words found its way into the spoken and written languages by the 11th century A. D. This was due to social and religious causes. But in the later centuries, because of foreign rule

and invasions, English, French, Portuguese, Urdu, Marati, Telugu and such other foreign and neighbour tongues found their share in infiltrating words and phrases into the language. Though the many other dravidian languages accepted the sanskrit sounds and letters and absorbed them into their alphabets Tamil kept up its individuality and independent existence.

Many technical words on arts, science and technology came into Tamil from other tongues and enriched the vocabulary. Many Sanskrit words added synonyms to Tamil words. Some words were taken into Tamil as they existed in their original form and others were Tamilised and then accepted. Words like vakkil, Jamin, Tasil and Munsif came from Urdu, while Alamari, Jannal and chavi crept in from Portuguese and Dutch. The British rule which lasted for more than a century brought in more than 500 English words relating to administration, law, politics, civics, education and science. English gave not only its words but also the words from many other languages with which it came into contact. Tamil is now capable of expressing any thought or new idea, even scientific and foreign. Its capacity and claim to serve as the best instrument of thought in all our activities cannot be over looked. It is classic as well as living.

Just as Tamil was enriched by many other languages, it also made wealthy many other tongues with which it came into contact. Dr. Caldwell pointed out many Dravidian roots in Sanskrit. He says that there are many words of Tamil origin in Sanskrit vocabulary, which are to be supposed to be common to both languages. During the middle Tamil period, Canarese, Tulu, Kudagu, Malayalam, Toda and Kota sprang from Tamil as separate languages. So they also carry a lot of words in common to Tamil. The Brahui of Baluchistan and the Sumerian languages have many

similarities with Tamil, in idiom and structure. Archaeologists point out the influence of Tamil on the languages spoken in distant lands. Sir. W. W. Hunter says that the language spoken at Kamachatka at the North East corner of Asia is considered by eminent authorities to be a dialect of Tamil. In the Indian antiquary we find that, the language spoken by the Maories in the far off Newzealand, and in the many group of islands between Cape comorin and Newzealand are akin to Tamil. Scholars have pointed out that the language spoken at Tuscany in Italy is a dialect of Tamil. Another researcher has pointed out similarities between the Tamils and the Scots in their language, polity, customs and manners. There are others who are tracing out the identity of the Scandinavian and other European myths with those of the Tamilians. These and many other researchers are likely to prove that the Tamilaham was the cradle of the whole human race. A number of place names in Tamil are found translated into Greek by the Greek and Roman travellers. Words like teak, canicopoly, godown, kattamaram, anicut, milagutanni have gone from Tamil to the English language.

To-day Tamil is known to the linguists all over the world and it has found a prominent place among the international languages. Now Tamil language is taught in five universities in the United States of America and in many institutions in Germany, Russia, England, Senegal, France, Poland and especially in the South East Asian countries. Many research works are being published by these foreign institutions on Tamil language and literature. Recently a research work has been done by a Chinese scholar on Chola Inscription place names.

Poet Bharathi wished that the sweet language Tamil should spread throughout the whole world. Now his dream is coming true.

Archaeologists

point out the influence of Tamil on the

languages spoken in distant lands. Sir W. W. Hunter

says that the language spoken at Kamachatka at the

North East Corner of Asia is considered by eminent authorities to be a dialect of Tamil.

TAMIL-OFFICIAL LANGUAGE

K. S. MAHADEVAN

Director, Tamil Development

In pursuance of the formation of Linguistic states in India, all states have been endeavouring their mite to replace English by their own official languages. As far as Tamil Nadu is concerned the following measures have been taken up.

In accordance with the provision contained in the constitution of India, it is heartening to note that Tamil Nadu is one of the earliest among the states to enact the Official Language Act. The Tamil Nadu Official Language Act was enacted in the year 1956 (Tamil Nadu Act XXXIX of 1956).

As a primary measure, a Committee known as the Official Language (Act implementation) Committee was constituted by the Government of Tamil Nadu so as to advise them on the steps to be taken to implement the Act. Under Section 4 of the said Act, the State Government may, by notification issued from time to time direct that Tamil shall be used in respect of such Official purposes as are specified in the notification. As the switch over from English to Tamil for Official use could not be effected all of a sudden, it was decided to bring about the change by stages.

Introduction of Official Language in Government Offices :

In the first instance, the scheme was introduced in Government offices in Tamil Nadu where no typewriters were in use. During 1961-63 the scheme was extended to all Government offices upto the district level. As regards the Offices of the Heads of Departments the scheme to introduce Tamil for Official purposes was implemented on a phased programme consisting of four stages and the scheme reached the fourth and final stage in the year 1971.

Introduction of the scheme in the departments of the Secretariat

In the Departments of the Secretariat excepting Law, Finance, Legislative Assembly and Legislative Council Departments, the first stage of the Tamil scheme was introduced with effect from 1st May, 1966 and it was extended gradually

IN PURSUANCE OF THE FORMATION OF LINGUISTIC STATES IN INDIA, ALL STATES HAVE BEEN ENDEAVOURING THEIR MITE TO REPLACE ENGLISH BY THEIR OWN OFFICIAL LANGUAGES

to other stages. Law and Finance Departments were also brought under the first stage of the scheme with effect from 1st April 1970.

Introduction of Official Language in Courts :

The Tamil Nadu Government by a notification directed that with effect from 14th January, 1970 Tamil shall be the language of all Criminal Courts for the purpose of recording evidence in all the proceedings with certain exceptions. It has also been decided to implement the Official Language Scheme in respect of writing Judgments with effect from 14-11-1976. It may be seen in practice that both the Criminal and Civil Courts are evincing interest in conducting cases in Tamil due to popular demand.

Glossary of Administrative Terms

So far, three editions of the General Glossaries of Administrative terms have been printed and supplied to all Government Offices in Tamil Nadu. A revised fourth Edition is now under preparation.

Supplementary Glossaries

Supplementary Glossaries of special and technical terms relating to 44 departments have also been brought out so as to enable the concerned personnel to get apt equivalents to be used in the Official matters.

In addition to the General and Supplementary Glossaries various Manuals, Rules and Codes required for the day to day use in several

Departments have also been translated and published in Tamil. The work of translation of Departmental codes and Manuals is being continued.

Short-hand Manual in Official Languages

A Tamil Short-hand Manual was printed and published for sale in September, 1965. A Second Edition of the Tamil Short-hand Manual has been printed and published in the month of October, 1977.

Training of Government Typists in Tamil Typewriting

Government opened a Central Training Institute to train Government typists and Steno-typists in Tamil Typewriting. It is obvious to note that sufficient number of typists qualified in Tamil Typewriting are available now in all Government Offices in Tamil Nadu.

Tamil Training to Junior I.A.S., and I.P.S., Officers

In order to acquaint Junior I.A.S., and I.P.S., Officers with the provisions and the implementation of the Official Language Act, Scheme has been drawn up for imparting a week's training to them since 1974.

Incentive Schemes

With a view to encourage extensive use of Tamil in Official correspondence, Government servants who write best drafts and notes in Tamil are being selected and awarded incentive cash prizes every year. Three prizes for each district—First Prize Rs. 500 Second Prize Rs. 300 and Third Prize Rs. 200 are being distributed.

Government Typists and Steno-typists were granted concession to appear for the Lower and Higher Grade Examinations in Tamil Typewriting as well as Tamil Short-hand thrice with out payment of the examination fees.

Incentives in the form of Special Pay of Rs. 30 is also given to Government Typists who have qualified themselves in Tamil Typewriting and Rs. 90 is given to each of the Stenotypists who have passed Higher Grade Examinations in Tamil Short-hand, irrespective of whether they

attend to Tamil Short-hand work or not.

Progress and Review

The Assistant Directors attached to this Directorate and posted in the districts, periodically inspect all the Government Offices in their respective Jurisdiction in order to review the work done in those offices and to extend help to solve problems arising in the day to day routine.

The Director takes up the periodical inspection of the Offices of Heads of Departments and Collectors of Districts to assess the work turned out in the implementation of the Official Language Act of 1956.

Development of Tamil Language and Literature

Tamil Development Directorate has taken various other measures to accelerate and improve the standard of Tamil Language in general. There is a Bibliography section which prepares descriptive Bibliography for Tamil books published from 1867 upto 1957, which provides a source of information to Tamil Research Scholars and serves as a guide catalogue to College and Public Libraries.

In order to encourage authors to bring out rare manuscripts the Government of Tamil Nadu have formulated a scheme of financial assistance. Financial Assistance, is also being rendered for the printing and publication of deserving Tamil manuscripts. The quantum of such financial assistance will be 50% of the total cost of publication or maximum of Rs. 5,000 whichever is less.

To encourage the Tamil writers in bringing out standard books in Tamil in various subjects, the Government of Tamil Nadu is awarding prizes in cash to the authors and certificates to the publishers.

Provision of facilities for people in other states to pursue studies in Tamil

With a view to cater to the educational needs of the Tamil speaking people settled down in other states and to provide an opportunity to the people of other states to study Tamil language the Government of Tamil Nadu are implementing a scheme of financial assistance to create chairs for the development of Tamil studies in the Universities and educational Institutions of other states.

Financial Assistance to Indigent Tamil Scholars

A scheme has been sanctioned for granting of Rs. 250 per month as financial assistance to 50 Indigent Tamil Scholars every year as a token of appreciation and in recognition of their past service rendered to the development of Tamil Language and literature.

Reformation to Tamil Scripts

The Government have ordered the implementation of certain reforms in Tamil scripts as adopted by Periyar E. V. Ramaswamy. To go into all aspects of further reformation in Tamil Scripts, the Government constituted an Expert Committee under the Chairmanship of Mahavidwan Thiru M. V. Venugopala Pillai and the Committee has commenced its work.

Preparation of Authentic History of Tamil Nadu

The first volume of the Authentic History of Tamil Nadu has already been published. The second volume relating to the history of 'Sangam Age' is under preparation.

Poet Laureate of Tamil Nadu

In order to provide a supreme status of pride to Tamil as the Official Language of the State, the present Government revived the Poet Laureateship which was created in the year 1947 but discontinued in 1954. Accordingly, Kaviarasu Thiru. Kannadasan is appointed as Poet Laureate of Tamil Nadu for life from 1st April, 1978.

Scheme of Translating, Printing and Publishing the Best Books of other languages into Tamil and vice versa :

As one of the measures of development of Tamil, the Government have decided to translate the best and deserving books in other languages and publish them in Tamil and translate and publish Tamil classics in other languages. For this purpose, an expert committee under the Chairmanship of Thiru S. Maharanjan is constituted and the same has taken up the work and doing it in an enthusiastic way.

Paventhara Bharadidasan Award

In recognition and appreciation of patriotism, love and reverence for the language of Tamil and literature of Paventhara Baradhi Dasan the Government have decided to institute an award in his name known as 'Paventhara Baradhi Dasan, Award' which carries a cash award of Rs. 10,000 to the poets chosen for this award every year.

3—TIER SYSTEM OF MEDICAL AID

A three-tier system of medical assistance is to be implemented in a phased manner in Madurai, Ramanathapuram, Tirunelveli and Kanyakumari districts at a cost of Rs. 1.75 crores.

The system would operate on the co-ordinated functioning of the curative facilities, under the Directorates of Public Health, Medical services and Medical education.

The Primary Health Centres would act as first aid posts and would deal with only minor injuries. Cases of major injuries would be directed to the nearest district or taluk hospital after first aid. Major casualties would be first treated at the district or taluk hospital and subsequently transferred to the nearest teaching hospital for specialized treatment. This would ensure a continuous referral system for emergency cases.

To begin with 107 Primary Health Centres have been selected in these districts for starting accident and emergency units. District and taluk hospitals in Dindigul, Palani, Periakulam, Ramanathapuram, Rajapalayam, Aruppukottai, Sivaganga, Tuticorin, Tenkasi, Kovilpatti and Nagercoil have been designated as casualty receiving stations.

Government have sanctioned a 30-bedded ward each to the Government Erskine Hospital Madurai and Tirunelveli Medical College Hospital, Tirunelveli. Sanction has been accorded for purchase of 50 ambulance vans for transporting the injured from the accident spot to the nearest hospital. The equipment in the ambulance van would include a camera to minimise delay in rendering medical attention to patients and to medico-legal procedures.

SAINIK SCHOOL

AMARAVATHI NAGAR :: COIMBATORE DISTRICT

ENTRANCE EXAMINATION FOR ADMISSION TO JUNE/JULY, 1980 SESSION FOR VI (SIXTH) CLASS ONLY.

Will be held on 23 and 24 Feb. 1980 (Answers can be written in Tamil, English, Hindi and other regional languages). The boys who qualify in the examination will be required to appear before a Board of Selection at a later date for Interview and Medical Examination, depending upon the number of vacancies available. The boys will be admitted in the order of merit. 15% of the seats for Scheduled Caste and 7% for scheduled tribe boys are reserved subject to their qualifying in the Entrance Examination on relaxed standard. The candidates who have already appeared in the Entrance Examination for Class VI are not eligible to appear again for the same.

AGE :

Boys born between 2 July 1968 and 1 July 1970 (both days inclusive) are eligible.

EXAMINATION CENTRES IN TAMIL NADU :

Madras	Tirunelveli
Cuddalore (NT)	Vellore (North Arcot District)
Thanjavur	Salem
Tiruchirappalli	Amaravathinagar
Madurai	

CURRICULUM OF SCHOOL :

Provides for excellent education, boarding facilities and extra-curricular activities. Special emphasis is laid on character building and physical training. Prepares boys for the Entrance Examination to the National Defence Academy and the All India Secondary and Higher Secondary Examinations conducted by the Central Board of Secondary Education. The medium of instruction is English with Tamil and Hindi as compulsory subject at Higher/Lower levels depending on the choice of students.

SCHOOL FEES:

Rs. 3,500/ (including Boarding and Lodging, Tuition, Text Books, and Stationery) per year. Outfit charges Rs. 500/- for the first year and Rs. 250/- for every subsequent year. Caution Money Deposit Rs. 150/- refundable when the student leaves the school. Pocket Money Rs. 250/- per annum.

GOVERNMENT SCHOLARSHIP SCHEMES ON MERIT CUM MEANS BASIS.

Tamil Nadu:

A liberal scholarship scheme has been instituted for boys of Tamil Nadu Domicile and for those belonging to other States whose parents have been employed continuously in the Tamil Nadu for a minimum period of three years as on 1st January of the year of admission.

If the joint monthly income of parent is upto Rs. 500/-, Rs. 600/-, Rs. 800/- and Rs. 1,000/- then the value of scholarship is Rs. 3,000/- Rs. 2,250/- Rs. 1,500/- and Rs. 750/- respectively.

Defence :

A limited number of Ministry of Defence scholarships are also available to sons of serving Ex JCOs and other Ranks and equivalent ranks in the Navy and Air Force.

Union Territories :

A limited number of scholarships for boys of Union Territories of Pondicherry and Karaikal are also available.

APPLICATION AND PROSPECTUS :

For application form and School Prospectus along with model question papers, apply to the Principal, Sainik School, Amaravathi Nagar Post Pin Code No. 642102, sending a crossed postal order for Rs. 5/- in favour of the Principal, Sainik School, Amaravathinagar (payable at Amaravathinagar Post Office) and a self addressed-envelope size 25 x 20 cm with postage stamps of paise 50 for sending the prospectus by Book Post or Stamps worth Rs. 2.55 if it is to be sent by Registered Post. Last date for the receipt of completed applications in the school is 31 JANUARY, 1980.

tamil cultural centre

Dr. S. SHANMUGAM,
M.A., M.Litt., Ph.D.

DIRECTOR.



IN this buzzing busy floor, a tranquility pervades you as you enter Room No. 603. Wherever you turn symphonies in wood, metals, ceramics, ivory, and colour confront you with a charm. One cannot but be enamoured with the Ikebana of cultural and art pieces. It is a veritable treasure-house. The Tamil Cultural Centre is a new venture of the Government of Tamilnadu for preserving and promoting Tamil Culture and tradition and to help the Tamils not to break loose from their great cultural moorings. The Centre will honour the memory of Tamil savants like Kambar and Vallalar.

'Culture' being an all-inclusive concept, it embraces Language, Literature, History, Philosophy, Sociology, Anthropology, Archaeology, Architecture, Fine Arts (both classical as well as folk arts) etc. Hence the centre is engaged in multifarious activities and consists of different wings to carry out the aims and objectives of the Centre.

The *Preservation and Display* wing comprise the Museum and the Art Gallery. Art pieces and articles of cultural value are collected to be preserved and displayed. The

centre has acquired different dance poses of Nataraja in bronze—The image of *Agora Tandava*, a rare pose, is one to be seen and admired. Poses of dance-girls are also displayed. Images, in all sizes, of other gods and goddesses of the Hindu pantheon are also collected. Even the Lilliputians among them have a minute workmanship. The centre has a collection of traditional house-hold articles, in which the aesthetic sense of our ancestors is captured. For instance, we find a very good collection of "chikku-varikal" which were used for removing the knots in the tresses of our ladies.

Wood carvings of excellent craftsmanship well-displayed in their centres' branch at Adyar simply takes your breath away. A highly aggrandised door of a chettinad house, now transplanted at the centre, lends it a grandeur. Back in the main branch, a graceful crucifix flanked by a pair of wood-panels with carvings of figures from Tamil history, literature and tradition, represent the harmonious co-existence of different cultural and religious cults.

Minor deities in ceramics are yet another collection displayed here. Traditional hair-dos are also captured in ceramic art. Tiny pieces of a monkey, a dhobi, a knife edged with elephants, and such other articles are wonders in ivory. Representations of Batik paintings, and oil paintings are also amassed. Paintings by Thiru Suryamurti, an internationally famous artist, are among the proud possessions of the centre.

Most of the larger items are housed in the centre's Branch at Adyar. As you enter the branch, the life-size painting of an elephant gives you a royal welcome to the realm of art. A little step further in, the life-size picture of a tiger greets you with its mystifying eyes. You are at a loss to find out whether they shower love, hatred, irritation or pity. Hobby-horses, karagam, and kavadi materials are the representations of our traditional folk culture.

An entire room is set aside for musical instruments. Some fifty instruments are preserved and displayed here. It is a treasure to lovers of music. The *Panchamuka*

Vadya and the types of 'yazh' are rare collections.

Clippings of cultural interest from daily newspapers and monthly, fortnightly and weekly magazines both in English and Tamil are also preserved.

The glorious heritage of Tamil Culture has had it ups and downs for the past 2,000 years. Though eversomany cultures have peeped in to enrich it, the truth is that our past glory is past. But instead of crying 'Ichabod' we should join together to preserve at least what remains still and try to rejuvenate the past. For this cause, the centre has got a *publicity wing*. The common people will be taught, and made to realise through slides, films, exhibitions, lectures and the like, what it means to be part of a civilisation that had had a glorious past and was the forerunner of world civilisation. Precious pieces of art and things of cultural interest lie unrecognised and are being spoilt by the innocent common people out of ignorance and lack of aesthetic sense. A survey of the residual items will be undertaken.

The *publication wing* is set up to publish picture post-cards, pamphlets, old manuscripts, research papers on culture and to reprint old rare books that are not available in the market. Translations of Tamil Literature will also be published for the interested foreigners.

The centre has plans to produce documentary films on Tamil culture and tradition, especially highlighting our folk-dances and folk music. An extensive collection of photographs of sculptures, carvings and other art pieces that cannot be brought to the centre for display, are taken. Mould and miniature models of these items in wood, stone and plaster-of-paris will also be made for sale in due course. Gramophone records of folk songs and songs of our famous poets will also be produced for sale. The Centre will be releasing shortly a record on Periyar and Anna. Documentary and feature films will be produced. All these are the works of the *production wing*.

The *Fine Arts and Folk Arts wing* will sponsor cultural programmes throughout Tamilnadu and in other states too. It will welcome cultural troupes from other states and from abroad to gain a comparative outlook of various cultures and

to promote good will and a sound cultural relationship with our brothers near us and afar.

A *Research wing* will be formed soon to encourage research on Muthamizh-Tamil Literature music, dance and drama. Scholars of sufficient knowledge and experience in their field of learning will be appointed. They will be given honorarium.

The *Excavation and Exploration wing* will do field work to bring to light the shadowy past. In the hoary past of Tamilnadu a number of port cities and capitals of great rulers who encouraged art and architecture, have been either swallowed by deluges or buried underneath. Such sites have to be unearthed for research.

The *Library and Reading Room* will have an important role in the functioning of the centre. Quite a number of books on various subjects related to culture, like Anthropology, Archaeology, Education, Sociology, Philosophy, Literature, Fine Arts, History and such other sciences have been bought for the centre's Library. Valuable magazines will be available in the Reading Room to get to know current affairs and be familiar with contemporary culture. Any 'scholar gypsy' may wander in for a good reading. It will be open for the public shortly.

An *Auditorium* by name 'Vallalar Valaagam' will be constructed, where various cultural programmes and seminars are to be conducted. Documentary and feature films produced by the centre and bought from other sources will be screened here.

The *sound and light wing* will provide equipments and do all the technical and electrical works.

The site just opposite to Rajaji Hall has been allotted to the Tamil Cultural Centre as per the announcement of our Honourable Chief Minister during the inaugural address of the Kambar Vizha. For the time being the Director's office is at the Secretariat and the technical wings work at the Adyar Branch. The Director is putting in a tremendous service for the establishment of the Tamil Cultural Centre with the kind assistance of the Government.

Whenever the visitors come to the Secretariat they do not fail to pay a visit to the centre. Their appreciation and advice are very useful to the steadily growing newly formed department of culture. This oasis of art and culture is a spring-pool of peace and quietitude far from the madding crowd.



Agricultural Heritage of the Tamils

varied agro-climatic conditions are suitable for raising a variety of crops.

The Sources :

Tamil literatures of different historical periods provide us with the sources to discover the history of agricultural traditions of the Tamils. It is very sad that there are no authentic chronicles on Tamil kings. Even the inscriptions on monuments, coins and copper plates left behind by the kings convey only information on the wars fought by them. It is, therefore, only literature which depicts how the Tamils lived in harmony with Nature, conveys a lot of information relating to agriculture directly, and indirectly in the form of folksongs. Further, the religious and puranical literatures of the medieval age give us some information on agricultural tradition of the medieval age. The history of agricultural development in Tamil Nadu may be traced by studying Tamil literature chronologically.

The Geography of Ancient Tamil Nadu :

The state of ancient Tamil Nadu spread from Kumari (Cape Comorin) in the south to Thiruvankadam (the present Thirupathi hills) in the North, and from the Bay of Bengal in the east to the Arabian Sea in the west. The present State of Kerala was a part of Tamil Nadu. Panamparanar had observed : "In between the northern Venkadam and the southern Kumari lies the great Tamil speaking land." The mother tongue of the people of this region is Tamil.

The Fauna and Flora :

Tamil Nadu enjoyed a variety of agro-climatic conditions. There are hilly ranges like the Thirupathi hills, Kodaikanal hills, Palani hills and Kolli hills. Rivers like the Cauvery, the South Pennai, the Palaru, the Vaigai and the Porrunai make the land fertile. The state also commands immense sea-wealth. Thick forests and long stretches of plains are spread over the length and breadth of the land. These

The Age of Tolkappiyar (c. 700 B.C.)

From time immemorial, farming has been an occupation in Tamil Nadu. The first Tamil work which conveys agricultural information is "Tolkappiyam." It is a book of Tamil Grammar and Prosody written in 700 B.C. The people of this age had classified their lands into four types based on physical features.

'Kurinchi' referred to hills and hilly tracts which were considered suitable for raising fruit trees, tubers, and millets. The land of 'mullai' covered forests on the downs and the pastoral country around the forests. These lands were predominantly dry and rain-fed. Hence people cultivated dry landcrops like the Italian millets and samai. In addition, cattle rearing was also practised in mullai. The wetland plains blessed with rivers were known as the land of 'marutham.' People in these lands raised crops like paddy, sugarcane, and banana. The sandy stretches of land along the sea-coast were known as the land of 'neital,' and was put to best use by practising fish-farming and salt-panning, and by raising coconut and palm groves. The lands of kurinchi and mullai which became dry owing to continued drought came to be known as palai (desert land).

The farmers of those days were called 'velan mandar.' Their primary duty was to raise crops and produce food. The velan mandars were expected to give total attention to farming. This is revealed in the following lines of 'Tolkappiyam'

"velan mandar are to farm and feast, not anything else"

The Golden Age of Agriculture

The Age of Sangam literature is said to cover the period from about 200 B.C. to 500 A.D. It was during this period that agricultural occupation gained a status and technical expertise unknown in the past. Therefore, the age may be called "The Golden age of Agriculture."

L. S. KANDASAMY

Editor, "Valarumvelaanmai"
Tamilnadu Agricultural University,
Coimbatore.

The Status of Farming :

Ancient Tamil Nadu did not suffer from casteism. But there were different classes of people based on the principle of division of labour. Thus there were the brahmins, the kings, the merchants and the farmers. No special status was conferred on any one of these occupations. The farmers were known as the 'vellalars' and they enjoyed great social status. As farming was considered basic to all other occupations it was treated as the 'foremost' and the most independent of all occupations. In fact, the 'pricking' stick with which the farmer drives the plough-bullocks is described as the sustainer of the sceptred hand of the king. Besides, people desired to be identified with the farming occupation. The poets claimed that they were also farmers wielding the plough of words; the kings and the soldiers claimed that they were farmers handling the plough of bows and arrows. Saint Thiruvalluvar recognised the greatness of farming and he scripted ten couplets on the title, "farming" in his incomparable work, *Thirukkural*. In short, the occupation of 'farming' was considered the occupation of the highly prestigious and civilised people.

The Royal Responsibilities

The Sangam Age was an age of sovereign kings. The composite state of Tamil Nadu was ruled over by Cera, Cola and Pandya kings and their subordinate minor royalities. They believed that their prime responsibility was to ensure agricultural prosperity. They aimed at making their states self-sufficient in food and other essential goods. They were very particular that not a single citizen should migrate to other provinces owing to scarcity of food. They undertook to reclaim forest lands and uncultivated lands for cultivation and to dig new tanks and ponds for irrigation. Whenever the kings forgot or failed to discharge these duties, the notables used to remind them of these duties. They realised that even if the area of rain-fed land of the king was immense, it would not be productive unless there were a large number of tanks and ponds to harvest rain-water for irrigation. So the kings knew it full well that their reputation would endure to posterity only if they built tanks.

Package of Practices

The cultivable lands were conveniently divided into two types viz. the irrigated 'nancei' (wet lands) and rainfed 'puncei' (dry lands). It is during this age that the farmers followed the important practice of ploughing, manuring, weeding,

Then, after weeding the field, more important than even watering is the guarding of the crop."

We also come to know that the farmers had a target of really one thousand kalam from one veli of land i.e., Fourteen tonnes of paddy hectare.

Water Management

People irrigated their lands from rivers, ponds and wells. They took particular care to locate the sources of water suitably. They located the tanks in places of excess in-flow of water, and built around them banks in the shape of a half-moon. They built dams connecting big boulders and rocks wherever possible in kurinchi lands and thus increased the water potential in hills without incurring much financial expenditure. In some places they dug canals from the rivers to fill their in-land tanks and ponds with river water. They employed watchmen to keep the banks of rivers, canals etc., in constant repair and to guard against wastage of water. In order to use water economically, the system of laying beds and watering the beds was in vogue.

Kapilai and Etram

Digging of deep wells for the purpose of drinking water and for irrigation was common in Konku Nadu (in and around Coimbatore District). The people of the age knew how to divine the places where there was much sub-soil water or flow of water. They used a bull-lock-drawn contrivance called 'kapilai' for baling out water from deep wells, and men-operated contrivance called 'etram' for baling out water from shallow wells. They had wells known as 'Ilanchi' from which the palace gardens and orchards were irrigated mechanically.

The Seasons

The farmers of this period were well versed with the seasonal operations for sound farming. A year was recognised in terms of six sequential seasons; thus : Ila venil (months of April and May), mutu

venil (June and July), Kar (August and September), Kuthir (October and November), mun pani (December and January) and pin pani (February and March). Tamil Nadu begins to receive monsoon rains just before the break of the kar season. As this was considered the right season for farming operations, the farmers would return home at the break of kar (August) to start their farming operations, if they were away on business.

The Plough :

The farmers believed in 'ploughing deeply rather than broadly.' These farmers were honoured as 'senchal' farmers. Buffaloes and oxen were used to draw the plough. They used to plough the fields till the big clods of soil were broken to small pieces, lay the fields fallow for some time and then raise crops in the fields. They applied manure before seeds had been sown or crops had been raised, and then fenced the fields all around for protection from cattle. These fences were raised with live plants and prickly plants.

The Seeds :

The people knew the value of quality seeds for reaping high yields. So they used to select the first ears of corn that matured well for seed purposes. Grains meant for seeds were strictly not used for food thus giving rise to a belief that those who consumed the seed-grains would fare badly.

Multiplicity of crops :

The farmers cultivated a wide range of crops, from commercial crops to cereal crops. In wetlands, besides rice, sugarcane and banana were grown. In dry lands, oilseed like the sesamum and the groundnut were cultivated. Garden crops like the coconut, and the arecanut, fruit trees and spices, and cotton - the basic material for textiles were also raised.

Rotation of crops

The Tamils of the period had the knowledge of scientific farming without actually having any formal learning along the scientific processes involved. It has now been scientifically proved that the bacteria in the root-knots of legumes help fixation of atmospheric nitrogen in the soil resulting in increased yield of the next crop in the land. Gaining this scientific knowledge not by textbook but by experience, the farmers had

raised legumes after every rice crop. In addition to such rotation of crops, they were also aware of the system of mixed cropping. They used to grow Italian millets and Indian beans as mixed crops. It is also seen that cotton and millets were grown as mixed crops. We also come to know that ginger and turmeric were also raised as intercrops in coconut groves and jack fruit groves.

Plant Protection

The farming community also knew that weeds and pests were the killers of the plant and accordingly they engaged in plant protection measures. Realising that the weeds grew along with crops, they felt it a bounden duty to remove the weeds from the fields. It is not worthy to remember here that weeding by the farmers was so highly regarded that it was equated with the social responsibility of the king in ridding the society of its social pests and wicked men. They used hand weeders called 'tular' for weeding purposes. Further, they undertook measures to protect the standing crops from pests, from other animals like the sheep and the boars, from bird-pests like the parrots and the crows and from rodents and insects like the rats, the crabs and the beetles. Thus the farmers of yore were highly practical and endowed with abundant common sense, though they lacked scientific knowledge as we apply the term today.

Storage of Grains

A contrivance called 'kuyam' was used to cut the ears of grains at the time of harvest. The grains were separated by beating the ears of corn on a hard surface of by making the bullocks tread on them. Then the chaff was separated from the grains by winnowing. The grains were collected, measured and stored in granaries (kalanchiyam). Sometime they stored the grains in baskets made of straw and plastered with cow-dung. The farm-houses in which rice of earlier harvests were stored were called Vala manai (The House of prosperity). The yields were measured in volume against a standard of measurement ranging from alakku, ulakku, mall, marakkal to parai, kalam and Kottai. The farmers had the practice of paying one sixth of the produce as tax to the state. The salaries of the temple purohiths, the farm labourers and others like the carpenters, the ironsmiths, etc., were paid in terms

of fixed measures of paddy. The disbursement was made in the threshing arena itself.

The Post-Harvest Operations

The farming community knew the importance of post harvest operations too. After harvest, the field was ploughed and left fallow. Sometimes, they used to flood the fields and allow the stubble to rot. Sometimes they ploughed the stubble land and raised the next crop immediately, and in crops like the sugarcane and the banana they allowed the second crop (Rattions) to grow from the stubs.

The Implements

The farming operations were too complex to be performed without tools. There were a large number of labour-saving and time saving tools in use in those times. Although they did not possess modern farm implements that are used today, they had ploughing tools, the levelling tools called 'talanpu', the water balers like 'ampi' 'kilar' and terram and contrivances like kulir, tattai and kavan to drive away bird pests. They had mechanical contrivances also to catch boars entering millet fields.

Allied Professions

The basic support for farm operations was provided by the cattle. So the people deified them, and treated them with respect. In fact, the wealth of the king was measured only in terms of the cattle population of his state. Cattle-rearing was popularly carried out in every home in pastoral country sides with limited water potential. These people sold milk, butter milk, butter, etc., in nearby towns. The money thus earned was used to run their homes and also to re-invest for increasing their cattle wealth.

Fish Erva Wealth

Fish-farming was popular in coastal places (neital) just as cattle rearing was popular in pastoral country sides (mullai). Fish was generally accepted by the ancient Tamils; in fact, the fish was used as a barter in exchange for a measure of rice. The unsold fish was dried, salted and sold; this process is called 'Meen unakkal.' It should be noted that women were engaged in selling fish.

Deforestation

In those days there was a regular need to deforest land and re-

claim it for purposes of agriculture. This was considered one of the prime duties of the kings. However, it was true that the kings used to identify one species of trees, to call it their guardian tree, and to popularise their cultivation in large numbers. It was believed that if those trees flourished, the kings and the citizens would also prosper. Thus, the palmyra tree was the chosen tree of the Cera kings, the athi (baubinia recemosa) tree of the Cola kings and the margosa tree of the Pandya kings. The kings were depicted as wearing the garlands made of the flowers of these trees. Thus the kings encouraged planting of useful trees and their cultivation.

Market Facilities

The ancient Tamils had well organised marketing facilities. The agricultural produce was bartered for other goods in village markets. But in towns they were sold for money. In exchange of rice, fish, salt and milk were sold as per accepted rates of exchange. In cities like Madurai, Kaverippumpatinam etc., there were separate bazaars known as kula vidhi for marketing grains and pulses. It is reported that eighteen kinds of grains and pulses were sold there. Information relating the sale of particular kinds of these grains and pulses was indicated by raising particular banners atop each market centre. It is also worthwhile to note that the merchants were impartial in their business. They neither sought excessive profit for their goods nor underweighed their goods while selling; thus they proved to be trustworthy. Tax was levied by customs authorities for imported as well as exported goods. The wages of the farm labourers were paid in kind by the farmers.

Role of Women

It is really gratifying to note that even in those ancient days, women played a role equal, if not greater, to that of men in agriculture. In fact there were a few farm operations, like transplantation, weeding, harvesting, winnowing and collecting the grains which were done only by women. They used to keep vigil over the millet-fields to drive away bird-pests with tools like kavan during day times. The women of the coastal regions (neital) engaged themselves in salt-panning, drying and salting the fish, etc., and

selling them. The women of the pastoral regions (mullai) engaged themselves in rearing cattle and selling milk, butter, etc., in barter. Women who had lost their husbands engaged themselves in hand spinning of cotton.

Social Prestige of Farmers

The Tamils had high respect and regard for their kings. The kings were equated with their soul. There is a popular saying in Sangam literature which states that 'the soil and life of the state is its king'. The kings also believed that it was the result of their righteous role or misrule that fortunes or misfortunes fell upon their kingdoms. The people were of the opinion that only righteous role of the king assured them of unfailing monsoons and bumper harvests. People by nature were hard-working and sincere. At the same time they had firm belief that their ends were shaped by forces in nature, and that they should always be upright in their conduct. As such, these righteous producers of food were greatly respected by poets and kings. Thus the farmers enjoyed great social prestige and status in the society.

The Age of Pallavas (C. 600 to 900 A.D.)

The literatures of the age of Pallava kings, are replete with religious poems of the Saiva and Vaishnava cult. Very little agricultural information is available in the literature of this period. However, the inscriptions on stones spread over various areas give us a clue to the agricultural practices of the age.

The Pallavas ruled over Tondaimandalam-the northern parts of Tamil Nadu. They reclaimed forest lands for purposes of Agricultural cultivation, they called themselves 'Kaduvetikal' (the axe-men of forests). They dug big tanks and ponds and named them after themselves. Thus we get titles like Thiraiyan tank, Vairamekan tank, etc. They established a board of management in these places. They earmarked certain areas of agricultural land, known as 'yeripatti' and utilised the income from the land for meeting the annual expenses for the upkeep of the tanks and ponds.

It is also seen that the farmers were keen in utilising the help extended by the kings in the form of reclaimed lands for cultivation and additional irrigation water for increasing their produce and in paying tithes to their kings. It is also understood that the systems of renting the land under fixed terms of tenancy and for the same tenants came into existence in due course.

The Pallava kings had embossed on their coins the image of a bullock. This evidently bears testimony for their avowed involvement and deep interest in agriculture.

Agricultural Advancement in the Cola Age (C. 900 to 1300 A.D.)

Unlike in the proceeding age of Pallavas we get plenty of information relating to agricultural development in the age of Cola. The great names of this age like Peria Puranam and Kamba Ramayanam and ethnographical evidences like the monuments are the undeniable sources for our information. It was during this age that agricultural land was surveyed and standardised in terms of muntiri, Kani and ma; rules for locating and managing irrigation sources without any wastage were established and systematised. The Cola king built dams across the rivers, and named them after themselves in the same way as Pallavas did for tanks. The tank which is presently known as Ponneri, was dug by the king Rajendran I and was named Cola Kankam.

Wet-land rice was pre-dominantly grown in the province. However, they also raised other crops like dry-land rice, varaku, ragi, sesamum and other garden trees like the coconut, the arecanut and the jack tree. A pioneering feature of the age is that they had raised another layer of crops under the canopy of these trees also, as understood from the word, 'keel payir'.

The Age of Nayak Kings (C. 1300 to 1600 A.D.)

A literary piece entitled, Mukkudar Pallu written some three hundred years ago depicts clearly the state of farmers of that period. This age saw the classification of farmers

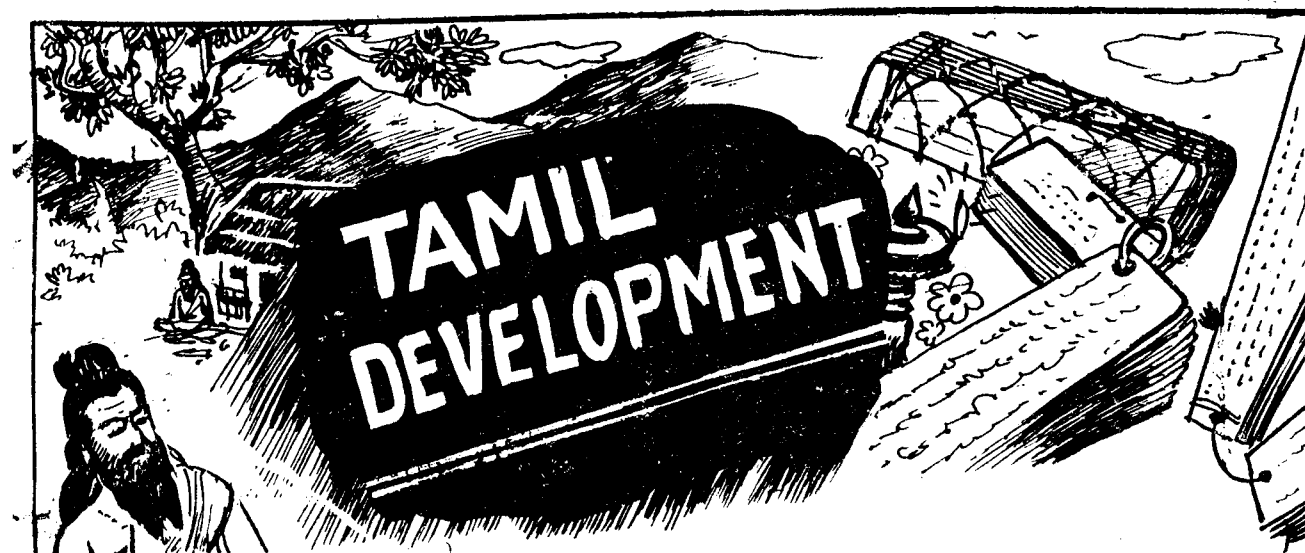
according to their socio-economic standing. The owners of large areas of lands were known as the nilakilar, the farm labourers as the Pannaiyattal and the tenant-farmers as the Ulavars. These tenants and the farm labourers were considered untouchables. The major share of the produce from the lands belonged to the wealthy landlords.

The number of varieties of rice mentioned in this literary piece is striking and enlightening. The general agricultural traditions of the immediate past were followed during the reign of the Nayak kings. Whenever the tanks and ponds became depleted of water, the right of fishing in these places was auctioned, and the income from such auctions was utilised for deepening the existing tanks, and for digging new tanks and ponds. An interesting aspect of farming of the age is that the farmers gained technical skill in matching soil types and their properties with particular crops which might respond with increased yields. This is indeed a step forward in the direction of modern farming.

Pre-Independent Era

This age witnessed great improvement enhancing water resources and water management. The Mettur dam, the Papanasaram dam and the Periyar dam were the three dams which served the needs of agricultural development during this period. The big Mettur dam is built across the river Cauveri in Salem District, the Papanasaram dam across the river Thamiravaruni in Thirunelveli district and the Periyar dam across the river Periyar in Kerala, which flows from the Western ghats bordering Madurai District. The water from the Periyar dam is taken by tunnels to irrigate the Cumbum valley and other places in Madurai District.

A special feature of these dams is that they have hydro-electric generating houses for generating electricity. The result is industrial development in addition to accelerated agricultural development. It is only during this period that the use of chemical fertilisers came into existence. Modern scientific plant protection systems also came into vogue during this period.



The total provision for the promotion of Tamil Language and Literature, in the Budget Estimate for 1979-80 is Rs. 70 Lakhs. To mention the more important components, Rs. 28 lakhs will be spent on stipends and book allowances to students studying through the Tamil Medium in Colleges; Rs. 23 lakhs on bringing out Collegiate books in Tamil, Rs. 9 lakhs on the Directorate of Tamil Development and its activities and Rs. 10 lakhs for other purposes.

Director of Tamil Development :

The Government are anxious that the policy of adopting Tamil as the Official Language of Tamil Nadu should be implemented with full vigour at all levels. The Tamil versions of several Acts, Codes and Manuals have been published. Glossaries of administrative terms and special terms for technical departments have been compiled and published for the use of the departments. Special Inspection Staff at the district level inspect the progress in the District Offices in the adoption of Tamil as the Official Language. An officer in each Department of Secretariat, each Head of the Department and each Collectorate has been ordered to be designated as Liaison Officer for working in close liaison with the Director of Tamil Development, ensuring the success of the Tamil Scheme.

A bibliography of the Tamil books published from 1867 is being compiled and thirteen volumes cover-

ing the period 1867-1925 have already been published. Work on the remaining volumes is in progress. The Department is also implementing a scheme for financial assistance to authors for bringing out original books in Tamil. The Government will give all possible assistance for bringing out the second edition of the Tamil Encyclopaedia.

History of Tamil Nadu :

An experts' Committee has been set up to write the authentic history of Tamil Nadu. Two volumes in the series of six volume have been completed. The first volume on the Pre-historic period has been published already and the second on the Sangam age will be published shortly.

Honours to Tamil Poets and Scholars :

A Reader's chair in the name of Umaru Pulavar has been instituted in Madurai Kamaraj University for research in Islamic Tamil Literature. The Government have paid an Endowment contribution of Rs. 2 lakhs for the purpose.

In memory of Pavendhar Bharathidasan, the Government have instituted in the Madras University an Endowment of Rs. 25,000, the interest on which will be utilised for organising Endowment Lectures every year.

The Government have instituted an Award Called Pavendhar Bharathidasan award, under which a cash

award of Rs. 10,000 and a silver insignia will be given to a Tamil poet selected every year. Kavignar Suradha got the award for 1978.

In accordance with the Government's policy of honouring Tamil scholars and savants, Thiruvallargal K. Appadurai, T. S. Avinashilingam, G. Devaneya Pavanar, M.P. Periaswami Thooran and V. Subbiah were honoured with the title of "Senthamil Chelvar" on Thiruvalluvar Day in 1979.

Financial Assistance to indigent Tamil Scholars.

The Government have instituted in January 1978 a scheme for giving pension to Tamil Scholars in indigent circumstances, i.e., those whose monthly income does not exceed Rs. 150 per mensem. Thirty-three scholars have already been given pension. The amount of pension which was Rs. 100 per month is proposed to be increased to Rs. 250 per month. The Scholars who have contributed significantly to Tamil language and literature (and dependants of such Scholars who have left their families unprovided) are eligible for this pension and the selection is done by an expert committee. The pension is given for three years at a time, but renewals are permissible.

Tamil Etymological Dictionary.

The eminent scholar in Tamil and Dravidian linguistics, Thiru G. Devaneya Pavanar, who is the Director of the Tamil Etymological

Dictionary Project is actively engaged in compiling the "Senthamil Corppirappiyal Akaramutali" which is expected to be a comprehensive and definitive work in the field. The work will consist of 13 volumes. The first part of the first volume will be published shortly. Work on the second part is now in progress.

International Institute of Tamil Studies:

The International Institute of Tamil Studies was established in October 1970. It is promoting research in all aspects of Tamil Studies and allied fields with the active co-operation of International Scholars interested in such studies. From 1972 it is publishing a half-yearly research journal. The Journal of Tamil Studies containing articles written by scholars all over the world. A well-stocked reference library has been set up in the Institute. The Institute gives intensive coaching in Tamil to foreign students with the aid of a language laboratory and audio visual equipment gifted by UNESCO. The Institute has so far published a dozen books. It proposes to publish a Social History of the Early Tamils, a companion to Tamil Literature, and a Who's who of Tamil writers. It also conducts every month popular lectures on Literary theories with special reference to Tamil Literature. It has conducted seminars on Folklore, Cultural heritage of the Tamils and Literary heritage of the Tamils. The Institute is getting an annual grant of Rs. 3 lakhs from the Government of Tamil Nadu. It is now located in the campus of the Central Institutes of Technology, Adyar and the Government have allotted six acres of land to the Institute near its present location for the construction of a permanent building for the institute.

Directorate of Tamil Cultural Centre:

There are ample evidences from Linguistics, Archaeology, Anthropology and similar sciences to prove that the Tamil Culture is the forerunner of world civilization. While there are many bodies and associations to do research in the above field, till now there has been no special set-up to present Tamil Culture in its proper perspective to the millions of Tamilians themselves, not to speak of bringing it to the attention of foreigners. The Tamil

Cultural Centre announced in the Budget Speech for 78-79 as a tribute to great Tamil savants like Kambar and Vallalar has stepped in to fill in this void.

To start with, the Tamil Cultural Centre will address itself to the establishment of a good Library and Reading room, an Auditorium and Exhibition hall, all with a view to further the cause of Tamil culture and tradition which have been permeating the Tamils for centuries together. Ultimately the centre will serve as a kaleidoscope to present the various facets of Tamil culture in all its splendour and glory to the world at large.

Fifth International Conference—Seminar of Tamil Studies

The Fifth International Conference—Seminar of Tamil Studies will be held at Madurai in June 1980. The Government will render all necessary help for the Conference as was done in 1968 for the Second Conference by the Government of Arignar Anna. They have already released an assistance of Rs. 50,000 as the first instalment, to be utilised for preparatory work.

Promoting Tamil Studies outside the State :

This Government are also offering generous grants to various Universities and institutions in other States which come forward to establish chairs in Tamil, undertake Research Work in Tamil or introduce part-time Diploma Courses in Tamil. During 1978-79, 15 Universities/institutions in other States were given a grant of Rs. 15,000 each for conducting part-time Diploma Courses in Tamil.

The International School of Dravidian Linguistics, Trivandrum proposes to implement the following programmes, among others :—

- (1) a survey study of the influence of Tamil in Thailand and Cambodia ;
- (2) investigating the translation theory based on Tamil, making use of Computer ;
- (3) a survey of South Indian Studies in the Far-Eastern Countries; and

(4) construction of an administrative building and auditorium to be named after the great Tamil grammarian, "Tholkappiar". The Government of Tamil Nadu have sanctioned a recurring grant of Rs. 1,36,000 per annum to the statute for five years from 1978-79. They have also agreed to give a non-recurring grant of Rs. 4,51,000 for the building works mentioned under (4) above and released Rs. 1 lakh as the first instalment.

Programme of Translations :

A programme has been launched for publishing in Tamil, valuable books from other languages, and for publishing valuable Tamil Classics in other languages. An Expert Committee has been constituted for this purpose under the Chairmanship of Justice Thiru S. Maharajan. As the first step the Committee has got prepared an annotated Bibliography of the Books in Tamil translated into other languages, and books in other Languages translated into Tamil. The Committee has selected books in English, French, Persian, Russian and Chinese Language for translation into Tamil and Tamil Classics for translation into English and other languages. Further the Committee has also plans to translate into Tamil, works which have won the Nobel Prize for literature. The work of translating and publishing Dr. Anandacoomaraswamy's "Dance of Shiva" and Francis Thompson's poems is now in progress.

Tamil script reform :

"On the occasion of the birth centenary of Periar E. V. Ramasamy, the Government have accepted for implementation some reforms in the Tamil script. Simplified forms were ordered to be adopted for 2 vowels and 13 consonants, which will lead to economy in printing and typewriting. All State Government Offices, Local Bodies, Quasi-Government Bodies and Educational Institutions were ordered to follow this script reform. The adoption of this reform was commended generally to all. A Committee of Tamil Scholars is being constituted to go into the reforms, in the light of the various opinions expressed, and give its advice to the Government.



Pongal is celebrated in Tamil Nadu and is the grandest and biggest harvest festival. Pongal is essentially a thanksgiving festival of Tamil Nadu.

Commencing from the last day of the Tamil month "Margazhi" it extends over three days in the month of Thai. This is the time when the harvest season comes to a close. The farmer who toiled for months in the field reaps a good harvest. This would not have been possible unless he had the help of such natural elements like the earth, the sun, the rain and the animals. The farmer, therefore, celebrates the Pongal to express his gratitude to all these agencies. A good harvest helps the farmer to plan for the welfare of his family. The Tamil saying "Thai heralds prosperity" is a reflection of the luck in store for the future.

With the end of the monsoon, there is freshness everywhere. The air is clean and crisp. The warmth of the sun is exhilarating. The landscape presents a fine picture of pastoral activity with scenes of rice fields, harvesting, threshing and so on.

Bogi : The festival commences with Bogi on the last day of 'Margazhi'. This is the preparatory day before Pongal which falls on the next day, the first day in the month of "Thai". Old household articles give way to new ones. "Let the old things go out and new things come in" is the Tamil adage. Old things are burnt in a bonfire in

the early morning. The houses are cleaned and decorated. The front and back courtyards and doorways are adorned with kolam and pumpkin flowers. The edges of the kolams are adorned with red powder. The entrances are decorated with "Thoranam" of mango and coconut leaves. Kunkum and tumeric paste are applied to doorsteps and door frames.

Pongal : The day dawns with a bright sun. The inmates of the family are bathed and attired in new clothes. The women of the house get ready to prepare Pongal. A new earthen pot decorated in the conventional manner with attractive motifs on it, is placed on the oven. Fresh turmeric is tied around the neck of the pot. Freshly harvested paddy which is hand-pounded, fresh jaggery and milk are placed in the pot and cooked. The milk boils upto the brim and all the members shout joyously, "Pongalo Pongal." The Pongal is either prepared in the garden or the open courtyard of the house. On a fresh plantain leaf, Pongal, is offered to the sun. Turmeric is considered to be auspicious. Sugarcane devoting sweetness right through the year.

Mattupongal : On this day the farmer honours the cattle which served him well throughout the year. The bulls and cows are bedecked with beads and bells, corn sheafs and garlands, the horns painted and tips fitted with metal caps.

The cattle are then taken to the village common ground in the evening.

PONGAL THE THANKS GIVING FESTIVAL

In the evening, the village folk dressed in new clothes, go on visiting, exchange greetings and the farm labourers bring fruits and vegetables as gifts to the landlords who give them new clothes. People greet one another with the words "Paal Pongitra". The philosophy behind the greeting is that prosperity will brim in the farmer's life just as the milk does.

Kannum Pongal : The four day long festival comes to a close with Kannum Pongal. Kannum means seeing-On this day people go sight seeing. In urban areas people visit the exhibition, museum, zoo and even the cinema theatres. In rural areas, bull-fight, cock-fight etc., are staged. On this day coloured rice balls are placed for birds. A number of crows and sparrows have a feast on this day. Thus even the birds are not forgotten.

The Jallikattu is a popular sport in the southern districts. Bulls are raised up specially for this occasion. The bulls are let out. They are untamed and ferocious. Unarmed, young men meet the bulls and try to master it. A few mirasdars and zamindars used to tie gold coins around the horns which goes to the young man who masters the bull. Today, bundles of currency are tied. In olden days, the owner also used to promise the hand of his daughter to the young man who masters the bull.

Thus Pongal, is a festival of thanksgiving, of rejoice, of chivalry, of valour, of colour and gaiety, in which man, beasts and birds participate.



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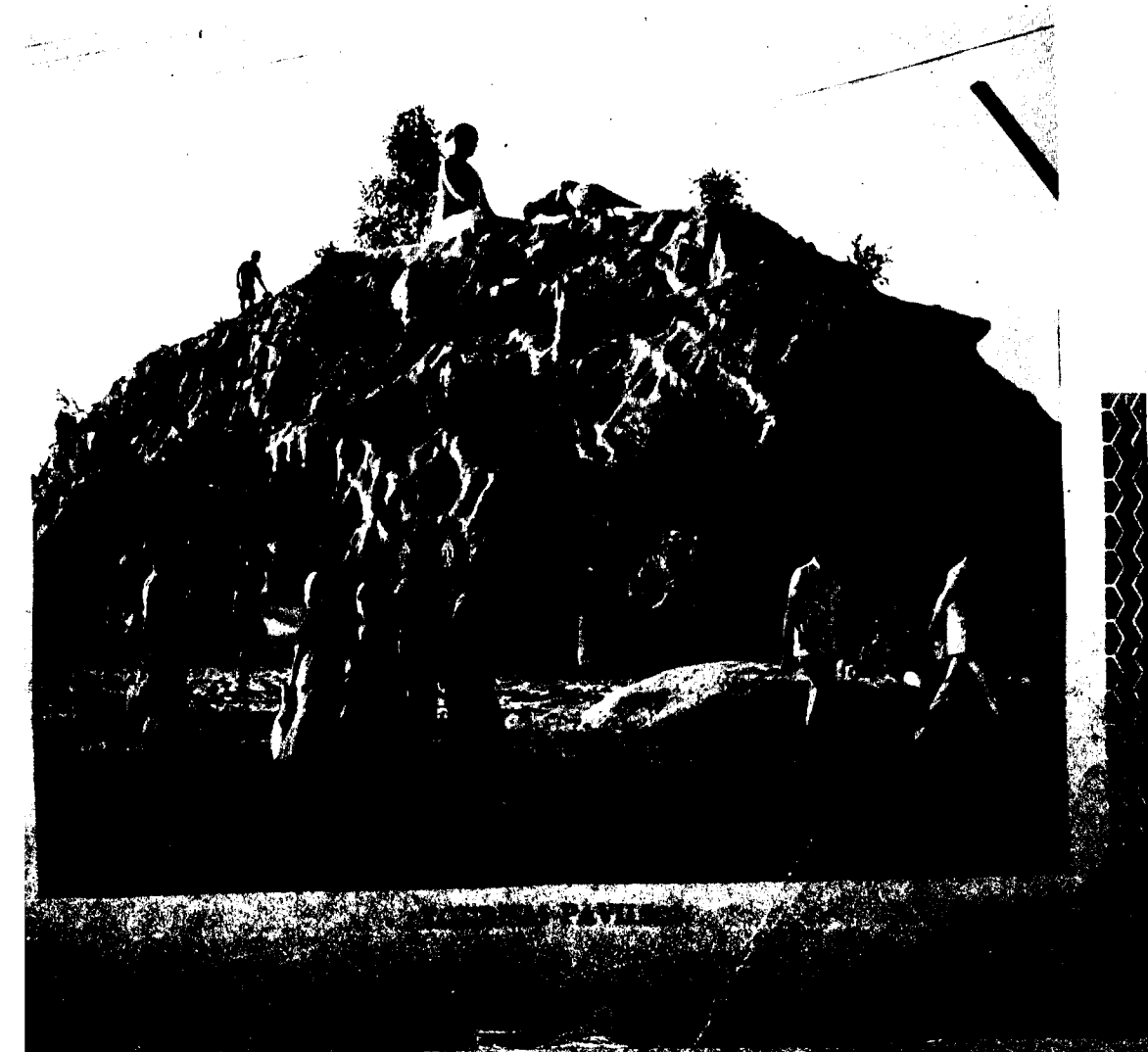


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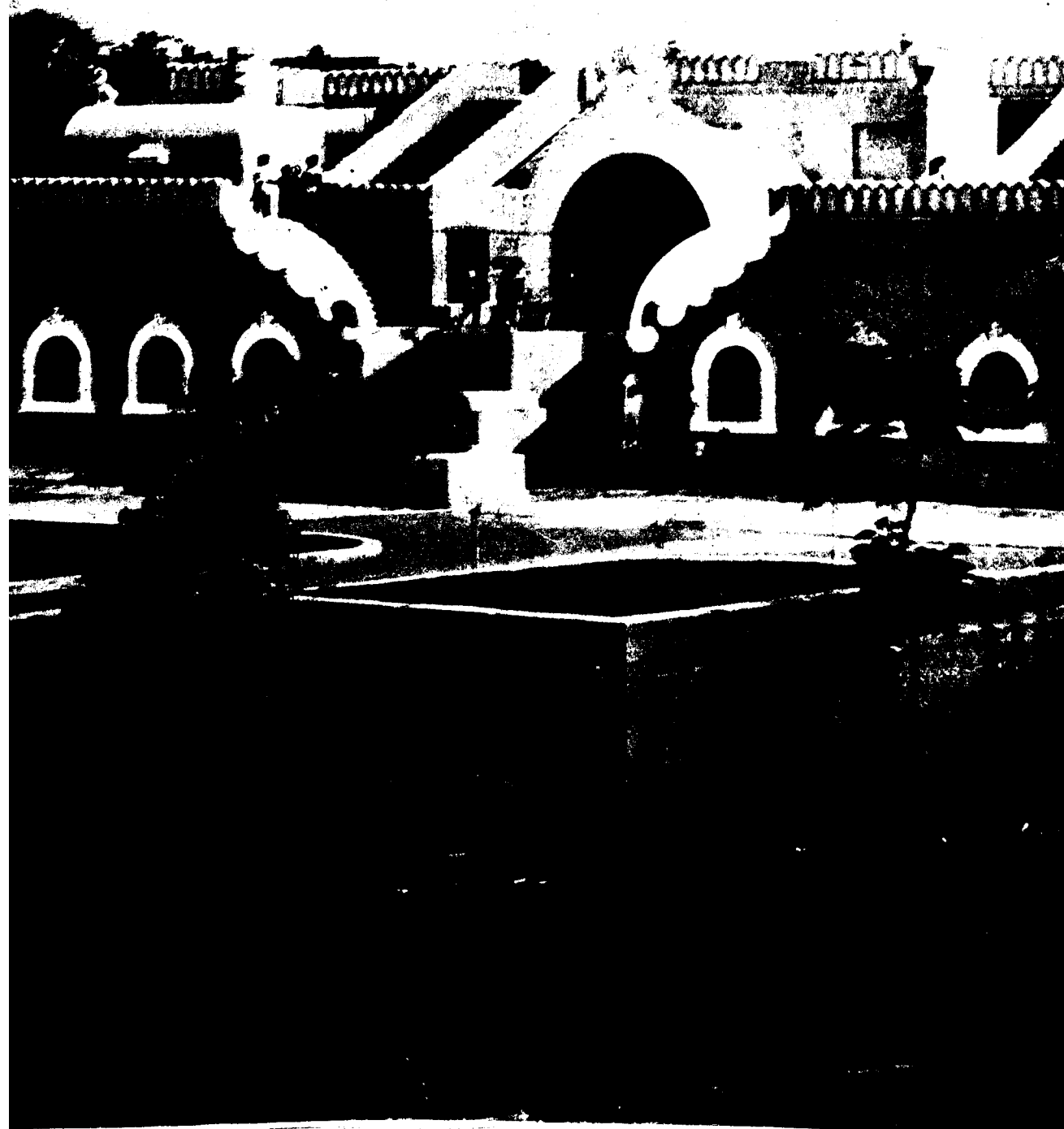


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**THE TAMILNADU
FOLK ARTISTES
WHO
PARTICIPATED
IN THE
REPUBLIC DAY
(26.1.80)
AT NEW DELHI**



The only contingent of the Indian Army which can wear the Cheshire Regiment hats is the "Madras Sappers". In 1843, they fought very courageously and assisted the Cheshire Regiment in the battle of Mainé. The "Madras Sappers" who have won many laurels in many a battlefield is celebrating its bicentenary in February 1980.

Tamil Arasu

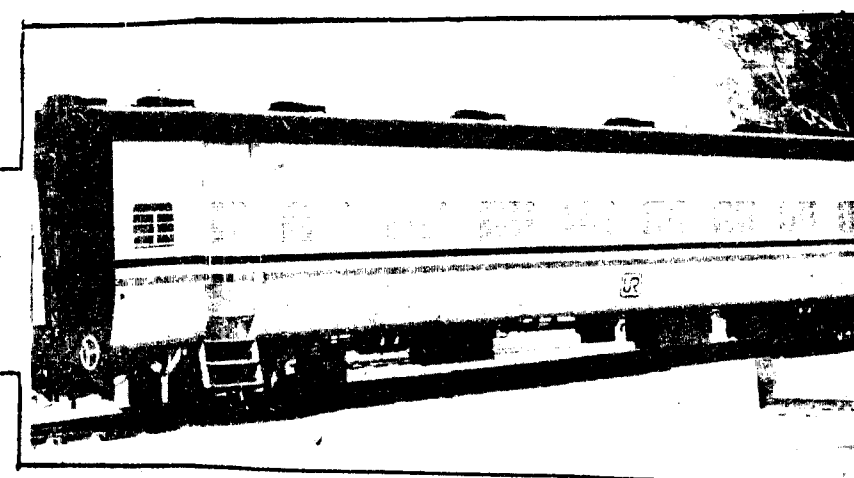
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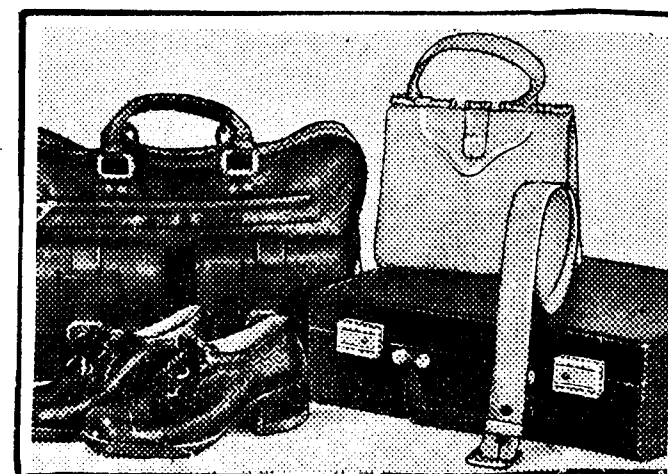
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EGMO

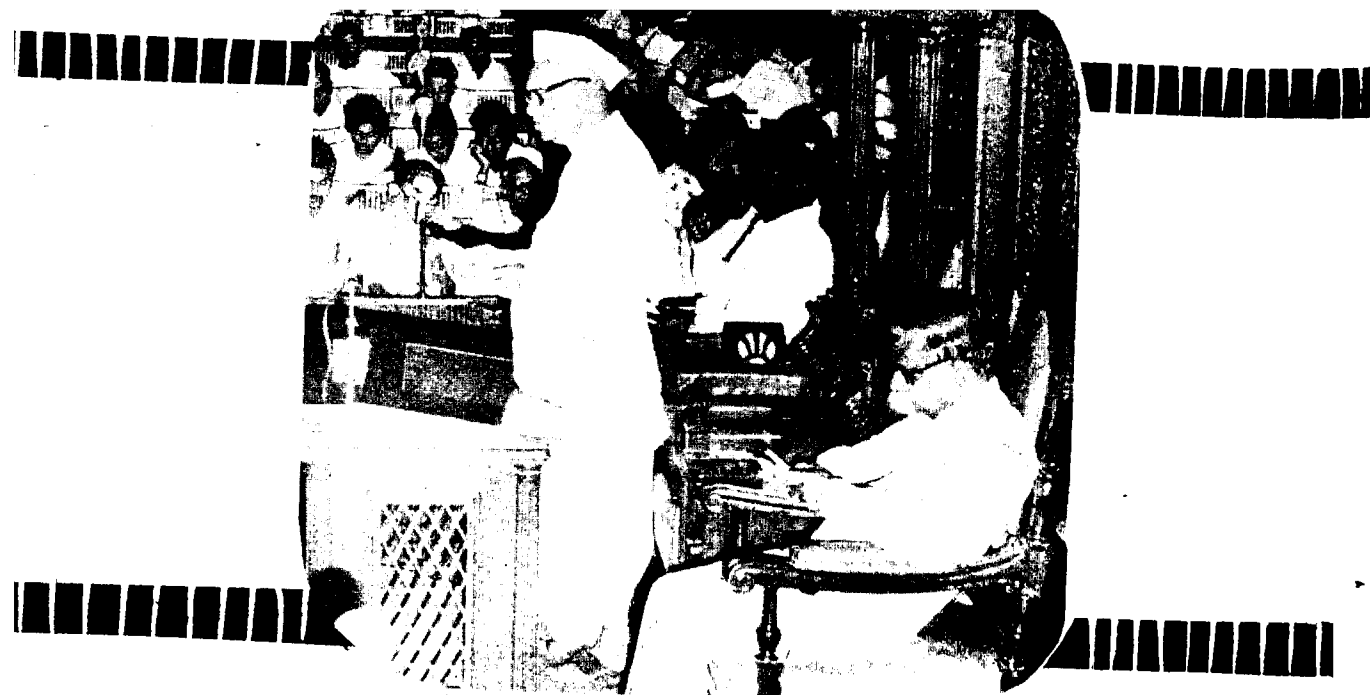
The second largest in the world, the ICF, exports coaches to Thailand, Burma, the East Asian and African countries, will soon be celebrating its centenary.



While extending all cooperation to implement the 20-point programme, the Governor in his address outlined the various steps taken by his Government for the welfare of the people of Tamil Nadu.



Leather-known to man from time immemorial — this growing industry earns a large amount of foreign exchange for Tamil Nadu.



Governor's Address

Joint Session of

Tamil Nadu

Legislatures

At the outset, I would like to extend my hearty welcome to the new Government at the Centre. I am sure that the new Union Government would take steps to gain the confidence and co-operation of the States and also to help them in discharging their duties to the people. I consider it appropriate to recall here the views of the Government of Tamil Nadu expressed in the Governor's address after a new Government was formed at the Centre in 1977:—

".....my Government will extend its constructive co-operation, based on Anna's philosophy, to the Centre in their efforts for building up a democ-

cratic socialistic, and prosperous India on Gandhian lines. At the same time, we shall take every opportunity to strongly advocate the claims of Tamil Nadu, whether they relate to political, cultural, economic or linguistic issues, with a view to ensure that the legitimate rights and interests of our State and of our people obtain due recognition and response from the Centre..... It is now being increasingly recognised that the Centre can be strong, only if the States are also strengthened. We trust that the imbalances in our federal Constitution in this regard will be rectified at an early date through appropriate Constitutional amendments and we shall support all efforts in this direc-

tion. We are also confident that with more powers we can make rapid progress in our efforts for improving the development and welfare of Tamil Nadu".

The decision of the Central Government to implement the 20-Point Programme as indicated in the President's address deserves praise. Members are well aware that the party in power in Tamil Nadu welcomed this programme even at the time of its announcement earlier and effectively propagated it among the people. In particular, the scheme was instrumental in abolishing the bonded labour in Tamil Nadu. To implement this programme in a proper manner this Government will extend

all its support to the Union Government.

I would like to mention with pride, the peaceful manner in which the recent Parliamentary elections were conducted in Tamil Nadu. On behalf of the Government, I express my happiness about the emergence of the desire for safeguarding our democratic traditions and for protecting the rights of the electorate.

The Government took speedy and timely measures with a sense of dedication in giving relief to the people affected by the recent heavy floods in many districts of our State. Many social service organisations and students' organisations also played an active role in these relief measures. Many lives have been saved on account of the proper precautionary steps and the extension of immediate relief. On our request, the Central Government sent a team to assess the quantum of assistance for relief measures. The Government of Tamil Nadu would like to thank the Government of India for announcing the Central assistance on the basis of this Committee's report. It is really commendable that the State Government acted promptly by ordering relief measures allocating substantial funds, without waiting for the decision of the Central Government on the quantum of assistance.

On account of the write-off of the Takkavi loans ordered by the State Government, 8.51 lakhs agricultural families have benefited. The Government has already given an assistance of Rs. 16 crores to the Co-operative Banks to enable them to pass on the benefits announced earlier by the Government to the ryots. The Central Co-operative Banks were not able to obtain financial assistance from the Reserve Bank of India in view of the heavy overdue positions. As a result, even those who have repaid their loans were not able to get further loans from the co-operatives. To obviate this difficulty, the Tamil Nadu Government has given an assistance of Rs. 27.5 crores to nine Central Banks. This will enable those who have repaid the loan to get further loans from the co-operatives. I am sure that the Mem-

bers will welcome this measure.

The food situation in Tamil Nadu continues to be comfortable. There is no compulsory procurement either directly from the ryots or through a levy on the traders. A number of direct procurement centres are being run by the Civil Supplies Corporation on behalf of the State Government. In these centres, paddy has been purchased from the ryots at the rate of Rs.105 per quintal, which is higher than the price notified by Government of India. All the villages have been covered under the 'one-village-one-shop' scheme of this Government and these shops are functioning well. When there was the likelihood of a sugar shortage recently, Government took immediate steps to ensure distribution of sugar for family cards throughout the State. The crisis was successfully averted in view of the timely measures taken by the State Government.

It is necessary to keep the prices of agricultural inputs under control so as to keep the cost of cultivation at reasonable levels. At the same time, it is necessary to ensure proper and steady prices for agricultural commodities. Appropriate floor prices for essential agricultural produces should also be fixed so that there is incentive for the ryots to cultivate them confidently. It is inescapable that the Government of India take steps to procure and maintain buffer stocks in many such commodities. Such an arrangement is at present available for rice and wheat. I request that the Government of India take step to extend this arrangement to cover other major agricultural commodities as well. Though it may not be possible to write-off the entire co-operative and other loans when the ryots are unable to repay them on account of the repeated failures of the monsoon, it is imperative that the Central Government evolves a National policy to give suitable relief for such agriculturists and also take steps to create necessary Fund for this purpose. At this juncture, I would like to welcome the statement of the President of India in his recent Address to the Parliament:

"It will be the Government's endeavour to ensure proper re-

munerative prices to the farmer for his produce".

It is hoped that the Central Government would take early steps to implement this policy. The State Government has drawn up a massive scheme to enlarge the facilities in the regulated market at a cost of about Rs. 100 crores so that the ryots are encouraged to increase the sale of their produce through the regulated markets. This scheme has been forwarded to the Government of India for being posed to the World Bank. Further, with the concurrence of the Government of India an amendment to the Tamil Nadu Agricultural Produce Markets Act will be brought before the House.

In this Session, a Bill will be brought forward to prohibit purchase of lands of scheduled tribes by non-tribals. Government recently promulgated an Ordinance reducing the ceiling on lands held by tenants to three standard acres from five standard acres. Government is of the opinion that by this measure, concentration of large extent of lands with some tenants will get reduced and the tenancy of lands would get distributed among the landless poor. A bill to replace this Ordinance will be brought before the House.

Speedy steps will be taken up to develop the forest wealth of this State. The Government will be vigilant in prevention of illegal felling and smuggling of trees and in punishing the offenders severely.

Tamil Nadu has been in the forefront in utilising its water resources. Our State has utilised the surface water fully. The State has exploited its ground water potential to a substantial extent and in fact in certain areas there has been over-exploitation. The Government will continue to hold talks with neighbouring States on the utilisation of their surplus waters. Such utilisation will not only increase agricultural production in the country but also create employment in drought prone areas.

It is well known that only by proper industrial development, the Nation can become strong. It is seen from the particulars given

below that the Central investment in Tamil Nadu has been dwindling in the past few years as compared to other parts of the country:—

CENTRAL INVESTMENT.

	All India.	Tamil Nadu.	Percentage.
(Rupees in crores)			
Upto 1969-70	3,885	312	8
Upto 1976-77	11,451	467	4

Tamil Nadu's share of Central investment upto 1969-70 was 8 per cent, whereas it has come down to 4 per cent by 1976-77. Tamil Nadu is a State having very high percentage of population below the poverty line; the number of unemployed is also very high in Tamil Nadu. These two major problems of our State can be tackled by the Centre, increasing its direct investment and taking other appropriate policy decisions to encourage industrial development. I would like to request the Union Government to take steps to reduce regional imbalances by investing larger amounts in Tamil Nadu. The first phase of the Salem Steel Project for which the foundation stone was laid by the Prime Minister should be completed speedily. Further, the other phases of setting up the Salem integrated steel plant should be expedited so as to give an impetus for industrial development in this region.

Tamil Nadu Government continues to encourage small industries and cottage industries. The Government is implementing a new scheme of capital subsidy to small scale industries to be set up in 24 backward taluks. Recently, the Government has ordered that Government departments and public sector undertakings must purchase their requirements in respect of 241 articles from small industries only. The Government has also initiated of a new scheme for equity assistance to revitalise sick small industries. During this year, as against the target of setting up 2,000 match units, steps have been taken for establishing 2,600 such units. During full

production, these units will provide employment opportunities for 52,000 persons. Members may recall the decision of Government to give fillip to sericulture industry by expanding cultivation of mulberry over 8,000 acres. As against this targeted area, about 7,000 acres have been covered by November 1979 and it is estimated that by the end of the financial year 10,000 acres will be covered. As announced in my last address, active steps are being taken to establish the Soda Ash Plant by Tuticorin Alkali Chemicals Limited, which is expected to go into production by early 1982. To implement the Government's decision to produce paper from bagasse, a Public Sector Corporation has been set up and preliminary steps are being taken.

Apart from being the State capital, Madras City functions as commercial hub of and the gateway to the South. The Tamil Nadu Government has been implementing various schemes for the development of Madras Metropolitan area. Steps have been taken for the clearance for the second stage of the World Bank aided Urban Development Project at a cost of Rs. 57 crores, even while implementing the first stage of the Project. I would like to reiterate here that the Mass Rapid Transport System is the only solution to solve the traffic problem of the City. It would be my strong plea with the Union Government that the work on this scheme should be commenced at least in the coming year. I would like to point out that as years go by, apart from the problems getting complicated, the cost would also increase. The Central Government must also take steps to convert the metre gauge railway line from Madras to Tuticorin to broad gauge. Only by this step, it would be possible for the country to draw the full benefits of the Tuticorin Port and also to develop the industrially backward areas on this route.

This year, the self-sufficiency scheme for providing basic amenities in an integrated manner has been started in 5 blocks in every district. It is proposed to expand the scheme and implement it in 100 more blocks in the coming year.

The centrally assisted Food For Work Programme should be

expanded further to create more job opportunities. It is my wish that the Tamil Nadu Government which is implementing this scheme successfully, should be further encouraged by the Government of India by larger allocation of rice. Members will be happy to know that the Employment Guarantee Scheme announced by this Government is being implemented vigorously.

In this State, Mobile Medical Units have been rendering a good service. It is proposed to enlarge this scheme. Government will also set up specialities like Cardiology in hospitals of the small towns.

In Higher Secondary Schools Vocational Education is being taught in a commendable manner. The Government will take steps to raise its standard and to provide laboratory facilities and equipments to these schools. This Government considers that at the school education stage itself, students should obtain necessary work experience and that they should get trained in vocations useful to the society. To achieve this, vocational education will be introduced in high schools in stages.

The Members may be aware of the interest taken by the State Government in promoting sports activities and the setting up of a separate Directorate of Sports and Youth Services. Schemes for Physical Education will be expanded significantly in the coming year. The students will be given special training to enable them to act as protective force for the society, whenever necessary.

In my last address, I informed the House that a scheme for construction of one lakh houses in rural areas will be implemented over a period of five years. I am happy to state that this scheme is making good progress. As against the targeted number of 20,000 houses, steps have been taken for construction of 30,000 houses. Till now, applications for loans for 38,000 houses have been sanctioned. Government is taking steps to expand the scheme with necessary assistance from HUDCO and other financial institutions.



C. RAMACHANDRAN, I.A.S.,
Director of Industries & Commerce

India has been the home of hides and skins and leather from ancient times and has the largest cattle population in the world. It accounts for a sizeable proportion of the world trade in leather. Leather Industry is the fifth largest employer in India. Leather industry is not only one of the important industries but also one of the oldest cottage industries of India. In the international map of leather trade, India, with about 13 per cent of the world's livestock population, occupies a dominant role. A recent study of the United Nations Industrial Development Organisation revealed that the world population of livestock was about 2780 millions in 1975 and India's share was estimated at 374 millions.

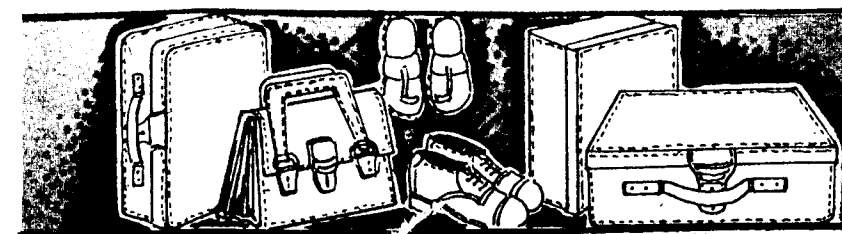
IMPORTANCE OF THE INDUSTRY TO THE ECONOMY OF TAMIL NADU

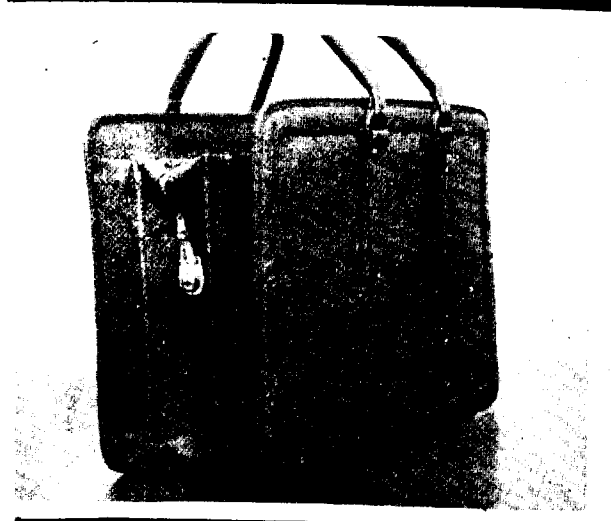
Leather industry occupies a unique position in Tamil Nadu's

economy. This traditional industry which provides employment to weaker sections of the community is labour intensive and figure among the export-oriented industries. In 1975-76, Rs. 185 crores worth of leather and leather goods were exported from India and this rose to Rs. 330 crores in 1978-79. The share of Tamil Nadu has been Rs. 134 crores in 1975-76 and Rs. 232 crores in the production of leather and leather products in India. The annexure shows the predominant position Tamilnadu occupies in leather trade. Tamil Nadu is known

for its traditional East India tanned hides and skins.

There are about 800 tanneries in India and out of which 400 are in Tamil Nadu and they form the bulk of the leather trade in the country. The tanneries are located in a few districts of the State. The large scale and small scale tanneries are located in Madras, Chengalpattu and Tiruchirappalli Districts; Vaniyambadi, Ambur, Pernambut and Ranipet in North Arcot District; Erode in Periyar District and Dindigul in Madurai District. Every





year, nearly Rs. 200 crores worth of East India tanned hides and skins are exported from the port of Madras which works out to about 60 per cent of the total exports. During the period from April 1978 to March 1979, of the total the leather and leather products exported from the country, Bombay port accounted for 12.85 per cent, Calcutta 16.60 per cent, Cochin 0.15 per cent and Madras accounted for 70.40 per cent. There is great demand for Indian leather and leather goods in the European Market because the leather have got unique features and they are suitable for finer shades and better finish.

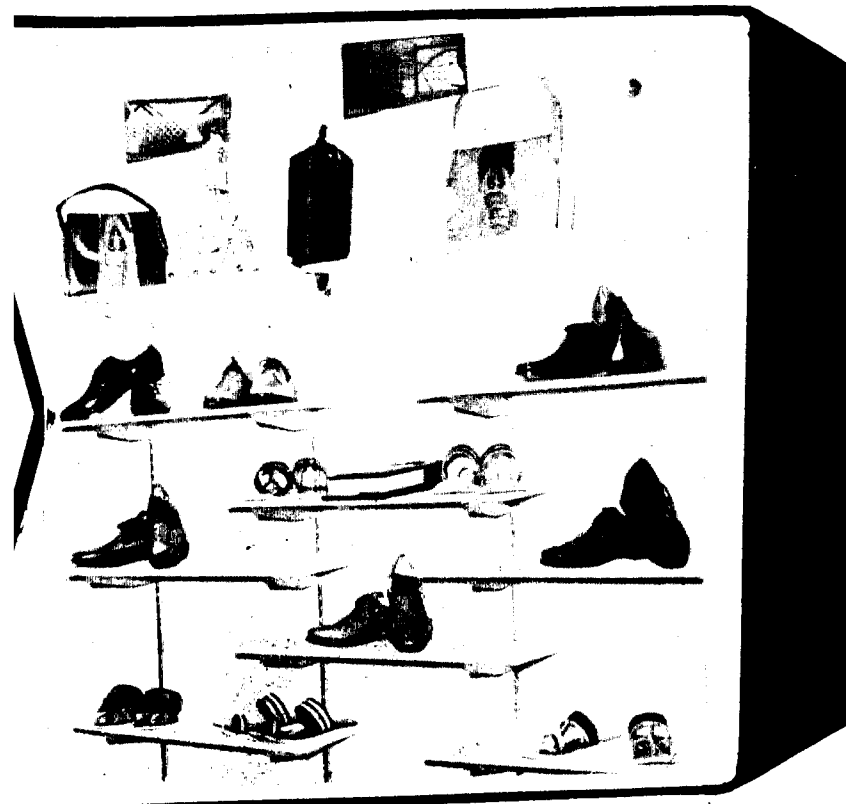
Though the availability of raw materials like hides and skins is not a problem for the Industry, the State depends on other states like Bengal, Bihar, Andhra Pradesh, Karnataka etc. for its extra requirement of hides and skins. The quantum of supply of raw hides and skins from these states may go down when leather industry in these regions are developed. With a view to increase the production of finished leather and to step up the export of finished leather and goods which may yield more foreign exchange, besides providing more employment opportunities, the Government of India have since restricted the export of E.I. tanned, wet blue leathers.

Tamil Nadu occupies the pride of place in leather industry. Besides the various infrastructure facilities available in the State, and apart from large leather exports, Madras has certain firsts in the leather field. Madras has the oldest Institute of Leather Technology in India and Madras University is the first to offer higher education in leather

technology. Tamil Nadu started the first Functional Industrial Estate, first to start wattle plantations and first to have a wattle extract plant. The Central Leather Research Institute (CLRI), Madras as we know, is considered to be the largest of its kind in the world. Thanks to the enlightened policies of the Government and to the well-established E.I. tanning industry, the traditional leather industry has taken to modern methods, machines and materials and rationalised the processes and products.

The State Government attach considerable importance for the development and growth of this industry. With a view to encourage small tanners to switch over to finishing of leather (from traditional tanning activities), steps have been taken up by the State Directorate of Industries to set up Leather Finishing Service Centres in the Co-operative sector and to Private infrastructure for the production of finished leather goods.

The Government of India have



contributed a sum of Rs. 25 lakhs for this purpose in the form of imported leather finishing machineries which have been erected in the Vaniyambadi Leather Finishing Servicing Industrial Co-operative Society which commenced its activity in December 1978. Two such societies, one at Ranipet in North Arcot District and the other at Dindigul in Madurai District have also been organised. Two more societies one each at Pallavaram in Chengalpattu District and Pernambut in North Arcot District are expected to come up shortly. These societies will also set up servicing Centres in their respective areas by raising share capital contribution from the small tanners and load from the State Financing Institutions. The Government of India contribution will be passed on to these societies towards Government share participation and building grant.

The first Functional Industrial Estate set up in July 1964 at Madhavaram, for the development of leather industry, has now 24 small scale leather units engaged in the manufacture of finished leather, leather goods, footwear leather aids, micro cellulose rubber and sheets and rubber sole for footwear manufacture. This estate is now managed by the Tamil Nadu Small Industries Development Corporation. The Tamil Nadu Small Industries Corporation is running a finished leather unit at Vinnamangalam.

The Tamil Nadu Industrial Investment Corporation provides liberal financial assistance for setting up leather finishing units and for the purchase of leather finishing machineries by the existing Units. The State Industries Promotion Corporation of Tamil Nadu and Tamil Nadu Small Industries Development Corporation, sanction subsidy on capital investment for units set up in backward areas.

The prototype Development and Training Centre for leather machinery of the National Small Industries Corporation of the Government of India, supplies prototype for the manufacture of sophisticated machinery and offer training facilities to the technicians.

DEVELOPMENT OF RURAL LEATHER INDUSTRY

Village leather industry has taken deep roots. Flying and carcass recovery, village tannery, tanning and finishing, footwear and leather goods are some of the important disciplines which have been developed in the rural areas. The Village tanners generally cater to the needs of internal markets. The artisans in the Villages using outmoded tools and implements need technical and financial assistance, marketing facilities and reasonable price for their leather products. Necessary infrastructure facilities are provided for the growth of cottage

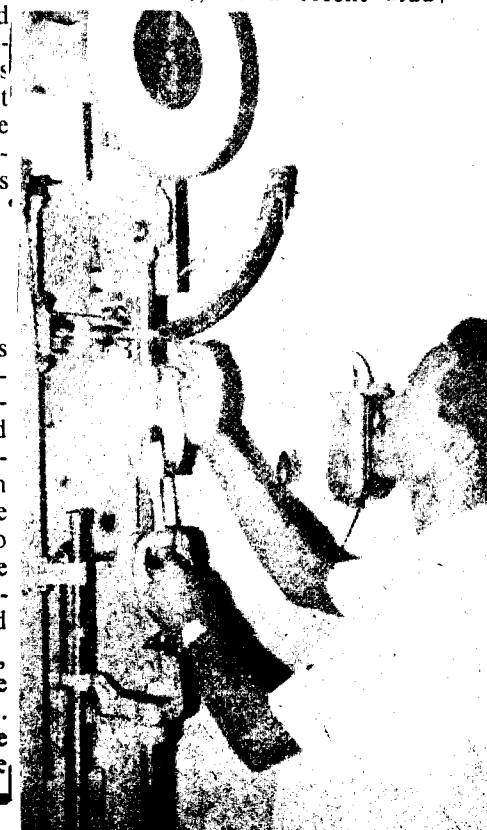
sector of leather industry in the State.

The khadi and Village Industries Commission provides technical and financial assistance to the cottage units through the Khadi and Village Industries Board in Tamil Nadu. The Board has set up flaying centres, model tanneries, chrome tanning units, chrome tanning, retaining and finishing Units, footwear units and leather goods depots in various parts of the State. Financial assistance is also rendered to individual tanners and cobblers.

The Central Leather Research Institute, Madras is providing facilities for improving raw stock quality of leather improving existing processes and products; creating newer types of leather and leather goods of potential market appeal, maximising indigenous production of tanning materials and machinery; providing technical know-how for the manufacture of different types of leathers and undertaking such fundamental work as would produce buildup knowledge and paving the way for useful innovation. A branch of the National Information Centre for leather at the Central Leather Research Institute, disseminates technological information to the leather industry in the south.

PATTERN OF THE INDUSTRY—A STUDY

According to a recent study



conducted by the Department of statistics covering 208 tanneries in Tamil Nadu 107 Units were engaged in tanning of leather, 85 units in finishing and 16 units in the manufacture of leather products, representing 51 per cent, 41 per cent and 8 per cent respectively. This shows that the tanneries in Tamil Nadu were engaged in tanning and finishing of leather and a very few in the manufacture of leather products.

As on 31st March, 1978, the productive capital invested in these 208 tanneries was of the order of Rs. 5,943 lakhs. Bulk of the investment was in the units engaged in the manufacture of finished leather and leather products. The tanning units shared only about 10 per cent of the productive capital. Of total value of output to the tune of Rs. 168.10 crores during 1977-78, the value of finished leather and leather products put together was 53.8 per cent of the total production, tanned leather 40.6 per cent and wet blue chrome tanned leather was about 5.6 per cent of the total production.

The 208 leather units had provided employment to 12,480 persons of whom 7804 were in finishing units and 4676 in tanning Centres.

These statistics indicated the trend of Indian tanners who promptly switched over to the field of manufacture of finished leather in view of the changed policy announced by the Government of India in 1973 to the effect that the quota for the export of leather in unfinished and semi-finished form would be gradually reduced by allowing export of only the finished leather and leather products.

ROLE OF INDIAN STANDARDS INSTITUTION

Leather industries serve the twin purpose of economic development and employment. Leather and Leather goods have attracted national and international markets which are growing quality conscious. Hence, the various aspects of the Industry demands quality control and standardisation. India, with the abundant availability of hides and skins, is eminently suited to cater to the world's demand of finished leather and leather products, provided it maintains the quality of the products. In recent years, the Government have provided assis-

tance and encouragement for producing quality finished leather and leather products to suit the sophisticated demand of foreign and indigenous markets.

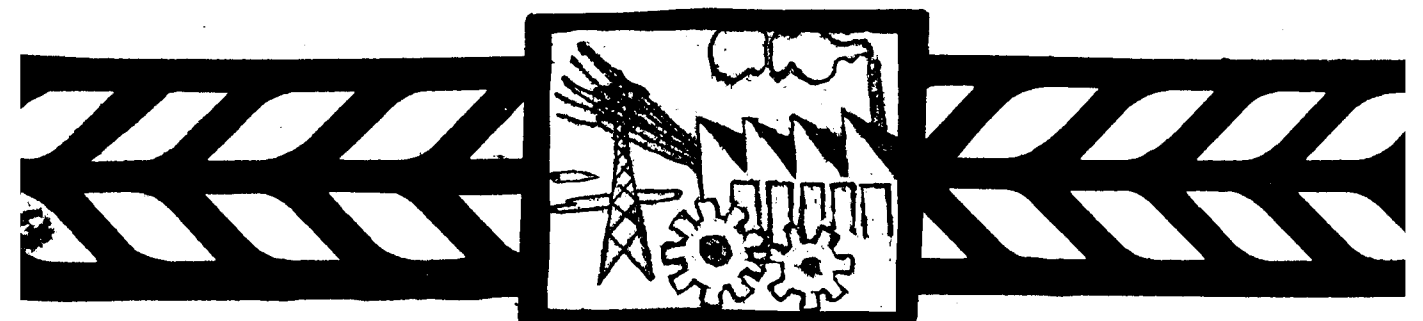
The Indian Standards Institution had laid down Indian Standards for leather and leather products. In applying the standards for maintaining the quality of the products, the interests of the large number of cottage and small scale leather units have been taken care of. There are more than 160 Indian Standards for leather, leather goods, leather processing agents, tanning materials, footwear, footwear materials, sampling and testing methods, hand tools and equipments, etc. Taking into account the latest trade trends and technical development, these standards are reviewed from time to time and revisions / amendments are brought out, wherever necessary.

With the renewed enthusiasm and emphasis, rational utilisation of raw materials and man power and adopting modern methods of production, the leather industry in Tamil Nadu will blaze new trails.

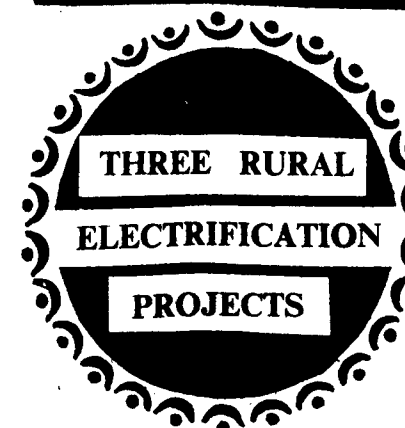
Export of Leather and Leather Products from India & Tamil Nadu

(Figures in Lakhs of Rs.)

Description	1975—76		1976—77		1977—78		1978—79	
	All India Export	Share of TamilNadu	All India Export	Share of TamilNadu	All India Export	Share of Tamil Nadu	All India Export	Share of Tamil Nadu
E.I.Tanned Hides and Skins	8044.02	7641.33	9758.54	9185.27	7044.00	6919.85	6788.94	6611.62
Net Blue chrome tanned hides & Skins	4182.05	2122.25	5285.85	831.41	5027.32	786.07	3932.14	304.56
Finished Leather	4035.40	3427.64	10,359.38	6878.90	9878.63	7419.93	18125.93	15239.75
Leather Goods	638.62	54.73	1195.98	104.54	1029.20	145.78	1461.75	373.68
Industrial Leather manufacturers	58.38	8.10	138.75	2.02	231.07	17.97	325.05	20.39
Leather Foot Wear	1197.93	12.11	3003.31	23.37	1746.73	19.08	1499.89	55.02
Foot Wear Components	56.99	20.14	456.39	199.34	793.69	369.98	836.53	636.67
Goat hair	108.58	20.63	74.96	15.19	32.76	12.31	48.65	16.41
Other products	205.86	103.19	1052.78	377.59	9.04	1.56	21.25	3.10
Total	18527.83	13410.06	31325.94	17517.63	25792.44	15692.53	33040.33	23261.20



The Rural Electrification Corporation has sanctioned another loan assistance of about Rs. 81 lakhs for three new electrification projects in Tamil Nadu. The projects covering 147 villages envisage energisation of 1,600 irrigation pump sets in rural areas of South Arcot, Dharmapuri and Salem district. All the three projects have been sanctioned under Special Project Agriculture (SPA) programme which aims at increasing agricultural production in potential areas through large scale energisation of irrigation pumpsets. This programme is



jointly financed by REC, the commercial banks and the Agricultural Refinance and Development Corporation.

With this REC has so far sanctioned more than Rs. 44.8 crores for the implementation of 169 projects in the State. On completion, these schemes covering more than 5,300 villages in the State will help energise about 75,700 irrigation pumpsets besides over 3,000 small scale industries and about 1.8 lakh domestic and commercial services and street lights in rural areas.

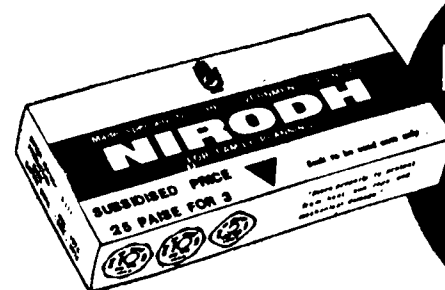
Children by choice, not by chance

An unwanted pregnancy can upset all your careful plans. It's happened too often with others, it's not for you to make the same mistake.

REMEMBER, prevention's better than cure. Don't leave things to chance.

USE NIRODH.

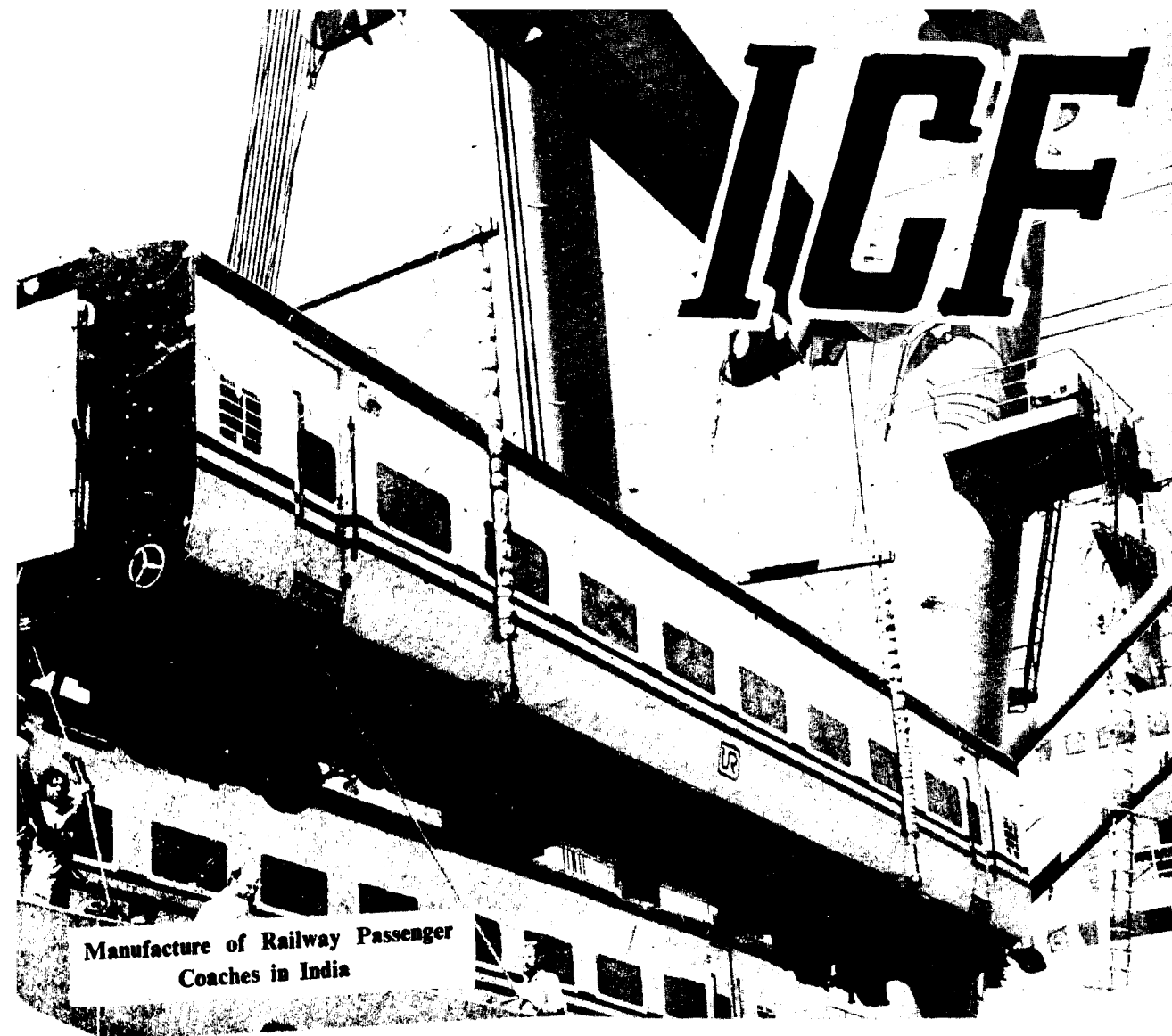
It is a simple, easy device for the male. Available at your neighbourhood chemists or the nearest Family Welfare Centre.



**NIRODH
MAKES
ALL THE
DIFFERENCE**

**A dependable device
to help the man and wife
who want a happy life**

davp 79/107



The Indian Railways now are 5 years young and growing rapidly, particularly since Independence. Indian Railways have the unique distinction of being the largest railway system under one management in Asia and second largest in the World.

The Indian Railways to-day have over 1,00,000 track kilometres, approximately 11,000 locomotives, 37,000 coaches and 4,00,000 wagons. The total investment on the Indian Railways has gradually increased to 6,000 crores or 60,000 million rupees.

History of the Coach:

When the first passenger train ran in India from Bombay to Thana at a high speed of 15 miles per hour, the passenger coaches consisted of open, rectangular wooden boxes mounted on wheels and have rough wooden benches for passengers.

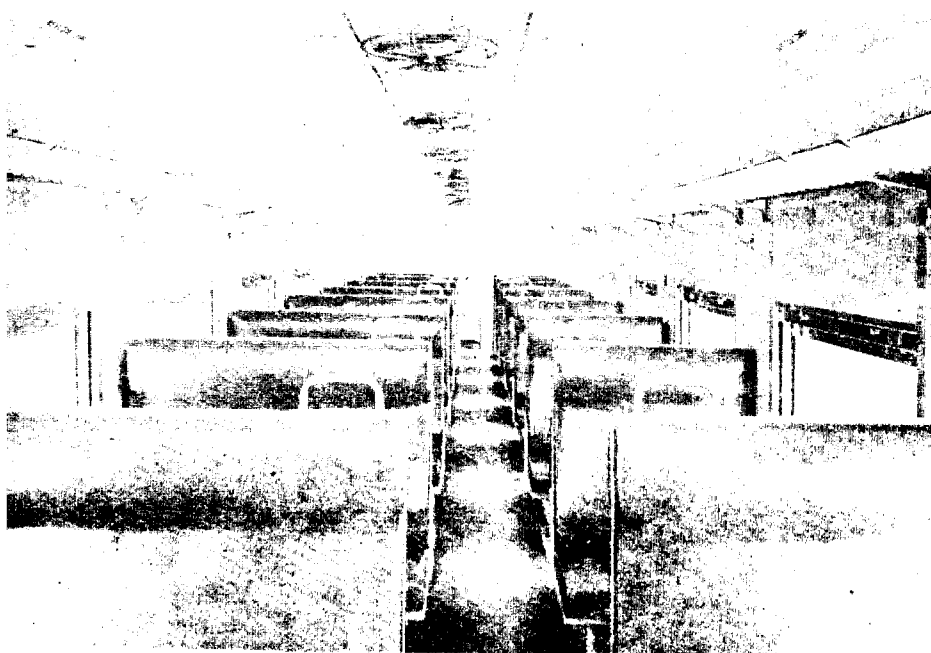
The coaches were connected by a primitive system of loose couplers where the passenger sat exposed to the elements receiving jolts at the time of braking and acceleration. The next stage in development was that the beautiful teak wooden bodies were built on heavy rolled sections and steel under-frames. The wooden bodies gradually gave place to the steel bodies while the rest of the design remained almost the same.

On the eve of Independence, Railways had been amputated, war-weary and had such overaged heavy obsolete stock. To modernise and revitalise the Railways and also achieve self-reliance, the Indian Railways looked round at the latest passenger coaches running on the advanced Railway systems in Europe and America. It was found that the most advanced design was of light-weight, all-welded anti-telescopic integral coaches. The Indian

Railways entered into a technical collaboration with a Swiss Company at Schlieren for manufacture of these latest design coaches.

The Integral Coach Factory commonly called the "ICF" was, therefore, set up at Perambur, Madras and production started on 2nd October, 1955. This factory is well-designed, spacious and well-laid-out for unidirectional movement of materials. The manufacture is based on mass production techniques on six parallel lines equipped with requisite jigs, fixtures, dynamic and fatigue testing machines as well as equipment for latest non-destructive testing technique like magnetic, particle, ultrasonic and radio-graphic testing.

All-welded construction has been adopted for the fabrication of these shells, the bogieside frame and bolster are also of completely welded construction. The entire



structure is made of sheets and plates folded to shape, eliminating the use of heavy rolled beams, channels or angles. All types of electric welding, viz. spot-welding, hand-welding, semi-automatic submerged arc-welding, butt-seam welding and flash-butt welding are employed in the fabrication of shell and its components. Argon gas welding is employed for the manufacture of Aluminium details. Coiled steel springs and rubber springs are used on primary and secondary suspensions. Incorporation of hydraulic dampers/shock absorbers at the primary and secondary suspension has further ensured far more comfortable riding of these coaches.

During the first year of ICF's production, coaches were assembled from components imported in a knocked-down condition or 100% imported. To-day almost all the components are manufactured in ICF itself or in different industrial centres in India. The coach is almost entirely indigenous and therefore the lowest priced in the World Market.

The ICF so far has manufactured 13,000 coaches of 70 different designs for the Indian Railways as well as for several railway systems abroad.

The Research and Design Organisation, the Manufacturer, i.e. Integral Coach Factory and the using Railways are part and parcel of one organisation, the Indian Railways. There is, therefore, the required feed back between the

User, Manufacturer and the Research Wing during the last 25 years. Every new prototype coach, whether built for Indian Railways or other Railways is subjected to strain-gauge testing according to international standards. After strain gauging, oscillograph tests are carried out to check riding qualities. As a result of these stringent measures and modern techniques, several new types of coaches have been designed and put into service. For example, the latest Second Class-lowest in India and called Economy Class' in other countries—has cushioned berths, fluorescent lights, oscillating fans, laminated plastic sheets, stainless steel fittings in toilets, cool drinking water facilities, etc. The latest Tamilnadu Express running between Madras and New Delhi on the BG covers a distance of 2200 kms. with 5 stops in roughly 30 hours. The train consists of 22 fully vestibuled coaches, including air-conditioned coaches, Pantry Cars, library, closed circuit television and it is almost a 5 star hotel on moving wheels! The Rajdhani Express is an entirely air-conditioned train with end-on-generation running at a maximum speed of 140 kms. per hour and covers a distance of 1400 kms. in 15 hours with only two stops in between.

On the Metre Gauge two important trains, the Pink City Express, from Delhi to Jaipur and Vaigai Express between Madras and Madurai are running with modern ICF coaches at 100 kmphs. High speed trains are in an advanced stage for speeds upto 160 kmph. on the

the Metre Gauge.

Not only this, but also ICF has now undertaken the challenging task of manufacturing Metro Coaches for the proposed Calcutta Underground Railways. The job is being undertaken for the first time in I.C.F.

The Indian Railways have not only to maintain its fleet of 30,000 coaches, but have to cater to the increasing traffic and hence require approximately 1,500 to 2,000 coaches per annum. ICF, last year, achieved a record production of 752 coaches with the help of 14,000 dedicated workers.

The balance of the requirement was met by the Indian Railways from two other public sector coach manufacturing units, located at Bangalore and Calcutta. The total production of all these units is still short of Railways' requirements and to manufacture more coaches of latest design, the Railways are planning another factory in the near future.

Since we are short of coaches, why do we export coaches? Not that we have any surplus capacity: nor do we send them for profit. We export these coaches to sister Railways and sister countries to run as messengers of good-will and friendship. ICF's first export was to Thailand in 1967.

Since then repeat orders and fresh orders have been received and so far orders for 359 bogies and 266 coaches have been executed by ICF in time for Thailand, Burma, Taiwan, Zambia, Philippines, Tanzania, Uganda and Vietnam. These coaches by their superior design, riding comfort, insignificant maintenance and low cost have earned the confidence and goodwill of all our customers so far. Almost all developing countries now have confidence and trust in India's ability to manufacture high class coaches meeting customers' specification to international standards!

No wonder ICF is going to celebrate its Silver Jubilee in the coming year and every coach has thus 25 years of expertise to back.

If and when you look at these coaches with an attractive, aesthetic pleasant decor inside, beautiful finish alround and comfortable riding, we are confident they will win your appreciation and heart too!



It was in the year 1835, that a few prominent Citizens of Madras keenly interested in Horticulture founded the Society with a view to promote the growth of gardens and also offer technical assistance to all interested in this field. The society since then has steadily grown to become one of the leading Horticultural bodies in India. In recent years there has been a phenomenal increase in its membership indicative of the confidence and trust, the people in the City have come to repose in it. Simultaneously many introductions of plants and improvements to the Society have been made.

Every year, the Society conducts Flower, Fruit and Vegetable show and its grandeur has been steadily increasing. This year the response from the public and in particular the school children is very encouraging. This is perhaps due to the special display of several exotic flowers and fruits and vegetables. The most outstanding feature this year is the decoration of the stage with all kinds of farm produce like grains, tubers, vegetables, fruits, coconuts, sugarcane and others by the teacher members of our Society from Polambakkam to say the least is the most remarkable and attractive exhibit. So much so it was visited by almost all who came to the show. Similar is the case with

the wonderful collections of Bonsai plants though few, but the most beautiful and attractive. The grandeur of the Double petunias, pleasing and colourful Ageratum, the giant size Holly Hock, attractive Cocks comb, Celosia, the pretty Roses and Asters are a few of the many which add colour to the Show. Another notable exhibition is the hybrid of Brinjal and Tomato along with the giant size capsicum. The exhibition of a large and rare collection of stamps by Mr. S.K. Patham, on various themes specially meant for children is one of the Star attractions. The Giant Lily (Victoria Regia) which is very rare and found only in this Society is in fact the prized possession of the Society has been exhibited with considerable amount of pride. The number of entrants- individual and institutional members to the various competitions conducted during the Show has been steadily rising and this has given added impetus to the Society to organise on still a grander scale in future.

The area under the Banyan tree has been utilised for displaying in full all varieties of shade loving plants. The Banyan tree itself, needless to state, is quite old and huge and can compare favourably with the world famous one at Adyar.

The visitors to the state have not been confined only to our Nationals, but on the otherhand, it has been attracting a large number of foreigners drawn from different countries. These persons come not only to see the exhibits but also collect some for propagation and introductions in their areas.





it's time for a beautiful change

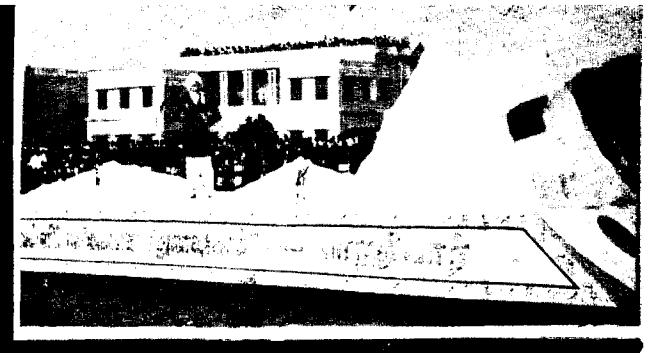
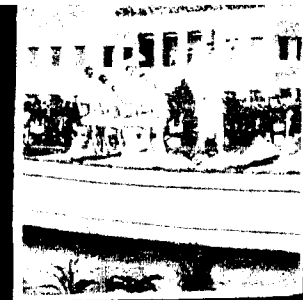
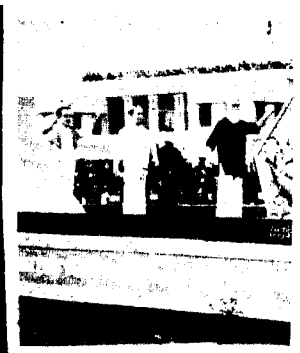
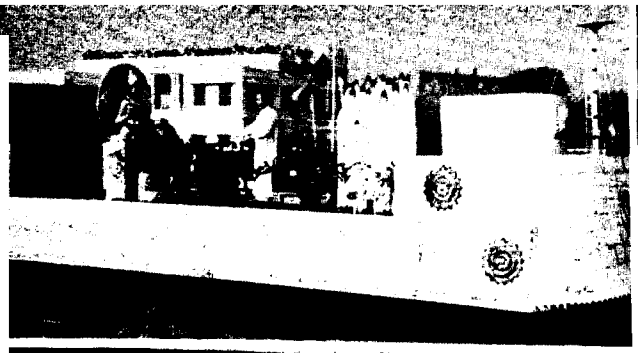
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Quick Easy.




*Tamilnadu N.C.C
Stand out again*



REPUBLIC DAY

26.1.30





Elite BANANA SUCKERS

A 1,200 acre fruit farm at the Kalrayan Hills in Salem district and a 400-acre orchard in the Sirumalai Hills in the Lower Plains would be utilised mainly to produce and supply 'elite' disease free banana suckers to the growers in that region.

Seedlings of hill and sub-tropical fruit trees would be raised in these orchards. Pineapple exclusively for the production of slips (planting material) would also be grown there.

The Tamil Nadu Government has proposed to establish two new giant orchards, in Salem district and in the Lower Palani hills of Madurai district.

There is already a 1,000 acre orchard at Vallathirayankottai in

Pudukkottai district, where choic varieties of mango grafts have been planted in large numbers.

There are also two elite banana gardens for the supply of health banana suckers, in the State. One is at Navlock, North Arcot extending over 100 acres, and the other a 50-acre garden, is at Mudalipatt in Tiruchi district.

The two banana gardens get technical expertise from the banana experimental Stations at Aduthura in Thanjavur district and Virunchi puram in North Arcot district.

DUCK FARM IN CITY PLANNED

The Tamil Nadu Poultry Corporation (TAPCO) proposes to set up a duck farm at Madhavaram Milk Colony in an area of 26 acres. The primary objectives would be popularisation of improved

variety of ducks, and management on scientific lines, supply of ducklings and drakes (male birds) at subsidised cost to the duck farmers.

The parent stock of ducks and equipment for hatching and incubation are likely to be imported under arrangement with the overseas Development Agency of U.K.

The establishment of the farm was contemplated in consultation with a duck expert from U.K. and Director, Central Poultry Breeding Farm, Hessarghatta.

Kaki Campbell the breed chosen for popularisation are good table ducks and capital egg layers averaging 300 a bird per year. They are not difficult to rear as swimming water is not required for laying birds and supply of fresh drinking water is enough.



Tamil Nadu N.C.C Bags award

"The onus for preserving the country's freedom and independence rests on you. I am confident you will do your job well" Thirumathi Gandhi told the cadets of the NCC.

Twelve hundred school children with coloured ribbons in their hands gave a precision display of physical training to the time of music played by the Jat Regimental Centre.

same directorate the best cadet among the junior division girls, Cadets Sargeant Major M.A. Ravi was declared the best cadet among junior division boys.

She was speaking to the assembled cadets at the Prime Minister's rally, an annual feature that marks the conclusion of the NCC's Republic Day camp.

This was followed by the Prime Minister's presentation of awards for the competitions held during the three-week camp. The Inter-Directorate championship banner went to Tamilnadu.

Cadet Under Officer P. K. M. Sirajuddin (Tamilnadu) received a scholarship of Rs. 1200 for being the best cadet of the Air Force Wings.

The proceedings began with a fanfare sounded by 31 buglers. Tmt. Gandhi arrived at the Garrison Parade ground at the Delhi Cantonment. She then inspected a guard of honour commanded by Senior Under Officer I.S. Sahadev of the Jammu and Kashmir Directorate.

Sr. Under Officer, Saranjit Singh received the banner on behalf of the Directorate. Senior under officer Sharda Ramachandran (Tamilnadu) was declared the best cadet among senior division girls and Sergeant Anita Hariharan of the

The 79-member NCC Contingent from Tamilnadu and Pondicherry which won the Inter-Directorate Championship banner for the ninth time were each awarded Rs. 1,000 by the state Government.

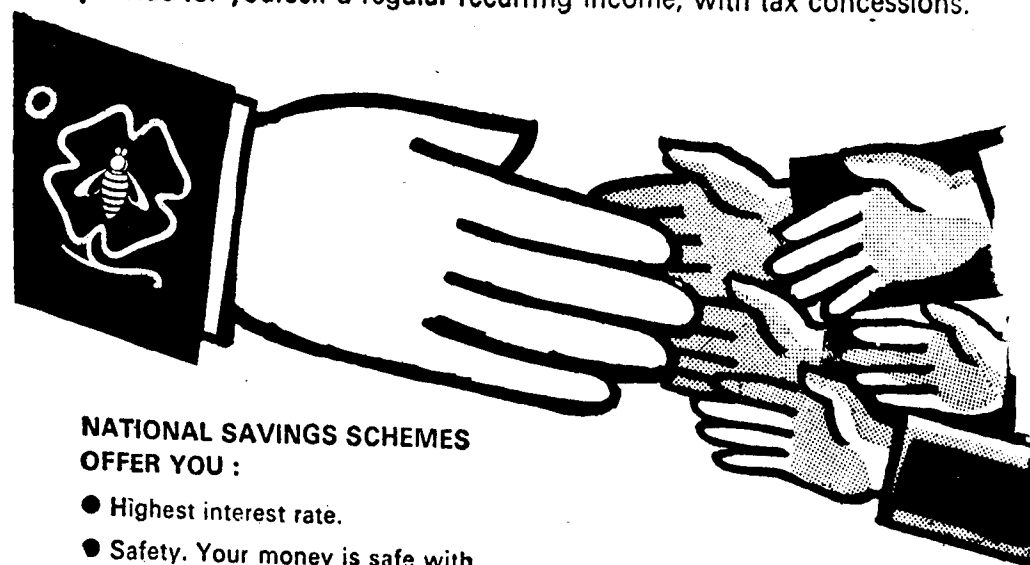


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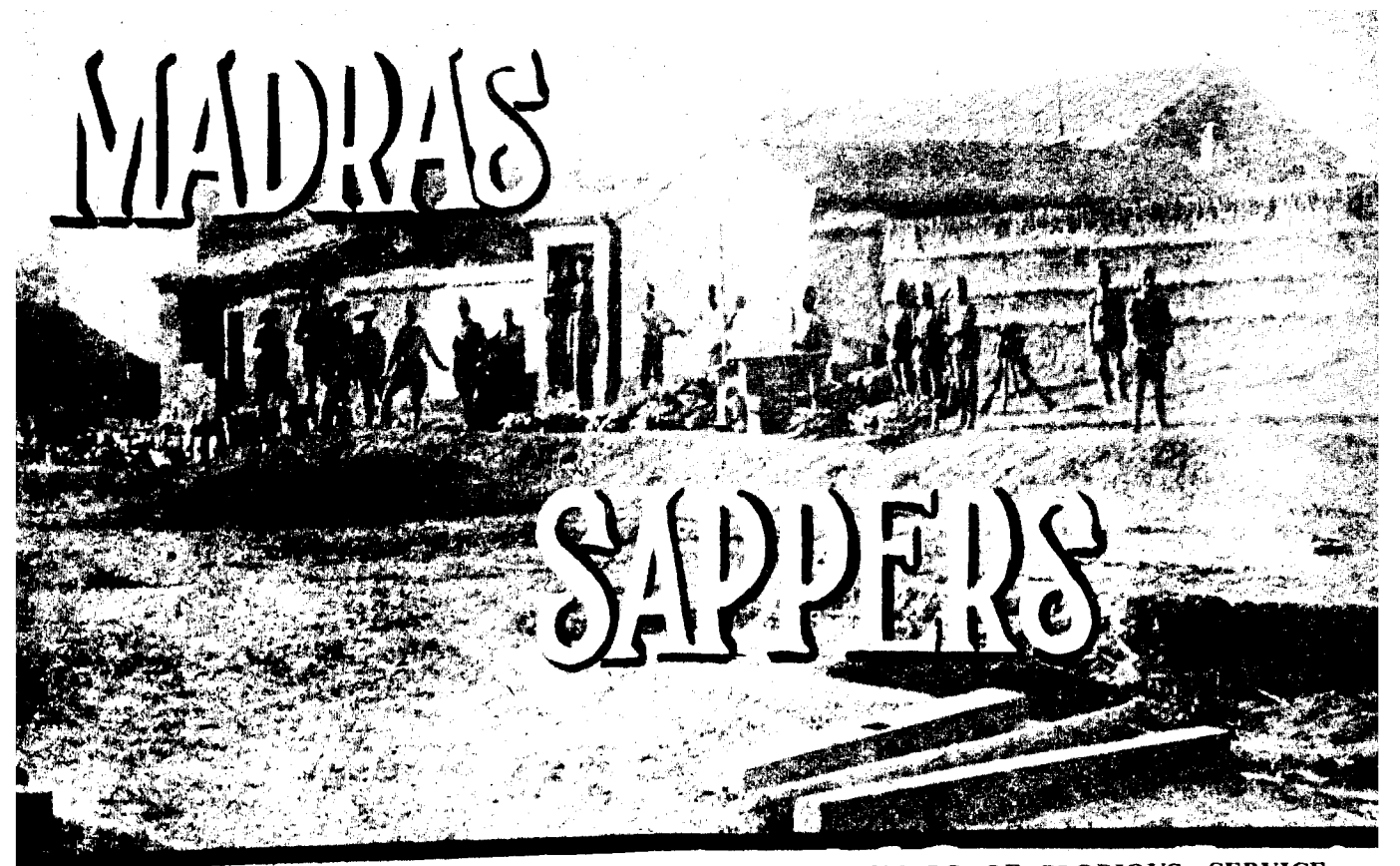


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TWO HUNDRED YEARS OF GLORIOUS SERVICE

Mettupalayam-Coonoor-Ootacamund narrow gauge railway line is one of the few connecting a hill station in the country. People from all parts of the country and abroad travel on this line. But many may not know that in the construction of the line between Coonoor and Ootacamund Madras Sappers were employed. This line was constructed in the year 1907. But the Sappers were involved in the construction of railways as early as 1855 in the Suakin-Barber Railway in Egypt. They were employed in the construction of railways in Abyssinia, Burma

and the North West Frontier Provinces. This is only a fraction of service rendered by them if their two hundred years history is unfolded.

Their history is a saga of glory. It began in the year 1780 when the Madras Engineers Group, popularly known as Madras Sappers was raised in the Dhowlaishwaram in the then Madras Presidency. At that time they were called the Corps of Madras Pioneers. From that day, the Sappers have grown in strength, and won many laurels.

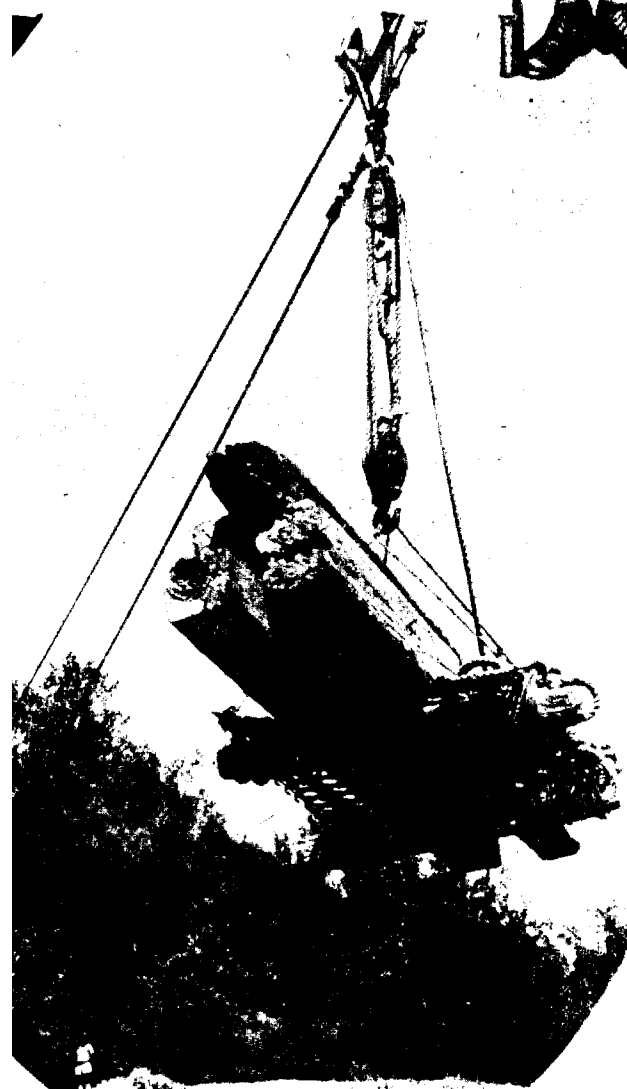
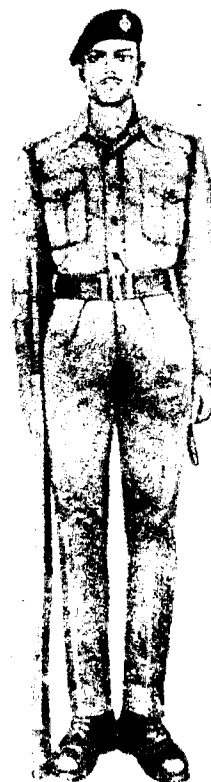
To begin with, as the name indicates, the Madras Engineers Group was the exclusive monopoly of the old Southern States of Madras Hyderabad, Coorg, Travancore and Cochin. After the attainment of independence this restriction was lifted. The Headquarters of the Group was shifted from time to time till 1865 between Dhowlaishwaram, Madras, Bangalore and Mercara. In March 1865, it was permanently established at Bangalore.

The history of Madras Sappers is almost identical with that of the



Indian Army. They have taken part in numerous campaigns both within the country and abroad. Their battle and theatre honours till date number over sixty-five.

The first overseas section in which Madras Sappers took part was in Egypt in the year 1801. In this campaign they won the battle honour EGYPT with the emblem 'Sphinx'. Subsequently they were in action in Eastern, Middle East and European theatres and earned many battle honours. In the year 1843, in the battle of Mianee, they fought very courageously and assisted the Cheshire Regiment. In recognition of this valour, the men of the Cheshire Regiment took off their hats and gave it to the Sappers. The hat remains to this day with the Sappers linking them with the past, with some modifications in the form of DOOPTA. They wear this hat on ceremonial occasions. The Sappers also assisted in quelling



was awarded this medal for act of great heroism and most conspicuous courage in circumstances of extreme danger. In MIGNANO in Italy on 24th February 1944 Subedar Subramaniam who was operating the mine detector flung himself over a live-mine to save his colleagues. In this act though Subedar Subramaniam died of injuries sustained from the blasted mine, one officer and five others were saved.

Madras Sappers also distinguished themselves in many wars after the country attained Independence. The first Mahavir Chakra was won by them in 1947-48 in Kashmir Operations. Civilian Dhobi Ram Chander of the Sappers was awarded maha Vir Chakra for evacuating and saving the life of an officer under heavy enemy fire. The Sappers also received Battle Honours for constructing a tank track across the 10,000 ft. Zojil Pass during the same operations in November 1947. The Sappers were in action in the India China War of 1962. It goes to their credit that they extended and maintained the Cheshul airfield during the winter months of October and November braving severe cold in below freezing point temperature. In 1965 and 1971 Indo-Pak Wars Madras Sappers took active part.

the Boxer Rebellion in China in the year 1900.

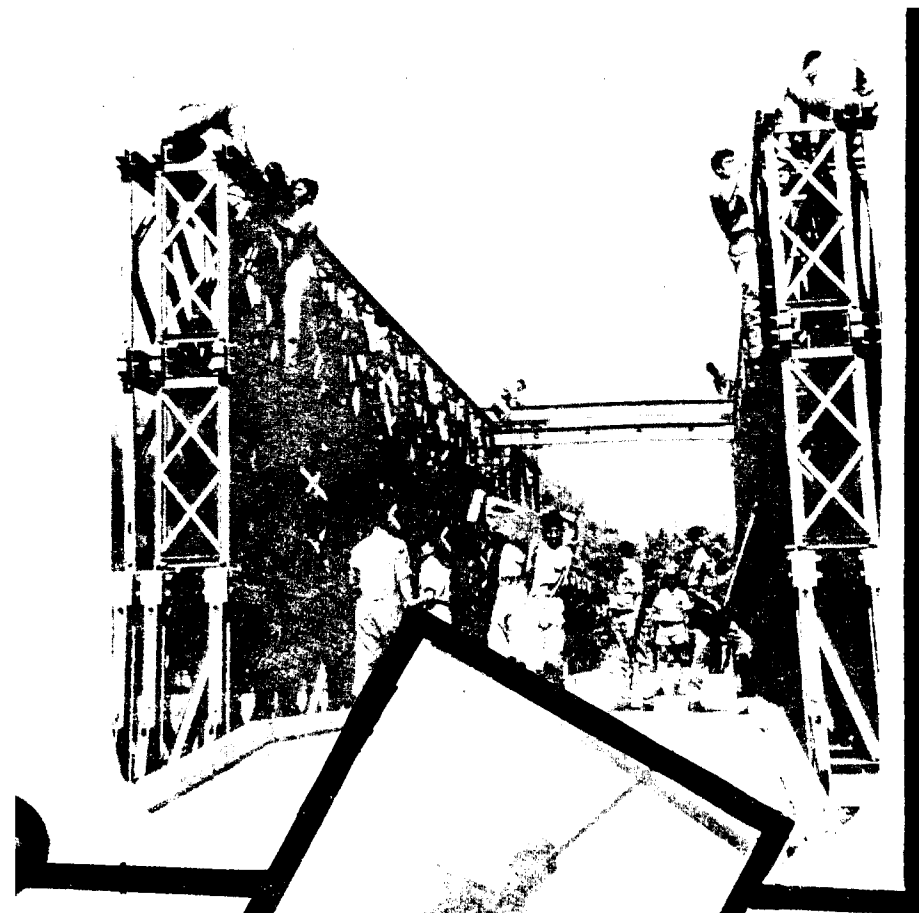
The First World War saw them in action in France, Egypt, Mesopotamia and Persia. In the year 1912 they developed a system called the Bangalore Torpedo to destroy wire entanglements. This system remains

known even to this day in military circles world over. They fought the Second World War in North Africa, Europe, West Asia and Far East.

Madras Sappers were the first to get a 'GEORGE CROSS' in the Indian Army. Subedar Subramaniam

In the 1971 war, they won their second Maha Vir Chakra Major Vijay Rattan Chowdhry was awarded posthumously this award for exemplary devotion to duty. Major Chowdhry was clearing a mine field at Chakra on the Western Front when he was killed by the enemy fire.





The Sappers have also helped the United Nations and its peace keeping operations in Indo-China, Gaza and Congo. Since Independence they have won over hundred gallantry awards including two Maha Vir Chakras and ten Vir Chakras.

Peace has not kept the sappers away. They have helped the civil authorities on various State Governments on a number of occasions in the maintenance of law and order and at the time of natural calamities, like floods, drought, earthquake etc. They have also assisted in maintaining essential services during strikes. In 1935 Quetta earthquake and in 1958 Cyclone floods they rendered commendable assistance. They were also employed in the construction of air field in Nepal in 1956.

Madras Sappers whose motto is 'SARVATRA' ensure that new entrants are given solid training to translate this motto into action. In the Training Centre located at Bangalore, for the first week the new entrants are taught to become trained soldiers. Then they are inducted to field engineering. This broadly covers Watermanship, Pipe Warefare and bridging. They are also taught to become a builder, repairer of equipments, and manufacturers of various components. The training which spreads over two years makes a Madras Sapper a true soldier, a master field engineer, a master builder and master improviser.

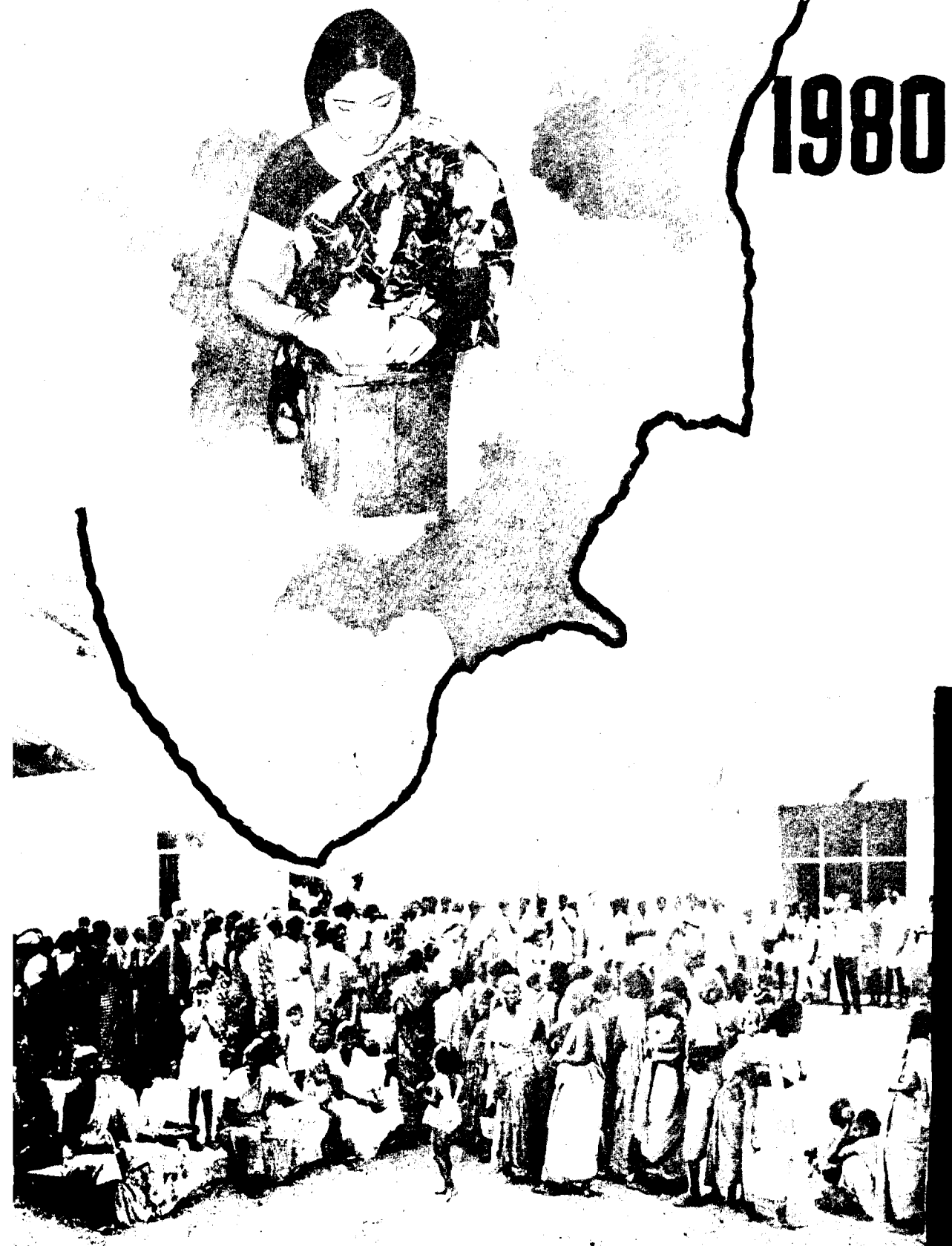
With this training, the Sapper joins his seniors to serve the nation, be it peace or war, true to the motto 'SARVATRA'.



LOK SABHA POLL

Results

1980





1. MADRAS NORTH

	Electorate ..	7,39,196
	Votes Polled ..	5,27,126
	Valid Votes ..	5,18,531
	Invalid Votes ..	8,595
Lakshmanan, G.	DMK ..	2,97,268
Abdul Khader, M.S.	AIADMK ..	1,97,950
Indra Kumari (Tmt).		
Pulavar, R.	Ind. ..	16,378
Ramiah	Ind. ..	681
Govindarajulu alias		
Jagajothi	Ind. ..	778
Selvaraj, T.V.	Ind. ..	236
Seman, Thalapathi,		
Dr. C.V.	Ind. ..	478
Balasubramaniam S.	Ind. ..	200
Manivarma, N.M.	Inc (U) ..	2,065
Mank Chand Nahar, B.	Ind. ..	195
Mariappan, A.S.R.	Janata (S) ..	722
Varada Desigan, O.A.	Ind. ..	884
Warrior, Dr. N.K.	Ind. ..	186
John P.	Ind. ..	375
Zainuddin, Dr. A.K.	Ind. ..	135

2. MADRAS CENTRAL

	Electorate ..	7,26,953
	Votes Polled ..	4,93,806
	Valid Votes ..	4,87,409
	Invalid Votes ..	6,397
Kalanidhi, M.D. Dr. A.	DMK ..	2,90,199
Rajagopalan Thookumeda	Inc. (U) ..	6,172
Shankar Giri, V.	Ind. ..	1,134
Chandran K.	Ind. ..	1,623
Zainuddin, A.K. Dr.	Ind. ..	1,676
Manakchand Nahar	Ind. ..	666

3. MADRAS SOUTH

	Electorate ..	8,11,849
	Votes Polled ..	5,52,796
	Valid Votes ..	5,44,980
	Invalid Votes ..	7,816
Venkataraman, R.	Inc. (I) ..	3,28,836
Raghavan, D.	Ind. ..	666
Sadagopan, A.	Ind. ..	1,930
Sulochana		
Sampath, E.V.K.	AIADMK ..	2,08,474
Seman Dr. C.V.	Ind. ..	1,510
Mohan Nair, Dr. G.	Ind. ..	1,344
VaHiappan, V.	Ind. ..	1,188
Jagannathan, E.	Ind. ..	1,032

4. SRIPERUMBUDUR (S.C.)

	Electorate ..	7,20,766
	Votes Polled ..	4,51,190
	Valid Votes ..	4,41,945
	Invalid Votes ..	9,245
Nagaratnam, T.	DMK ..	2,53,912
Ulaganathan, M.S.	Ind. ..	803
Emperuman, V.	Ind. ..	6,017
Moorthy, M.	Ind. ..	6,317
Varadarajan, T.	Ind. ..	1,347
Jaganathan, S.	AIADMK ..	1,71,135
Jayabarathy, D.	Inc. (U) ..	2,414

5. CHENGALPATTU

	Electorate ..	6,73,832
	Votes Polled ..	4,84,102
	Valid Votes ..	4,73,014
	Invalid Votes ..	11,088
Anbarasu, Era,	Inc. (I) ..	2,83,163
Kandaswamy, P.S.	Ind. ..	8,150
Dharmalinga Mudaliar, C.	Ind. ..	5,097
Mohanaragam, R.	AIADMK ..	1,73,147
Veerappa Gounder,		
V. T. R.	Ind. ..	3,457

6. ARKONAM.

	Electorate ..	7,01,433
	Votes Polled ..	4,68,113
	Valid Votes ..	4,57,858
	Invalid Votes ..	10,255
Velu, A.M.	Inc. (I) ..	2,78,516
Ragunathan, A.M.	AIADMK ..	1,61,155
Kanthappan, A.	Ind. ..	3,255
Krishnan, K.	Ind. ..	7,904
Periasamy Reddiar, A.M.	Ind. ..	4,153
Janakiraman, A.	Janata (S) ..	2,875

7. VELLORE

	Electorate ..	7,00,222
	Votes Polled ..	4,30,318
	Valid Votes ..	4,21,976
	Invalid Votes ..	8,342
Abdul Samad, A.K.A.	Ind. ..	2,32,567
Ganesan, P.S.	Ind. ..	1,983
Kamalkannan, G.	Ind. ..	5,339
Warrant Officer Seshan	Ind. ..	4,120
Dhandayuthapanai, V.	Janata ..	1,53,021
Tamilmani, M.J.	Janata (S) ..	16,007
Loganathan Naidu,		
Chicha	Ind. ..	8,939

8. TIRUPATTUR

	Electorate ..	6,86,891
	Votes Polled ..	4,44,712
	Valid Votes ..	4,36,393
	Invalid Votes ..	8,319
Murugian, S.	DMK ..	2,74,216
Pandurangan, M.	AIADMK ..	1,58,855
Rasheed, A.A.	Ind. ..	3,322

9. WANDIWASH.

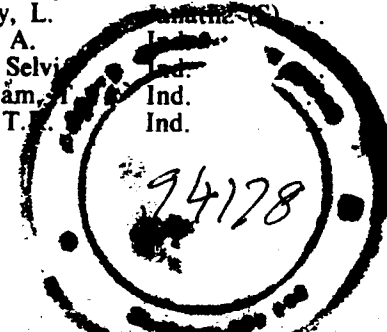
	Electorate ..	7,14,275
	Votes Polled ..	4,68,039
	Valid Votes ..	4,57,876
	Invalid Votes ..	10,163
Pattuswamy, D.	Inc. (I) ..	2,85,549
Sadagopan, A.	Ind. ..	3,384
Natarajan, R.A.	Inc. (U) ..	5,327
Murugesan, K.	Janata (S) ..	5,221
Venugopal Gounder, C.	AIADMK ..	1,58,395

10. TINDIVANAM

	Electorate ..	7,17,265
	Votes Polled ..	4,55,048
	Valid Votes ..	4,42,840
	Invalid Votes ..	1,12,208
Ramaswamy		
Padayatchi, S. S.	Inc. (I) ..	2,90,069
Rajamani, S.	Ind. ..	9,160
Bhuvaragamurthy	Ind. ..	10,440
Munuswamy		
Thirukkuralar, V.	AIADMK ..	1,33,171

11. Cuddalore

	Electorate ..	6,92,583
	Votes Polled ..	4,54,244
	Valid Votes ..	4,42,319
	Invalid Votes ..	11,925
Muthukumaran, R.	Inc. (I) ..	2,62,694
Abdul Wahab, P.	Ind. ..	1,984
Aravinda Bala Pajnor	AIADMK ..	1,54,043
Ramamoorthy, L.	Ind. ..	4,959
Ramalingam, A.	Ind. ..	4,970
Rajalakshmi, Selvi	Ind. ..	6,359
Kanagarathinam	Ind. ..	5,786
Narasimhan, T.	Ind. ..	3,524



**12. CHIDAMBARAM (S.C.)**

Electorate .. 6,94,357
 Votes Polled .. 4,87,049
 Valid Votes .. 4,75,735
 Invalid Votes.. 11,314

Kulandaivelu, Dr. V. DMK .. 3,02,523
 Mahalingam S. CPM .. 1,63,798
 Duraiswamy R.N. Ind. .. 5,984
 Duraivelavan, D. Ind. .. 3,430

13. DHARMAPURI

Electorate .. 6,91,267
 Votes Polled .. 3,84,635
 Valid Votes .. 3,77,330
 Invalid Votes.. 7,305

Arjunan, K. DMK .. 2,09,603
 Ganesan, C. Ind. .. 5,020
 Kandhan Ind. .. 2,525
 Sivaraj, Dr. M.P. Ind. .. 1,468
 Thangaraj Ind. .. 2,188
 Nallasamy K. Janata (S) .. 13,794
 Bhuvarahan, G. Janata .. 1,42,732

14. KRISHNAGIRI

Electorate .. 6,56,225
 Votes Polled .. 3,62,269
 Valid Votes .. 3,53,525
 Invalid Votes.. 8,744

Ramamurthy, K. Inc. (I) .. 2,22,839
 Rajagopal, V. AIADMK .. 1,22,328
 Swaminathan, K.M. Ind. .. 3,552
 Nambiraj Inc. (U) .. 4,806

15. RASIPURAM (S.C.)

Electorate .. 7,34,962
 Votes Polled .. 4,41,588
 Valid Votes .. 4,32,588
 Invalid Votes.. 9,000

Devarajan, B. Inc. (I) .. 2,36,112
 Anbalagan S. AIADMK .. 1,76,240
 Kandaswamy K. Inc. (U) .. 5,018
 Kandaswamy S. Ind. .. 4,903
 Kamaraj Ind. .. 6,106
 Natesan, K. Ind. .. 1,620
 Ramaswamy P. Ind. .. 2,589

16. SALEM

Electorate .. 6,91,389
 Votes Polled .. 4,70,633
 Valid Votes .. 4,60,108
 Invalid Votes.. 10,525

C. Palaniappan DMK .. 2,33,971
 Kangani C.N. Ind. .. 953
 Kannan P. AIADMK .. 2,07,713
 Kandasamy, P. Ind. .. 918
 Gandhinathan, M. Inc. (U) .. 5,381
 Sambalingam, T. Ind. .. 3,327
 Thambi (Sakkarai Gounder) S.C. Ind. .. 440
 Balasubramaniam, P.N. Ind. .. 3,007
 Ramaswamy, M. Ind. .. 1,864
 Vadivelu, B. Ind. .. 1,092
 Vasanthi Muthu Ind. .. 1,442

17. TIRUCHENGODE

Electorate .. 8,89,296
 Votes Polled .. 5,47,419
 Valid Votes .. 5,35,881
 Invalid Votes.. 11,538

Kandaswamy, M. DMK .. 2,76,012
 Kulandaivelu, R.S. AIADMK .. 2,54,797
 Swami R.G. Ind. .. 3,771
 Narayanan, E.M.S. Ind. .. 1,298

18. NILGIRIS

Electorate .. 7,34,760
 Votes Polled .. 4,88,097
 Valid Votes .. 4,78,505
 Invalid Votes.. 9,592

Prabhu, R. Inc. (I) .. 2,73,614
 Adolfas Mayson Ind. .. 918
 Selvaraj, J. Ind. .. 2,461
 Thippiah, T. T. S. Janata .. 1,87,871
 Bojarajan, M. Ind. .. 1,970
 Raju, K.P. Ind. .. 2,846
 Venkatachalam, G.S. Janatha (S) .. 8,827

19. GOBICHETTIPALAYAM

Electorate .. 6,78,003
 Votes Polled .. 4,34,266
 Valid Votes .. 4,22,452
 Invalid Votes.. 11,814

Chinnasamy, C. AIADMK .. 2,10,808
 Shanmugam M.K. Ind. .. 4,326
 Sidha Gounder, E. Ind. .. 10,385
 Thiruvankadam, N.R. Inc. (I) .. 1,96,933

**20. COIMBATORE**

Electorate .. 7,85,260
 Votes Polled .. 5,18,780
 Valid Votes .. 5,10,166
 Invalid Votes.. 8,614

Ram Mohan alias Era Mohan DMK .. 2,76,975
 Parvathy Krishnan, Tmt. CPI .. 2,20,866
 Ramalingam, N. Inc. (U) .. 4,219
 Gopal, A. Ind. .. 1,920
 Natarajan N. Ind. .. 865
 Shanmugam Ind. .. 1,555
 Rajagopal alias L.G.B. Rajan Ind. .. 3,166
 Anwar Hussain T.M.S. Ind. .. 600

21. POLLACHI

Electorate .. 7,05,793
 Votes Polled .. 4,64,211
 Valid Votes .. 4,53,721
 Invalid Votes.. 10,490

Dhandapani, C.T. DMK .. 2,33,261
 Natarajan, K. Ind. .. 2,934
 Natarajan, M. AIADMK .. 2,17,526

22. PALANI

Electorate .. 7,62,601
 Votes Polled .. 4,40,801
 Valid Votes .. 4,31,997
 Invalid Votes.. 8,804

Senapathy Gounder Inc. (I) .. 2,30,733
 Appan Ind. .. 2,107
 Karvendan Ind. .. 21,925
 Lakshmpathy Raju Janatha .. 1,71,165
 John Peter Ind. .. 6,067

23. DINDIGUL

Electorate .. 7,57,333
 Votes Polled .. 4,81,438
 Valid Votes .. 4,72,487
 Invalid Votes.. 8,951

Maya Thevar, K. DMK .. 2,44,669
 Rajan Chellappa AIADMK .. 2,17,923
 Krishnan Janatha (S) .. 2,552
 Sudalai Muthu Pillai, M. Ind. .. 1,227
 Subramanian, K. Ind. .. 1,220
 Muthukrishnan Ind. .. 3,506
 Musthapa, P.M. Ind. .. 1,390

**WAY
OUT****24. MADURAI**

Electorate .. 7,87,564
 Votes Polled .. 5,33,277
 Valid Votes .. 5,26,182
 Invalid Votes.. 7,095
 Tendered Votes 62

Subburaman Inc. (I) .. 2,92,380
 Uthayanan Ind. .. 662
 Karuppiah Chettiar Ind. .. 897
 Kamaraj Ind. .. 1,424
 Krishnan Ind. .. 2,588
 Sundararaj Thevar Ind. .. 5,046
 Balasubramaniam CPM .. 2,23,185

25. PERIAKULAM

Electorate .. 7,35,390
 Votes Polled .. 5,06,263
 Valid Votes .. 4,97,460
 Invalid Votes.. 8,803

Natarajan, Cumbum DMK .. 2,55,204
 Ramasamy AIADMK .. 2,35,322
 Surulivelu Ind. .. 6,934

**26. KARUR**

Electorate .. 7,62,973
 Votes Polled .. 5,14,544
 Valid Votes .. 5,06,788
 Invalid Votes.. 7,756

Dorai Sebastian Inc. (I) .. **2,81,149**
Appavoo, M. Ind. .. 5,250
Elamaran, P.M. Janatha (S) .. 11,215
Kanagaraj, K. AIADMK .. 2,07,015
Marimuthu, V. Ind. .. 2,159

27. TIRUCHIRAPPALLI

Electorate .. 7,22,379
 Votes Polled .. 5,19,651
 Valid Votes .. 5,12,709
 Invalid Votes .. 6,942

Selvaraju B.E.N. DMK .. **2,78,485**
Rathinam, S. Ind. .. 898
Selvanathan M.J. Ind. .. 1,204
Periyannan S Ind. .. 2,004
Ranganarajan, T.K. CPM .. 2,04,886
Lalgudi Rajendran, B.A. Ind. .. 23,133
Vijayarangan, N. Ind. .. 986
Velu, C. Ind. .. 1,113

28. PERAMBALUR (SC)

Electorate .. 6,94,116
 Votes Polled .. 4,90,148
 Valid Votes .. 4,80,175
 Invalid Votes.. 9,973

Mani, K.B.S. Inc. (I) .. **2,82,767**

Ayyakkannu, M. Ind. .. 4,012
Karmeham, K. Ind. .. 3,504
Kumaravel, K. Ind. .. 4,812
Thangaraju, S. AIADMK .. 1,83,595
Vadivel, P. Ind. .. 1,485

29. MAYURAM

Electorate .. 6,76,693
 Votes Polled .. 5,20,978
 Valid Votes .. 5,09,810
 Invalid Votes.. 11,168

Kudanthai Ramalingam Inc. (I) .. **2,91,625**
Govindasamy Janatha .. 1,99,620
Malavai Singaravelan Ind. .. 4,822
Mayuram Sundaresan Janatha (S) .. 13,743

30. NAGAPATTINAM (SC)

Electorate .. 6,84,297
 Votes Polled .. 5,53,290
 Valid Votes .. 5,46,448
 Invalid Votes.. 6,842

Karunanidhi Thazhai, M. DMK .. **2,78,561**
Murugaian, K. CPI .. 2,67,887

31. THANJAVUR

Electorate .. 6,60,633
 Votes Polled .. 5,12,635
 Valid Votes .. 5,06,949
 Invalid Votes.. 5,686

Singaravadiel, S. Inc. (I) .. **2,68,382**



Ganapathy, T.M. Ind. .. 1,498
Subbiah Ind. .. 8,867
Ambalapattu, K. Ind. .. 8,867
Sethumadhavan, A. Inc. (U) .. 4,359
Freedom fighter AIADMK .. 2,23,843
Thangamuthu, K. AIADMK .. 2,23,843

32. PUDUKOTTAI

Electorate .. 7,43,763
 Votes Polled .. 6,00,327
 Valid Votes .. 5,89,914
 Invalid Votes.. 10,413

Swaminathan Inc. (I) .. **2,94,494**
Suriyanarayanan Ind. .. 6,486
Chelliah AIADMK .. 2,78,395
Dhandayuthapani Ind. .. 6,389
Ramanujam Janata (S) .. 4,130

33. SIVAGANGA

Electorate .. 7,25,576
 Votes Polled .. 5,14,079
 Valid Votes .. 5,04,428
 Invalid Votes.. 9,651

Swaminathan, R.V. Inc. (I) .. **3,06,748**
Alagappan, R.M. Ind. .. 2,186
Seenipulavar, N.N.K. Ind. .. 3,073
Subramaniam, M. Ind. .. 17,705
Somasundaram Udayar Ind. .. 2,529
Pandian, D. CPI .. 1,72,187

34. RAMANATHAPURAM

Electorate ..

Valid Votes .. 4,85,422
 Invalid Votes.. 8,910

Sathiyendran, M.S.K. DMK .. **2,75,049**
Appan, G.A. Ind. .. 3,913
Anbalagan P. AIADMK .. 1,90,916
Kalyandas Matadipathi Ind. .. 4,108
Balaraman, Dr. S. Ind. .. 8,300
Mani, A. Ind. .. 1,093
Muthusamy Janata (S) .. 558
Bharathy, N. Ind. .. 1,485
Vadive' Thevar Ind. .. 1,485

35. SIVAKASI

Electorate .. 7,56,211
 Votes Polled .. 5,17,475
 Valid Votes .. 5,09,343
 Invalid Votes.. 8,132

Soundarrajan, N. AIADMK .. **2,34,654**
Appan, G.A. Ind. .. 2,455
Arulraj Devar, S. Ind. .. 1,174
Raju, S.P. Ind. .. 12,422
Kaliappan, K. Ind. .. 806
Shanbagamoorthy, S.P. Inc. (U) .. 2,402
Santharam, V.N. Ind. .. 570
Sooriyanarayanan, R. Ind. .. 1,856





Kagan, S.	Ind.	..	670
Lakshmana			
Subbarayulu, S.	Ind.	..	526
Veeraputhira Nadar, V.S.	Ind.	..	909
Vellaichamy alias Appu Reddiar	Ind.	..	709
Jaganathan, A.	Ind.	..	991
Jayalakshmi, Tmt. V.	Inc. (I)	..	2,28,042
Sriram, R.M.	Ind.	..	21,157

36. TIRUNELVELI

Electorate	..	7,02,603
Votes Polled	..	4,75,645
Valid Votes	..	4,67,531
Invalid Votes	..	8,114

Sivaprakasam, D.S.A.	DMK	..	2,56,626
Arunachalam, V.	AIADMK	..	1,96,664
Subbanaicker	Ind.	..	1,156
Chellasamy, P.	Ind.	..	1,256
Gnanasundaram Pillai, Z.	Ind.	..	840
David Nadar	Ind.	..	857
Pandian	Ind.	..	2,026
Murugesan, S.	Ind.	..	7,614
Ramasamy Reddiar, P.	Ind.	..	492

37. TENKASI (SC)

Electorate	..	6,79,386
Votes Polled	..	4,47,808
Valid Votes	..	4,36,204
Invalid Votes	..	11,604

Arunachalam, M.	Inc. (I)	..	2,72,260
Rajagopalan, S.	Janata	..	1,63,944

38. TIRUCHENDUR

Electorate	..	7,04,399
Votes Polled	..	4,45,880
Valid Votes	..	4,39,140
Invalid Votes	..	6,740

Kosalram, K.T.	Inc. (I)	..	2,27,395
Harihara Iyer, N.	Ind.	..	1,666
Azhagappan, P.	Ind.	..	2,200
Kanagasabai alias Moses	Ind.	..	3,390
Kumari Anandam	Ind.	..	75,020
Shanmugavel, E.	Ind.	..	965
Soundarapandian, N.	Janata	..	1,13,576
Duraishwami Nadar, N.	Ind.	..	822
Pillai	Janata (S)	..	14,106

39. NAGERCOIL

Electorate	..	6,63,322
Votes Polled	..	3,70,796
Valid Votes	..	3,64,605
Invalid Votes	..	6,191

Dennis, N.	Inc. (I)	..	1,87,111
Duraishwami Nadar, N.	Ind.	..	1,859
Poomedai Lakshmanan Pillay, S.	Ind.	..	4,656
Ponraj, S.	Ind.	..	1,536
Wilson, A.	Ind.	..	18,137
Vijayaraghavan, P.	Janata	..	1,48,703
George, A. J.	Ind.	..	2,612



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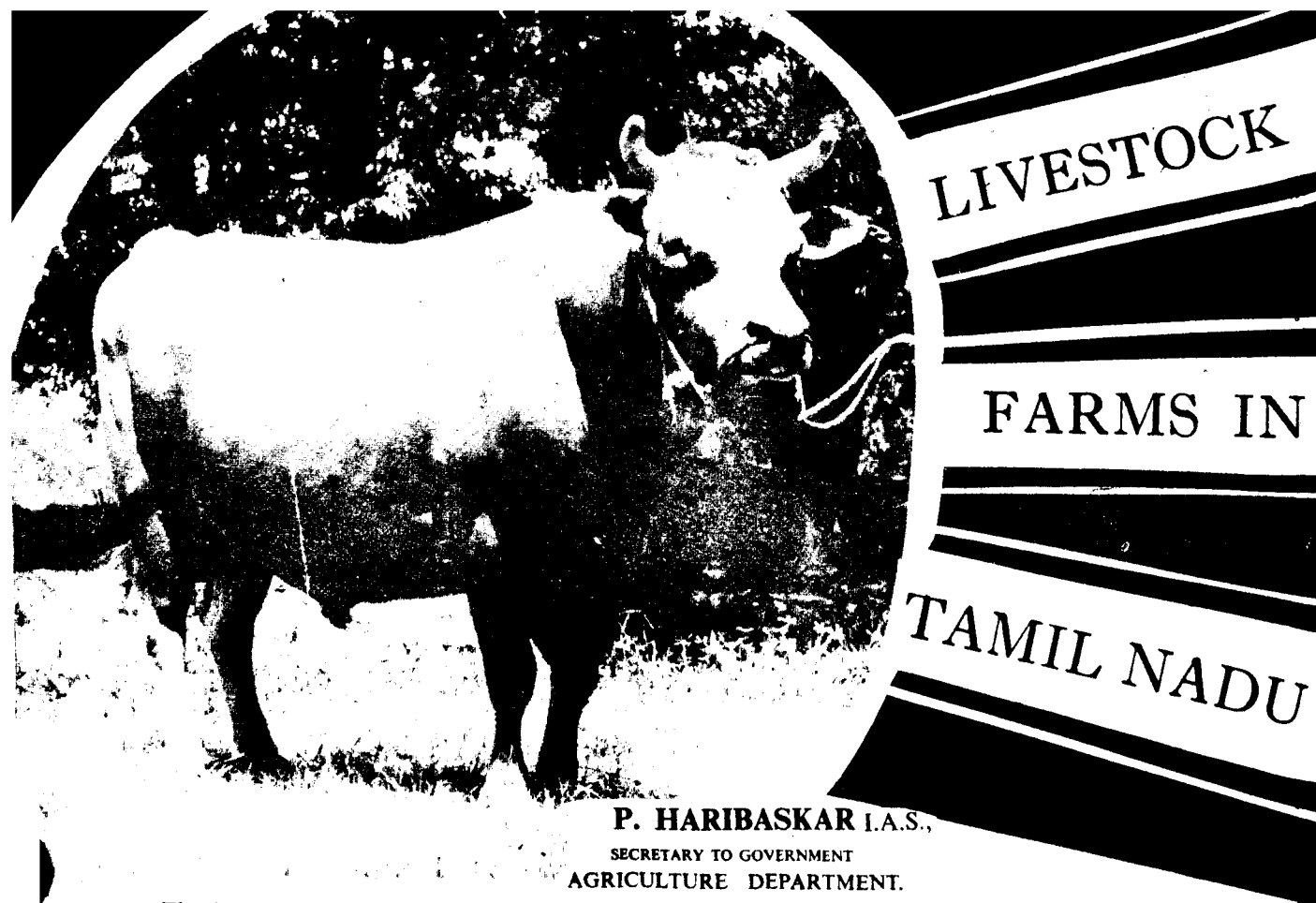


Tamil Arasu

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The Livestock Farms in Tamil Nadu have been playing a pivotal role in the field of Livestock improvement with a special emphasis on cattle and Sheep development as its core. These farms serve as nerve centres for the propagation on modern method of Animal Husbandry package of practices to the breeding, feeding and management aspects. The Livestock farms have been well disbursed all over the State thereby contributing for a healthy growth of Animal Husbandry Departmental activities. Each one of these farms have special significance in so far as breed of choice, location and objectives. It is only in the fitness of things that these farms have been oriented as a catalyst for improving the livestock wealth of the entire state by the provision of the much valued seed material which form the basis for almost all animal husbandry Departmental activities such as providing breeding bulls, Rams and pigs etc., It will be worth while to dwell at length the activities that are being carried on in the different livestock farms in the state.

District Livestock Farm, Hosur.

This is the oldest and one of the best Livestock Farms started

way back in the year 1828 as a Remount Depot by the Military authorities for rearing horses. Subsequently the farm was taken over by the Agriculture Department in the year 1924 and then in 1938 handed over to the Animal Husbandry Department, with the object to maintain the purity of the breed and conduct research on this line. The farm is situated in a picturesque location about 6 kms. from Hosur in Hosur Denkanikotta Road in Dharmapuri District with an added advantage of over 3000, above sea level. The topographical and climatical conditions are impeccable, the farm extending over an area of no less than 1,641.41 acres, the symbolic of nature's gift. The farm puts forth the appearance of having spread with a green carpet, during the mid-summer season with its 930 acres of pastures, and also fulfils the requirements of hay and fodder to the animals.

The main object of the farm can be briefly stated as raising of pure breeds in Sindhi cattle, Mandya, Corriedale cross in sheep, white yorkshire in pigs, and white leghorn in poultry, besides producing high pedigree bulls, rams, boars and cocks for the purpose of grading up of local breeds. This also provides practical training in the

various aspects of Animal Husbandry for the B.V.Sc., students and other Animal Husbandry courses.

The farm serves as a seed centre for grading up of local breeds with pure bred cattle, sheep, pigs and poultry.

The purity of the Sindhi breed is synonymous with the name of the District Livestock Farm, Hosur. The farm not only caters to the need of our State but also other States in the country. The Hosur cattle farm also serves as a model farm in Livestock improvement and fodder production and its excellence is proved by the continuous visitors both from within and outside the country who are captivated by the activities that are carried in the farm.

District Livestock Farm, Chettinad.

The District Livestock Farm, Chettinad is situated 15 kms. from Karaikudi, on the Karaikudi-Pudukottai road in an area 1907.32 acres. The farm was started on 4.6.1957 with the object of accelerating livestock improvement and fodder development in southern districts. The main breeds maintained in this farm are Tharparkar in white cattle and Murrah among Black cattle. Apart from this, Kila-

karisal breed of sheep, Large white yorkshire pigs and W.L.H breed of poultry are also maintained.

This farm serves the needs of the various schemes like K.V.C., I.C.D.P., etc., by supplying pure-bred seed materials for the grading up of local breeds of Livestocks.

District Livestock Farm, Abisheka-patty:

The District Livestock Farm, Abishekapatty is functioning from 15.4.64 and is situated at Abishekapatti in Tirunelveli-Tenkasi Road, 8 Kms. from Tirunelveli. The farm is located in an area of 1969.83 acres.

The main object is to produce cross bred milch animals with exotic breed of Jersey and local breed of Gir, to produce murrah bulls for breeding, and for Fodder Production. The Exotic blood level of the milch animals produced is aimed at 5/8 level.

The farm caters to the needs of Breeding Bulls, boars, poultry, for various panchayat Union Schemes and Departmental schemes like K.V.C., I.C.D.P., etc. and for the fodder Development Schemes. Kilakaraisal breed of sheep is maintained in this farm and rams are distributed to the various schemes.

District Livestock Farm Pudukottai:

This farm was taken over from the erstwhile Pudukottai state in 1951 in order to produce stud Bulls and to increase milk production. Subsequently an area of about 990.57 acres at Machuvadi forest was taken over in the year 1957 and developed The Dairy area is run in Pudukottai Town, as part of

Livestock Farm, where milch cows, cows of advanced pregnancy and suckling calves are maintained.

The main object of the farm is to improve the quality of bulls, Rams, Boars by selective breeding and supply of good perigreed bulls, rams etc., to public and to various panchayat union for intensive cattle, poultry, sheep and piggery development activities in rural areas and to increase milk and egg production to meet the growing demands of the public.

A programme for cross breeding of Sindhi cow with Jersey bulls is implemented in the farm with a view to increase the production of milk.

The surplus milk produced in the dairy is distributed to the public. This particular item of service done by this farm has gained significance and reputation from the public.

Kilakaraisal and Mandya breeds of Sheep are maintained in this farm and produces seeded rams to sell them to the Public through Panchayat Unions and other departmental units. Large white yorkshire breed of big and W.L.H. breed of Poultry are maintained and distributed for Livestock Development to the public.

District Livestock Farm, Orathanad.

The Farm is situated in the Village of Orathanad 22kms. from Thanjavur on Thanjavur-Pudukottai Road in an area of 253.67 acres. The farm was originally the property of chatram department instituted for charity purposes by the Maharaja of Serfoji, and taken over by the Department on 27.1.65.

The main object of this farm is to maintain pure breeds of Murrah and Sindhi and to supply pure bred bulls of the above breeds for the Livestock Developmental programmes in Tamilnadu and to maintain exotic breeds of poultry to infuse ideas in the minds of the public on the aspect of poultry rearing on modern scientific lines.

This farm serves the purpose of a demonstration centre for the activities of AHD., including fodder development aspects to the ryots and Dairy farmers and also imparts training to the Animal Husbandry education and farmers' training course. The requirements of wholesome milk to the public is also partially met.

Livestock Farm. Korukkai.

This farm is situated in Korukkai village of Thiruthurai Poondi Taluk in Thanjavur district, about 8 kms. from Thiruthurapooni and originally the farm was an annexure to the District Livestock Farm, Orathanad.

The main object of the farm is to develop and preserve, by line breeding, the umblachery breed of Cattle which is a drought type of animal useful for Agricultural purposes in Thanjavur District. The farm also aims at evolving a viable economic cow capable of yielding 1500 to 2000 kgs. of milk per lactation suited to agroclimatic conditions of this area through cross breeding using one exotic breed and as well as through triple cross with one Indian Milch breed and one exotic breed.

The farm supplies good quality pure breed umblachery breeding bulls to provide breeders and also



provides good quality fodder slips to farmers in and around the farm.

The Ootacamund Municipal Farm was taken over by the Animal Husbandry Department on 1.9.61 and developed as District Livestock Farm on scientific lines. The farm is situated 5 kms. away from Ootacamund town in Municipal limits on the old Mysore road in an area of 129.38 acres.

The object of the farm is to develop and maintain a base farm for milch cattle development in the Nilgiris District including production of Cross breed cows to upgrade the local cattle of Nilgiris with exotic bulls of Holstein Friesian.

The Farm supplies pure breed and cross breed bulls to the A.J. units and also to provide breeders for breeding purposes. Whole-some milk is made available to the public through Ootacamund Cooperative Milk Society at reasonable rate. Improved pigs are reared and sold both for breeding and for Slaughter to the Panchayat Unions as well as to the public. Fodder Development is also undertaken with improved variety of fodder crops so as to serve as a model farm to the farmers.

Sheep Farm, Sattur is functioning since 1.1.70 and is situated in the river flanks of Arjuna river and Vaipar River 5 Kms. from Sattur on the Sathur-Nenmeni road.

The object of the farm is to study the performance of pure kill-karikal, Ramnad white and vembur breed of sheep to suit local conditions from scientific points of view to augment food production through multiplication of livestock and to determine the economic trials of vembur breed of sheep.

Male stock is distributed to the ryots through Panchayat Union Schemes and development schemes like S.F.D.A., S.A.P., D.P.A.P., etc., to upgrade their flocks.

Sheep Farm Chinnasalem:

Sheep Farm, Chinnasalem is located at the junction of Salem and South Arcot District border on the Salem-Madras Highways, 75Kms. from Salem and 240 Kms. from Madras in an area of 1866.50 acres.

Mecheri breed of sheep is maintained in this farm since this breed is very popular among the sheep breeders and ryots of this tract. Jamunapari breed of Goat is also raised since this is a dual purpose breed for both milk and meat production. Drought breeds of Alambadi and Hallikar of Mysore State were maintained in this farm till 1977 to supply breeding bulls

to the departmental units for breeding purpose.

Pureline W.L.H. and Hybrid poona pearl breeds of Poultry are maintained in this Farm. To encourage pig breeding among the public white york shire pigs are also maintained in this farm.

The farm supplies sheep, pigs and poultry to the Panchayat Union Schemes and other Departmental Schemes like SFDA, SAP, IRDP DPAP.

Fodder production Unit is also established and fodder slips leguminous fodder seeds are being distributed to the Farmers.

Poultry Farm: Kattupakkam:

A Poultry farm at Kattupakkam near Madras City in the G.S.T. Road is situated with a view to increasing the Poultry production in the State and thereby reducing the gap in the availability of the eggs and poultry meat which will help to curb the deficiency of animal protein among the population. This farm is one of the two major chick hatcheries functioning in the state to cater to the needs of the various Poultry Extension Centres situated in the state under the Animal Husbandry Department.

Day old chicks of WLH breed is produced at this farm and distributed to the various centres. This also looks after the needs of various poultry development schemes that are being implemented in the state.

Exotic Cattle Breeding Farm:

Eachenkottai

The exotic cattle breeding farm was established at a Centrally sponsored scheme at Eachenkottai in order to meet the demand for cross bred cattle of the exotic breeds which are required for the genetic improvement of the local cattle and the successful implementation of the various cattle development schemes in our state. The object of the farm is to produce and supply pure breed exotic bulls for cross breeding through Artificial Insemination to demonstrate proper methods of Animal Husbandry and fodder production, to supply pure breed bulls to the progeny testing scheme at Hosur and to strengthen extension work in the District on the basis of the facilities developed at the Farm.

A frozen Semen Bank is being installed in the farm to prepare and distribute frozen Semen to the field in the advent of introduction of Frozen Semen Technology in Artificial insemination.

Government Dairy Farm: Madhavaram:

A portion of the Madhavaram Dairy Farm has been taken over by the Animal Husbandry Department from the Dairy Development Department, and it is functioning since 1-7-79. The Units of milch animals are maintained by the Department and the milk produced is handed over to the Dairy Development Department for distribution. A fodder Farm is also maintained as part of Livestock Farm.

It is only befitting that the Animal Husbandry Department activities are carried on in a well organised and well knit manner based on sound and scientific principles of breeding, feeding and management incorporating the latest advancements and techniques. Thus they serve as multi purpose units of not only as demonstration centres on modern methods of Animal Husbandry but also invariably acting as a source of supply of superior germplasm to the field.

The spectacular progress and achievement in livestock management and development by the Livestock Farms have stood the test of time. This has been brought forth in an efficacious manner by the exhibits of these farms winning universal acclaim and laurels in the District, Regional, State and All India level cattle and Livestock Shows on several occasions.

Realising the useful service rendered by these livestock farms for the improvement of livestock developmental activities, the Government have decided to start one such livestock farm in each District of the Tamil Nadu.

Apart from this, the prestigious drought breed of Tamil Nadu, Kangayam breed, requires all encouragement and the purity of the breed have to be maintained in tact. With this view the Government of Tamil Nadu have decided and establish a farm solely for this purpose in Kangayam. For streamlining the administrative and accounting procedure in the Livestock farms so as to make them function as viable units, the Government have constituted a committee with the Secretary to Government, Agricultural Department as its chairman and Director of Animal Husbandry as Member-Secretary, Deputy Secretary to Government (Planning), Finance Department, Additional Director of Animal Husbandry (Planning and Administration) additional Director of Animal Husbandry (SAP) all the members.



INTENSIVE CATTLE Development

P. DORAISAMI, I.A.S.,

Director of Animal Husbandry

THE main object of the Intensive Cattle Development Project is to enhance milk production and raise the income of farmers in the area. With the idea of improving the quality of cattle and raising their productivity with regard to milk Government of India sanctioned under crash programme Intensive Cattle Development Project schemes in the country during 1964. In Tamil Nadu three such project were functioning in the milk shed areas of Coimbatore, Madras and Madurai which were merged with the regular activities of the departments in 1970.

Considering the importance of achieving a break through in milk production, Intensive Cattle Development Project was revised by the Government of Tamil Nadu in its original pattern with some modifications. Accordingly the following five Intensive Cattle Development Projects are functioning presently.

1. Madurai 7. 1.74
2. Thanjavur 22.10.75
3. Tirunelveli 1.10.75

4. Pudukottai 3. 2.77
5. Trichy 1.11.78

These projects are introduced with specific object to increase the milk production in milk shed areas by planned cross breeding and grading up of indigenous cattle with exotic jersey bulls etc., and grading up of buffaloes with Murrah buffalo bulls.

The object of Intensive Cattle Development Project may be briefly mentioned as follows:—

Objects

1. Cattle Breeding.
2. Augmenting feed and Fodder resources, so as to provide adequate nutrition for the cattle, thereby exploiting their genetic potential and breeding efficiency fully.
3. Creating a sizable pocket of high yielding milch cattle.
4. Infusing confidence among farmers in the Dairy Industry as to its profitability.

5. Castrating the scrub bulls to avoid the degradation of the exotic inheritance infused in indigenous through scientific cross breeding programme.

The area of operation, which is otherwise known as milk shed areas is selected having the breedable age of cows and buffaloes as the main criteria.

Each Intensive Cattle Development Project with 100 Sub-Centres, covers one lakh of breedable cows/she buffaloes and the projects with 50 Sub-Centres cover, 50,000 breedable cows/the buffaloes. Each group of 25 sub-centres are attached to a Regional Artificial Insemination Centre where pedigreed bulls are maintained, semen collected preserved and systematically supplied to the Sub Centres. Under the Intensive Cattle Development Project, jersey breeding bulls are used for cross breeding white cattle and Murrah Buffalo to grade up the local buffaloes population.

ACTIVITIES UNDERTAKEN

As one of the main object

of Intensive Cattle Development Project is to create a sizable pocket of high yielding milk cattle, the following activities are undertaken to achieve the same.

BREEDING

Development of cattle is a long term policy. Although time consuming, it contributes a good lot to the nation's wealth over a period of time. The primary factor involved in augmenting milk production is improving the quality of cows and buffaloes. Any amount of improved practice and increased inputs will not lead to desired results, unless the basic genetical make up of the animals concerned is improved. The Project therefore aims at a net work of Artificial Insemination sub-centres at the rate of one for every 1000 heads of cows and buffaloes of breedable age.

To fulfil this important activity semen of high yielding exotic bulls is used to cross breed the local cattle. Indiscriminate breeding is avoided by elimination of all scrub bulls.

At present in all the Intensive Cattle Development Projects, jersey and Murrah Buffalo bulls are being maintained. It is also proposed to restrict the level of exotic blood in local cows to 62.5% to preserve their disease resistant qualities.

Foods and Fodder Development:

Feeding of cows is an important aspect and accounts for a major portion of maintenance cost. Unless a cow is properly fed on scientific lines, she will neither yield to her full capacity nor will breed regularly. There is no awakening

among the people about the need to raise green and leguminous fodder for cattle. To encourage fodder production, distribution of seeds and slips is being made. In addition upto date information on the scientific methods of raising fodder, plant protection methods etc. are imparted to the ryots. Distribution of seeds, slips etc. at half cost and chaff cutter at subsidised rates is also encouraged.

HEALTH COVER:

Healthy cattle is the pride of the nation. Productivity and fertility is closely related to the health condition of the animals. Animal health cover to the cattle is provided through the sub-centres functioning under Intensive Cattle Development Project. Prevention is better than cure and hence preventive vaccinations against contagious diseases are done. Deworming of young calves is done on an intensive scale to reduce the calf mortality due to verminous infestation. Sterility problems are tackled by the technical officers.

Extension Work:

Extension activities are the backbone in the implementation of any welfare programme. The people should be properly educated on various topics pertaining to improved Animal Husbandry practice. In the Intensive Cattle Development Projects, this is achieved through Cattle shows, Calf rallies and exhibitions arranged regularly. Mass contact programme are also held



in interior villages, very frequently. Training centres are also organised in cattle breeding.

Assessment and evaluation:

The Statistical cell of Project, Collects and compiles data on various aspects of Project work and analyse the data and the results are employed for applying the correctives wherever necessary and for correct appraisal of the achievements.

The surveys and studies relating to

1. Annual Survey of Livestock Census.
2. Annual Survey of Milk Production.
3. Annual income of a farmer

are undertaken from maintenance of cattle during each year per head of cattle prior to establishment of intensive Cattle Development Project and after establishment of the project.

Milk yield survey:

According to the Bench Mark Survey conducted during 77-78, Milk Yield of the cows and buffaloes in the Intensive Cattle Development Project areas were as follows:-

The objective being to raise the level of milk yield, this development programme registers a continuous evaluating machinery to assess objectively at every stage how far the objectives have been achieved in all spheres by initiating surveys and studies. The milk recording survey is a major exercise

Considering the All India average percentage of calving rate for white cattle and black cattle which are 40-45% and 30-35% respectively the actual average of the Intensive Cattle Development Projects in Tamil Nadu are not upto the level. The main reason being that these Intensive Cattle Development Projects are in the early stages of their organisation and operation which will pick up in due course. Besides there are some bottle necks in the feed back of information due to administrative lapses. By taking all out and effective measure it is aimed to achieve the All India figures very shortly.

Calf subsidy

Nobody can deny the fact that to-day's calves are tomorrows cows. Therefore they have to be properly taken care of. Selected heifer calves of both white and black cattle born of Artificial Insemination at the age of 6 months are included in calf subsidy scheme. Under this scheme, calf owners are being paid a subsidy of Rs. 10/- per month. The calves will be continued in the scheme till they attain the age of 3 years or the date of maturity whichever is earlier. An arrear subsidy of Rs. 5 per month, for each of these calves will be paid in aggregate for the period they were under the scheme, when the milch animals calve. This scheme prevents the drifting away of heifer calves with high milk potential from the Intensive Cattle Development Project area thus ensuring their availability for stepping up milk production in the areas and for further development.

The advent of Intensive Cattle Development Projects have heralded a new era in the boosting of milk production, particularly in milk shed areas in and around the cities and towns which holds a good promise for the future.

	Madurai	Tanjore	Pudukottai	Tirunelveli
Average yield per day				
Cows	3.50	1.732	0.780	1.942
Buffaloes	3.62	2.329	1.670	1.463
Day Production:				
Cows	1,01,418	51,887	9,418	91,479
Buffaloes	79,235	31,835	13,138	..



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The Tamil Nadu Poultry Development Corporation Limited (TAPCO) was started on 12-7-1973 with the main aim to implement Poultry Development Programmes in the State ensuring at the same time their economic viability. The Corporation also undertakes marketing of eggs and meat in the state to stabilise the prices and to assure a reasonable income to the farmer.

ACTIVITIES :

The activities of this Corporation are broadly classified as (A) Commercial and (B) Extension.

Feed Mixing Units, Marketing Centres and Hybrid Chick Hatcheries at Arasur (Coimbatore District) and Kappalur (Madurai District) comprise the commercial wing. Extension wing comprises TAPCO Farm and Extension Centres.

POULTRY FEED MIXING UNITS :

- (1) Nandanam (Madras)
- (2) Kottapattu (Trichy)
- (3) Kappalur (Madurai)
- (4) Tiruppur (Coimbatore)

These four Poultry Feed Mixing Units are engaged in the production of balanced poultry feed using industrial and agricultural by-products

and the quality of poultry feed mixed in these units are maintained. TAPCO is having its own Feed Analytical Laboratory at Nandanam (Madras) which is exercising rigid quality control in the purchase of quality feed ingredients and mixed feed. The giant Feed Mixing Plant installed at Feed Mixing Unit, Nandanam is capable of producing 4 M.Ts. of poultry feed per hour. A uniform price for TAPCO's feed has been fixed for the benefit of the poultry farmer.

The feed produced and sold during the last 3 years is furnished hereunder:

Year	Feed Produced (M.T)	Feed Sold (M.T)
1976-77	4,918	4,827
1977-78	5,772	5,402
1978-79	5,650	5,600
1979-80 (From April 79 to Decem-ber '79)	5,385	5,396

MARKETING CENTRES RETAIL OUTLETS

(1) Madras ..	78
(2) Chingleput ..	11
(3) Vellore ..	3
(4) Salem ..	6
(5) Madurai ..	4
(6) Trichy ..	4
(7) Tirunelveli ..	3
(8) Coimbatore	11
TOTAL	120

These Marketing Centres provide necessary inputs to the farmers such as quality chicks, balanced feed, technical expertise and collecting back the produce such as eggs and spent birds for marketing. As a policy, flat procurement rate is adopted which enables to quote flat selling rates for several bulk buyers including Government Institutions as also the Central Government Institutions like Railways and Defence Units. Priority for procurement in Tamil Nadu is given as usual to remove middlemen and the produce are procured from the farmers directly.

MODERNISATION OF EXISTING DRESSING PLANT AT ADAYAR

A project was drawn up to modernise the existing Dressing Plant at Adayar at a cost of Rs.1.76 lakhs with a capacity to dress 250 birds per hour with a view to provide Chicken meat to the consumers more hygienically. The civil works is nearing completion and the plant will be switched on shortly.

SALES PROMOTIONAL ACTIVITIES :

In order to cater to the Market in Madras City to meet growing demand for Poultry Products, a deal has been finalised to purchase 1,58,000 eggs per week from 17 farmers in NELLORE in Andhra Pradesh on contract purchase price of 33 paise per egg throughout the year. By this, the egg selling price is also kept at a constant level to a certain extent. Another contract for purchase of 30,000 eggs per week from Andhra Pradesh State Meat and Poultry Development Corporation Limited, Hyderabad is under negotiation. By this, the turnover in egg will be increased to 97.66 lakhs numbers in a full year in Madras City alone. A beginning has been made for the supply of eggs to other states by supplying eggs to Car Nicobar Islands in the Union Territory of Andhaman and Nicobar Islands. So far, 4 shipments of eggs (1000 Nos. each) have been despatched.

TAPCO'S SNACKATERIA :

TAPCO has opened Canteens at Secretariat and in Madras Corporation premises for serving dishes made out of Poultry Products to the public at reasonable rates.

Encouraged by the Public response for the above said canteens a "SNACKATERIA - DRIVE-IN-RESTAURANT" has been constructed at the junction of Anna Salai and Thiru-vi-ka- Road (Thousand Lights) at cost of Rs. 1.05 lakhs and is to be opened shortly. This will be the first of its kind ever to be put up in Madras by a Public Sector Undertaking.

SELLING OF PORK / PORK PRODUCTS :

Besides selling poultry products, TAPCO sells pork and pork products also. Pork is procured from Animal Husbandry Department and Pork Products are purchased from MAFCO, BOMBAY. The following pork products are sold in the retail outlets of TAPCO: (a) Salami; (b) Cocktail sausages; (c) Hot dogs; (d) Frank Furter; (e) Bacon; (f) Ham; (g) Chicken-n-Ham.

SALES STRATEGY :

To increase turnover in districts also, 11 additional booths and 3 Meat shops are proposed to be opened.

A strategy has been evolved for Madras Marketing Unit with an aim to project its sales as far as possible thro' its own outlets. Under this strategy, it has been proposed to open two new Zonal Offices, 20 "Meet at Meat Shops" and 7 Canteens in thickly populated residential areas in Madras City.

TURNOVER:

The turnover particulars for the last three years are as follows:

YEAR	Sale of Eggs (In Nos) LAKHS	Sale of Chicken (In kgs)
1976-77	137.07	29,144
1977-78	180.30	67,421
1978-79	228.34	1,33,245
1979-80 (4/79 to 11/79)	150.17	1,01,640

REGIONAL OFFICE AT NAMAKKAL AND SERVICE CENTRE AT ERODE :

TAPCO is having a Regional Office at Namakkal and a Service Centre at Erode. These Centres are functioning in order to develop poultry Industry in and around Salem, Periyar and Coimbatore districts by arranging all inputs like chicks, quality poultry feed etc., procuring the produce of the farmers and furnishing technical expertise etc.,

CHICK HATCHERY AT ARASUR (COIMBATORE DISTRICT) :

This hatchery which has been hitherto rearing Poona Pearls parent stocks of egger and broiler has now switched over to rearing of 'Babcock' strain of egger parents and 'COBB' Broiler parents. The first batch of "Babcock" egger chicks was released on 15.8.1979. The first batch of "COBB" Broiler chicks will be released during February '80.

COMMERCIALISATION OF EXISTING CHICK HATCHERY AT KAPPALAR (MADURAI DISTRICT) :

The pureline Hatchery at Kappalar was converted into a Commer-

cial Hatchery and "HH 260" parent stocks (Egger) obtained from Central Poultry Breeding Farm, Hasserghatta (near Bangalore) are housed therein. The project is estimated to cost Rs. 27.08 lakhs. Assets worth to Rs. 5.61 lakhs are already available. So far, Government of Tamilnadu have released a sum of Rs. 7.50 lakhs for investment in the said project. A sum of Rs. 2.50 lakhs is expected from Government during the current year. The balanced cost (Rs. 11.47 lakhs) will be met from institutional finance.

The performance details are as follows for the two hatcheries put together:-

YEAR	No. of chicks Produced (In numbers)
1976-77	1.52 lakhs
1977-78	4.26 lakhs
1978-79	3.88 lakhs
1979-80 (From 4/79 to 12/79)	4.68 lakhs.

TAPCO GROWER FARMS AND EXTENSION CENTRES

1. Chengalpattu.
2. Kottapattu (Trichy)
3. Perundurai (Periyar District)
4. Seshanchavadi (Salem District)
5. T. Kallupatti (Madurai District)

These five centres rear day old chicks and supply to the poultry farmers, Government Institutions and to other schemes like special Animal Husbandry Programmes, Integrated Rural Development Programme, Applied Nutrition Programme and other schemes etc. These centres also provide technical know how and health coverage to the birds reared in and around those centres.

Since these centres are mainly service oriented and dedicate themselves in promoting Poultry Industry in rural areas it could not be run as economically viable units. Due to limited rearing space available, birds could not be reared in large numbers and supplied to the needy though TAPCO birds are preferred

by public. To overcome this and to reduce the loss and make these centres at least self supporting ones, a scheme has been drawn up to construct additional rearing spaces so that their rearing capacity can be increased. The project is estimated to cost Rs. 5 lakhs and Government financial assistance is awaited to push through the scheme.



The achievements in this sphere of activity are listed below:-

Year	No. of Birds sold (In Nos.)
1976-77	1.28 lakhs
1977-78	1.72 lakhs
1978-79	1.07 lakhs
1979-80 (From 4/79 to 12/79)	2.24 lakhs

The one Grower farm at Adayar will be exclusively utilised to keep the birds before slaughtering them. The broilers required by the Madras Marketing centre will be reared at Grower farm and Extension Centre at Chengalpattu and transported to Adayar for dressing.



SCHEMES IMPLEMENTED BY TAPCO:

(i) SPECIAL ANIMAL HUSBANDRY PROGRAMME POULTRY DEVELOPMENT:

This scheme sponsored by the Government of India is implemented by TAPCO in the four Districts viz. North Arcot, Chengalpattu, Salem and Madurai. The scheme sanctioned in 1976-77, envisages the establishment of 6000 poultry units at the rate of 1500 Poultry units in each District. Under the scheme, subsidy is given at 25% to a small farmer and 33 1/3% to a Marginal farmer and Agricultural landless labourer on the total capital cost of the Poultry Unit. The rest of cost has to be raised through institutional finance from Nationalised or Co-operative Banks.

The scheme has been sanctioned initially for a period of 3 years from 1976-77 onwards. It is continued in the current year also by Government of Tamilnadu with the funding pattern of sharing the subsidy expenditure by Government of Tamilnadu, and Government of India on 50 : 50 basis.

So far as many as 1675 farmers have benefitted under the scheme. A sum of Rs. 24.22 lakhs was released towards subsidy. During the current year 2,000 more farmers will be benefitted and a total sum of Rs. 30 lakhs is to be released as subsidy for which Government Orders have been received very recently. Ten Nationalised Banks, Two Co-operative Central Banks and One State Land Development Bank are actively participating under the scheme.

OTHER SCHEMES IN WHICH TAPCO IS PARTICIPATING

(1) INTEGRATED RURAL DEVELOPMENT PROGRAMME

One of the schemes contemplated under "Integrated Rural Development Programme", is to establish poultry units in the area covered by Small Farmers Development Agency. Under this scheme Tapco has undertaken the supply of necessary inputs such as quality chicks, and poultry feed. The scheme is to be implemented by the concerned District Collectors in co-ordination with Small Farmers Development Agency and Block level agencies. Poultry Units under this scheme have been established in Kanya-



kumari District, where it has been implemented with great vigour. In Trichy District, the scheme is gaining momentum.

(2) STATE LAND DEVELOPMENT BANK SCHEME: CHENGALPATTU

Under this scheme, the State Land Development Bank has prepared a project for the setting up of 30 egg units and 10 Broiler Units in and around Sriperumbudur (Chingleput District) and Poona-mallee areas. The egg unit will consist of 250 birds and broiler units 200 birds each.

From TAPCO, chicks and feed are supplied to the said beneficiaries. All other assistance is given by the State Land Development Bank. So far, 3 Broiler Units have been established in Senthamangalam Village in Sriperumbudur.

DUCK PROJECT:

Government of Tamilnadu have entrusted the establishment of Duck Farm near Madras to TAPCO at a total cost of Rs. 16.94 lakhs. The Duck Farm will be located at Madhavaram Milk Colony which has been selected for that purpose. Site for the farm, has been selected and 25.36 acres, in Madhavaram Milk Colony have been requested for transfer to TAPCO from Animal Husbandry Department. The farm will be established as soon as Government of India arrange for the free supply of "Khaki Campbell" ducklings and sophisticated hatchery equipments under arrangements with Overseas Development Agency of United Kingdom.

BELT AREA DEVELOPMENT PROGRAMME:

The main object of this project is to rehabilitate the landless labourer and marginal farmers and strengthen them economically so that their migration into city in search of job is prevented. This will cover the suburban area of 80 Kilometers of Madras City. A scheme has been drawn up to establish 1000 Poultry Units at a total cost of Rs. 23.04 lakhs and the proposals are under the active consideration of the Government.

ASSISTANCE TO GOVERNMENT OF SAUDI ARABIA TO IMPROVE THE EXISTING STATUS OF POULTRY FARMING IN THAT COUNTRY:

Government of India, at the instance of the Government of Saudi Arabia have proposed TAPCO to assist that country to improve their existing status in Poultry Farming. Government of Tamilnadu, have also agreed for this and communicated this to Government of India. Government of India has already been addressed to inform the nature and scope of work involved in the assignment and on receipt of particulars further action will be initiated.

IMPORTANT ACHIEVEMENTS

1. Government of Tamilnadu with effect from April '79 have exempted levying of S.T., S.C. on the live birds sales as a measure of reducing additional burden on the farmers and to encourage poultry farming in Tamilnadu.
2. Tamilnadu Electricity Board has agreed to charge the power used for poultry farming under Lower Tariff IV (a) which will work at to be 50% less than the normal electric charges.
3. The insurance coverage has been introduced for Special Animal Husbandry Programme Scheme.
4. TAPCO Feed is I.S.I. marked.

FINANCIAL

Subject to provision for taxation and other charges and reserves, it is expected that the current year profit (tentative) will be Rs. 3.75 lakhs as against the profit of Rs. 2 lakhs expected for the year 1978-79.



M. RAGUPATHY, I.A.S.,

Commissioner for Milk Production and Dairy Development and Managing Director, The Tamilnadu Dairy Development Corporation Limited.

Milk is very important in the Human dietary. Tamil Nadu possesses a total of 105.54 lakhs of White Cattle and 29.58 Lakhs of Black Cattle, of which 29,21,569 and 14,59,436 are reported to be breedable Cows and Buffaloes respectively, as per the Cattle Census conducted by the Department of Statistics in 1977. There has been an increased trend in milk production of Cows and Buffaloes as per the sample survey conducted during 1977 and the per capita availability of Milk is reported to have gone up from 63 Grams in 1974 to 104 Grams in 1977. In spite of the increase in the per capita of availability of milk in Tamil Nadu, the ideal requirement

of milk advocated by Nutrition experts of Indian Council of Medical Research is 280 Gms. per individual per day and we have to go a long way to reach this target. This could be achieved by the TNDDC and the Department of Animal Husbandry in Tamil Nadu only by adopting improved methods of breeding, and Animal Husbandry practices.

Livestock Development is no more a primitive profession of the Rural poor or the backward section of the Community. Cattle Development has taken deep roots in Tamil Nadu. Tamil Nadu being a fairly extensive State, with different agro-climatic conditions, various Cattle Development Programmes adaptable to the local conditions have been taken up by the TNDDC as well as the State Department of Animal Husbandry and a great leap forward has been struck in the establishment of the basic infrastructure requirements in accelerating the productivity of the milch cattle. TNDDC also has played a key role in this regard.

TNDDC was set up as a Limited Company on 4.5.1972 and commenced its operation from 1.7.1972. The Corporation procures raw—milk from the farmers through the Producers. Cooperative Societies from ten Districts in the State and after standardisation of Fat percentage, the Corporation markets fluid milk and milk products in Madras and Madurai Cities and a few other urban centres in Tamil Nadu. In 1972-73 TNDDC procured 125.50 lakhs lts. of milk from the farmers and in 1978-79 it had procured 784.38 lakh lts of milk. TNDDC was marketing 221.16 lakh lts. of milk in 1972-73 and in 1978-79 it had marketed 1,037.84 lakh lts. of milk. The growth rate in procurement of milk and marketing of milk has been phenomenal. The daily average of liquid milk marketed in 1972-73 was 81,000 lts. per day and this has gone up to 2,84,000 lts. per day in 1978-79 and projections for 1980-81



is that it will go upto 3.48 lakh lts. per day. TNDDC was directly benefitting about 4,239 farmers as on 1.7.73 when it started on its operation and as on 1.7.1979 the number of farmers who were benefitted by the TNDDC was approximately 3 lakhs. Again analysing the performance of the TNDDC from the point of view of income to the farmers, the salient feature to be noticed is that the amount paid to the farmers by TNDDC was Rs. 130.60 lakhs in 1972-73, and this has gone upto nearly 1,365.11 lakhs in 1978-79 and it is hoped that in 1980-81 the payment to the farmers by TNDDC would be of the order of about Rs. 2,056 lakhs. The above analysis shows the direct impact of the operation of the TNDDC on the income of the farmers of Tamil Nadu. TNDDC has also been responsible for the organisation of about 2000 numbers of "ANAND PATTERN" of Coop. Producers' Societies as on 30.1.1978 and it is forming more number of Coop. Producers' Societies at the Village level, and also catalysing the efficient functioning of District level Milk Producers' Unions in Tamil Nadu. The success of the TNDDC depend also to a large extent on the financial assistance received from the Government of India under "Operation Flood-I" programme.

Regarding the programme of Cattle Development, the TNDDC believes in direct marketing of various Technical Inputs like Artificial Insemination, Veterinary Health coverage, preventive vaccination work etc. As on 1.7.1978 the TNDDC was operating 154 Veterinary Routes, 36 Mobile Veterinary Units and 10 Emergency Veterinary Units. The number of Artificial Insemination done to help production of cross-bred Cattle, was 2,28,735 as on 1.7.1978 and the TNDDC has been successfully following up and verifying the success of their Artificial Insemination Programme in the field. Recently, the TNDDC has launched on a massive programme of Artificial Insemination, through Frozen Semen Technology. Thus it may be seen that the TNDDC has played a vital role in development of Dairying in important milch cattle tracts of Tamil Nadu, and thereby has benefitted directly many Small/Marginal Farmers and Agricultural Labourers

In keeping with the National objectives of development of Rural areas and provision of employment opportunities to the rural poor, the TNDDC is actively assisting the Farmers directly by various developmental activities like massive cross breeding programme with Frozen Semen, formation of large number of Producers' Coop. Societies at the Village level etc. to ensure that the interests of the Producers of milk are safeguarded. Those cattle development activities contribute directly to improve the productivity of the animals and thereby improve the living conditions of the rural masses. In the field of improved technology relating to Cattle Development in Rural areas, a great leap forward has been initiated by the TNDDC by introducing Frozen Semen for Artificial Insemination in the various districts and with the assistance of IDC (Indian Dairy Corporation) a Frozen Semen Bank has been set up at Ooty in the Nucleus Jersey Farm complex and with the facilities like five liquid Nitrogen Plants to be located in different focal points in Tamil Nadu, a massive network of cross breeding programme, with an emphasis on follow up action and the verification of the success of the programme is taking place. Recently the TNDDC has been contemplating an ambitious programme of covering all the Districts in Tamil Nadu by organising Producers' Coop. Societies of "ANAND PATTERN" so that by 1984, 12 lakhs of milch cattle of breedable age, owned by the Members of about 4,500 Producers' Coop. Societies in Tamil Nadu could be covered so that Milk Production can be expected to go up to about 35 lakhs lts. per day, increasing the per capita availability to about 130 Grams per day. The above approach is a very ambitious approach and tireless and unceasing efforts in Cattle Development creating Farmers' Organisations, heavy capital investments in putting up milk processing facilities, etc. are required. By such an ambitious programme, the Corporation also hopes to reverse the trend of flow of milk to the main Metropolis of Madras and Madurai and to ensure that all Urban and Semi-urban centres of Tamil Nadu are also benefitted by getting good quality milk. The TNDDC is doing its best to achieve the above objectives and it is hoped that the best is yet to be.



THE ROLE OF MODERN SURGICAL TECHNIQUES IN LIVESTOCK DEVELOPMENT

Dr. E. I. RAJENDRAN, M.V.Sc.,
Professor of Surgery & Rrs.,
Madras Veterinary College.

THE MADRAS VETERINARY COLLEGE

The Madras Veterinary College was started in the year 1903, when it offered a three year Diploma Course G.M.V.C. (Graduate of the Madras Veterinary College.) The Institution was affiliated to the Madras University in 1936. It was the first Veterinary College in India to offer a B.V.Sc. Degree in Veterinary Science and Animal Husbandry.

On the recommendations of the first Indo-American Team on the Agricultural Research Education, the Madras Veterinary College was upgraded as a "Regional Centre for Post-Graduate Education & Research" in the year 1958. The Master of Veterinary Science (M.V.Sc. Degree Programme) in various departments was a phased one and by 1962, 16 Departments had started the course. Since 1974, the College stands affiliated to the Tamil Nadu Agricultural University and from December 1976, the Madras Veterinary College is a constituent Unit of the Tamil Nadu Agricultural University.

Apart from imparting education in B.V.Sc. Degree Course, the Madras Veterinary College offers M.V.Sc. Degree Course in 16 Department and Post-Graduate Degree (Ph.D.) in the following 9 Departments—

1. Animal Genetics.
2. Animal Nutrition.
3. Anatomy.
4. Microbiology & Bio-Chemistry.
5. Dairy Science.
6. Obstetrics & Gynaecology.
7. Parasitology.
8. Poultry Science.
9. Pharmacology.

Currently Trimester pattern of education has been introduced for the Doctorate Programme also.

From 1.9.79, two new Departments viz. Department of Clinics and Department of Animal Disease Investigation & Control have been started.

At present there are 24 departments in the Madras Veterinary College.

A well equipped Hospital is also attached in the Madras Veterinary College which functions throughout day and night catering to the public.

Apart from imparting education in Veterinary and Animal Husbandry Sciences, research work is also undertaken in all the Departments of the College. In addition, there are 4 farms under the Director of Research (Animal Sciences) which are helping the P.G. Students and staff to undertake research programmes of benefit.

The graduates of this institution are spread all over India and abroad and they have been well equipped with modern knowledge to face any problem on Veterinary and Animal Husbandry aspects.

A decade back surgery was confined to major hospitals and the impact of modern research and technique were not felt in the field, where major part of our livestock are located. Due to the perfection of techniques and adoption of improved teaching methods, the present day Veterinary Surgeons are able to perform useful surgery in the field. A few operations that are perfected at this College are mentioned below:

RUMENOTOMY:

The operation was not thought of ten years back by the field Veterinarians. It is performed for removing poisonous materials from the rumen when they accidentally consume poisonous stuff, in case of foreign bodies as metallic and plastic objects in the stomach. Studies indicate 75% of the Cattle have some foreign body in the stomach which can cause harm. With the latest surgical technique, a cow can be operated in the standing position without any restraint using para vertebral anaesthesia. Shock or any other complication is not encountered and the administration is safe. The operation could be completed in an hour and the results are good and many surgeons perform this operation in remote villages.

URETHROTOMY:

A common condition seen in male cattle in obstruction of the urinary passage with stones formed in the bladder in young and old animals. If the condition is not relieved in time mortality can occur. No proper surgical technique was available a decade back. Research at this institution resulted in a two stage operation by which a polyethylene tube is introduced into the bladder by urethrotomy to be followed by a second operation to remove the stone. The technique is made simple and it is followed in the field by enterprising Veterinarians.

ORTHOPEDICS:

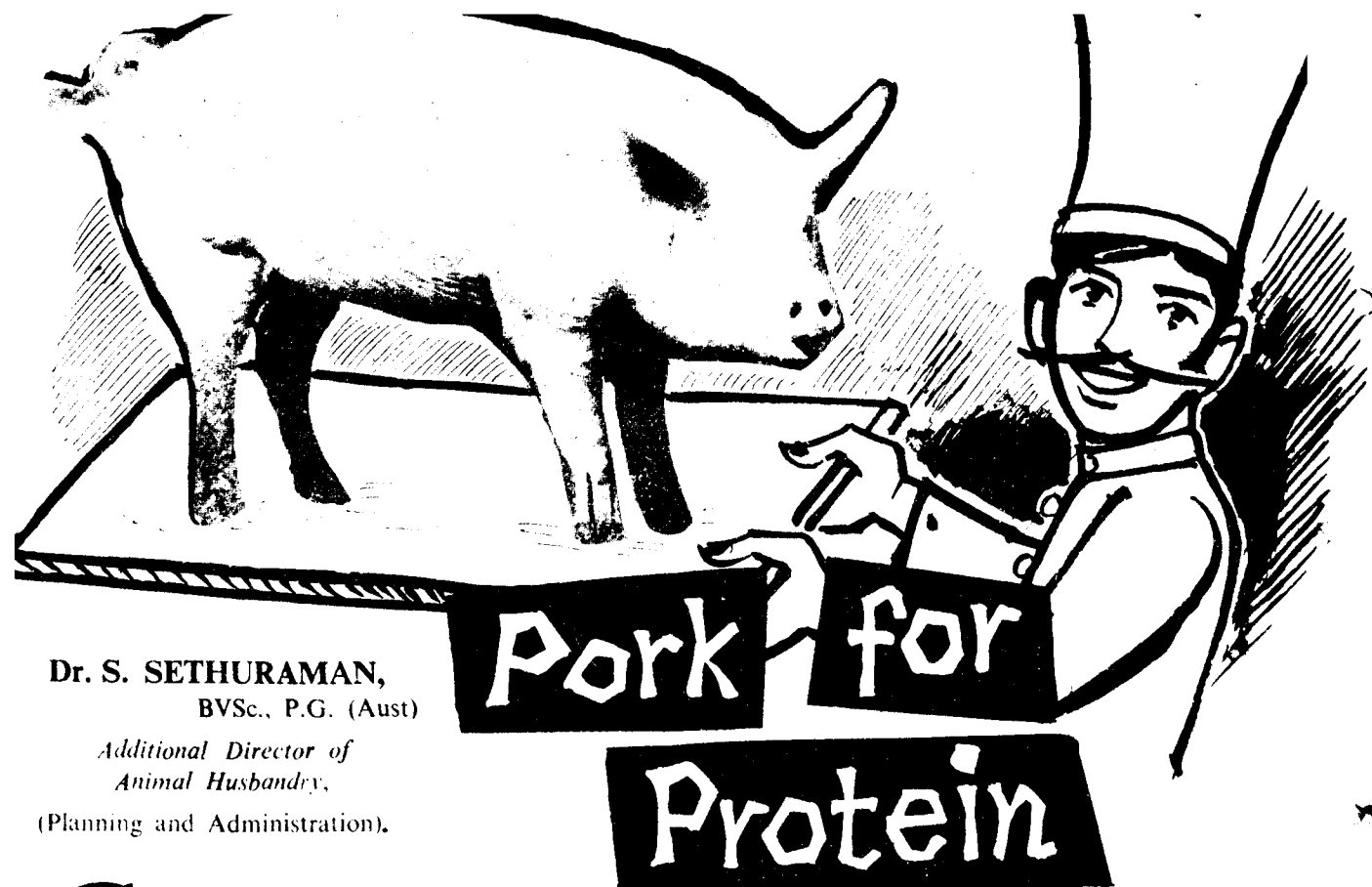
Fracture of long bones is a common occurrence in livestock. Proper approach and techniques were lacking some years back. At present the reduction of any fracture by suitable anaesthesia, better immobilisation techniques including fixation by open method is taught to students who practice it in the field. An added addition to this branch is Patellar Demotomy a simple operative technique perfected to relieve the chronic displacement of patella, a very common condition in village animals.

DEHORNING:

The present day cross bred animals have weak horns. If they are allowed to develop they get injured at some stage of their life or the horns cause injury to neighbouring animals. The technique of nipping these horns in the bud by painless method with electrocautery is perfected and practiced in the field with good results.

VASECTOMY:

Heat detection is a problem in cross bred cows and buffaloes. Proper timing of insemination is essential for successful conception. Detection of heat and inducement to heat can better be achieved by a bull which has a proper sex desire. With this aim a teasing bull is made by Vasectomy operation. The technique is simplified so that any one in the field could do it.



Dr. S. SETHURAMAN,
BVSc., P.G. (Aust)
Additional Director of
Animal Husbandry,
(Planning and Administration).

CONSIDERING the number of habitual meat eaters in our country. Pork eaters are very much less and really this is a discouraging factor for the Piggery Development. The main reason is the religious taboo in pork eating. It is a well known fact that thousands of infants, children and pregnant ladies are deprived of the valuable nutritive diet which they have to consume for building up good health. Malnutrition is in abundant and the Government is considering all the aspects to provide good nutritive food to this vulnerable group at a cheaper rate. One main ingredient in any diet is the protein, either animal or vegetable protein. In foreign countries, such protein deficiency conditions are seldom seen since their staple food is meat and meat products. Animal protein can be produced and made available to weaker sections more easily than vegetable protein. One of the rich source of animal protein is pork and its products. The barrier in consuming pork by the people of Tamil Nadu is being slowly removed by educating them about the usefulness of pork by extension methods. Still much has to be done in this aspect.

Whenever we talk of pork to the people, they immediately think

of our black country pigs which live on garbage and other unwanted materials.

Piggery Development has been taken up by our Government on a large scale during the last decade and we have made some achievements if not in a great deal. The rural people who rear country pigs have been educated to rear their pigs under hygienic condition with the available shelter for them. Once the habitual meat eaters are convinced that pigs can be reared like other Livestock, the false opinion prevailing among them can be got rid off.

Under Piggery Development, introduction of exotic breed of pigs have been taken up by the Tamil Nadu Government. The main reasons for rejecting the pork of the country pigs as already stated, is the environment under which they are reared. As such the rearing of pigs in Tamil Nadu remains in the hands of socially backward and economically weaker section of the society because of the very meagre resources and intense backwardness. Slowly others have taken up this section of Livestock Development and started realising the profitability and usefulness of the same.

The introduction of Exotic boars of pigs is done mainly to increase the production of pork and also to get rid off the unaesthetic colour of the country pigs. Under this scheme, in the block, exotic boars were distributed under subsidised cost. When this had gained momentum, small units comprising of 4 gilts and one Boar were distributed under Piggery Development Schemes.

Production of exotic breed of pigs in large numbers for supply to the public for rearing and multiplication is an important item in the development of piggery.

During the year 1974-75 Tamil Nadu Government had sanctioned one Piggery Development Centre and it was established at District Livestock Farm, Ootacamund with a foundation stock of 23 animals.

Besides the District Livestock Farm, Ootacamund, Piggery sections started during earlier years are functioning in the District Livestock Farm, Hosur, Orathanad, Chertinad, Pudukottai, Abishekapatti, Sheep Farm, Chinnasalem, Sattur and Veterinary Hospital, Saidapet.

The Common Exotic breed reared is large white yorkshire.



The breed has got a good body length, early maturity, greater litter size and above all the optimum back fat thickness.

With a view to popularise pork eating among the rural mass the Animal Husbandry Department encouraged setting up of 'Pork Clubs' during early seventies. Even though this was not a success, it has created an awareness about the nutritive value of the pork and its products.

Of late people have started realising the nutritive value, the taste and comparatively cheaper cost of pork than that of mutton and chicken.

The nutritive value was increased no doubt mainly due to the cross breeding programmes envisaged by the Animal Husbandry Department. The people get to know about the taste due to the demonstration done at the places like Tradefairs, and other exhibitions and pork clubs, where the tasty, cooking methods were demonstrated by which the pork used to sell as hot cakes.

The alarming increase in the cost of mutton and chicken have obviously made the price of pork as a comparatively cheaper one for the quantity they get.

When we consider the serious

problem of protein hunger and malnutrition vis a viz the cost of mutton and chicken there is a great need for developing pork industry in our country. Pigs do play a vital role in this respect because of their high rate of prolificacy, shorter generation intervals, fast growth rate and greater feed conversion efficiency. When put on proper footing the pork industry in India could solve the problem of malnutrition at a comparatively lesser cost to a greater extent and also give a profitable subsidiary income to the rural folk.

There are of course several constraints in piggery Development which cannot be lost sight of. They are:

1. Though pork is considered as staple food, pork eating is considered as a taboo.
2. Pigs compete with human beings in consuming cereals
3. Pig rearing is at present in the hands of people who are considered socially low.
4. Desi Pigs are allowed to feed on filth etc. and can easily transmit verminous infestation among human beings.

All the above problems can be tackled by educating the masses and providing alternative substitute feeds like the meat meal, bone meal

etc. from carease utilisation plants. But the most essential perquisite while organising piggery Development programmes is the establishment of suitable retail outlets and establishing pork dressings and processing plants in suitable places in the State.

This aspect is fulfilled to some extent amongst the city dwellers by opening a retail meat shop at Veterinary Hospital, Saidapet.

The Piggery Development work has been taken up on a large scale among the tribal population of the State since they are habitually rearing pigs. Under integrated tribal development programme the following number of units have been distributed.

1976-77	52 Units	0.11 lakhs
1977-78	105 Units	0.29 lakhs
1978-79	82 Units	0.21 lakhs

Under the Block integrated Rural Development Programme Piggery Development has been taken up and is being implemented in the state.

Hence, for overcoming the social taboo and to provide wholesome meat at a comparatively low cost and at the same time to create more employment potential for the economically weaker section, the Government have envisaged piggery development on a large scale.



The domesticated Water-buffalo is the key animal in the cereal dominated economy of Indian Peninsula. It forms a major source of milk and butter fat in India. With the increase in human population and consequent rise in the demand of cereals, milk, butter and meat, there has been a rapid expansion of buffalo population. According to F.A.O. production year book 1971, the total buffalo population of the world is 124.54 millions of which nearly 56% of the population (70 millions) are

of our country. Zaffarabadi breed is seen in Gujarat State. In Surat district in Gujarat and in Maharashtra State, Surati breed is seen. In Baroda and Mahsana Districts, Mahsana breed is seen. Murrah breed is found in Western Uttar Pradesh, Delhi, Haryana and Punjab of the northern region of our country. In Deccan tract of Nagpur region of Maharashtra and adjoining areas of Andhra Pradesh and Madhya Pradesh, Nagpuri or Ellichpuri breed is found. In Nilgiri Hills an indigenous Toda breed of buffalo is seen.

the horns are massive and in females they are lighter and long. Body colour is dark ashy or almost black. The lower extremities are generally dirty white upto hock.

Environment:—

The distribution of buffaloes in our country depends upon the environment and the environment includes the elements of climate, land forms and soil which are interdependent on each other and they influence individually and collectively on its life and beha-



located in Indian Peninsula. In India its population is 54.2 millions which forms about 44% of the world population. India is the largest breeding country in the world and for every one buffalo there are .5 cattle in our country. In Tamil Nadu the buffalo population is 2.85 millions and they are kept chiefly for milk production.

Breeds:

Many breeds of buffaloes are seen distributed in different parts

Distribution:

In Tamil Nadu, Murrah buffaloes are reared and maintained in several farms at Orathanadu, Pudukottai, Chettinadu, Tirunelveli, Hosur, Kattupakkam and Coimbatore. Indian buffalo is a massive animal with a large body relatively small ears and some what tubular in form with only a few hairs on their margin with large number in the interior. It has a characteristic shape of horns separated by a wider space on the forehead. In bulls,

vioural pattern. The environmental temperature and rain fall in our country vary from region to region. In places where the rainfall ranges between 150 cm. and 200 cm. per annum (hot-humid areas) swamp buffaloes are distributed and they are mainly draft type of buffaloes

Dr. S. VENKATAYAN,

M.V.Sc.

Professor of Physiology, Madras Veterinary College.



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and the principal crop cultivated is paddy and buffaloes in such areas are smaller in size and are mainly used for draft purpose for paddy cultivation. In places where the rainfall ranges between 25 cm. and 150 cm. per annum (warm sub-humid to hot dry areas) river buffaloes thrive well and the principal crops cultivated in these areas are wheat, millet, groundnut, and cotton and in these areas dairy buffaloes thrive mostly.

Thus we notice in our country two distinct bioclimatic zones existing and they are responsible for the distribution of two different types of buffaloes. In drier areas where better feeding resources exist, dairy buffaloes thrive well and in wetter areas where nutritional insufficiency exists, only draft type of buffaloes are seen.

Climate:-

Climate is the kind of weather that any place has year after year. The climate and climatic elements affect the organism directly and indirectly through their influence on its total environment. The climatic complex regulates the composition of soil, types of farming and the production and quality of grasses, legumes and other plants. The climatic element that influences the buffaloes directly is the heat. The factors that influence heat are temperature, humidity, air movement and radiant energy. The comfort zone for Indian buffaloes is between 60°F and 70°F. Outside the comfort zone they will increase the metabolic rate either to keep them warm or to dissipate heat.

Humidity is low in summer and higher during rainy season.

At a high environmental temperature the humidity of air will affect the evaporation of water from the skin. The evaporation of water from the skin will depend upon the quantity of sweat produced by the buffaloes. In buffaloes the number of sweat glands are few compared to white cattle. There are 160 sweat glands per square centimeter on the skin in buffaloes whereas in Indian cattle there are 3171 sweat glands per square centimeter. Hence buffalo sweat glands do not play significant role in heat regulation. To compensate this, buffaloes resort to swimming or wallowing during the heat of the day in summer. In Tamil Nadu air temperature during winter does not go far below compared to North India and the buffaloes withstand the winter air temperature without adverse effect on their milk production.

Solar radiation:

Solar radiation consists of visible, ultraviolet and near-red radiations besides radiation reflected from its surroundings. The long wave infra red radiation also heats up the surrounding objects which in turn heats up the animal body. The intensity of solar radiation varies with latitude, altitude, changing conditions of the atmosphere, altitude of the sun and the reflectivity of the ground. Heat is gained by the animal by the intensity of sun-shine, altitude of the sun shape and orientation of the animal and reflectivity of the coat. The skin and animal coat affect heat exchange with the environment and their efficiency in heat dissipation under hot conditions is dependent on colour (pigmentation) of the skin, thickness of the skin and colour

of the hair coat. The buffalo hair coat consists of bristle like stiff hairs distributed very thinly and unevenly over its body. In adult the major portion of the body is devoid of hairs. Hence the epidermis takes up the heat regulating function of the hair coat. The thickness of the skin in buffalo is twice that of cattle and it increases with age. The thickness of the skin protects the animal against heat. The colour of the skin and haircoat also play a significant role in the absorption of solar radiation. The buffalo has a dark pigmented skin and dark coloured hair coat which absorb solar radiation during summer. An exposure of a buffalo under hot sun for one hour will tend to increase its body temperature and hence it is very sensitive to exposure to sun. During summer the heat gained from higher environmental temperature and the metabolism of heat of feed digestion in the animal is greater than the rate of heat dissipation and it results in reduction of their feed intake during day. During cooler hours of the night they tend to lose surplus heat and tend to graze during night. It will be useful to allow buffaloes for grazing during night time.

Guide Lines:

For better rearing and breeding of buffaloes when buffalo farming is contemplated, adequate provision must be made to ward off dissipation of excess heat from animal. There must be facilities for wallowing and bathing. Adequate water supply has to be provided. Wherever possible, there must be provision for splashing of water and artificial shower. Well-ventilated housing has to be provided. Trees have to be planted to give adequate shade to protect the buffaloes against direct solar rays. Wet gunny bags have to be placed on the back of buffaloes during summer months. Spongy porous covering like rubber or acetate sponges to hold moisture can be kept over the back of the animals. The adoption of the above mentioned methods facilitating better heat dissipation during summer months will go a long way in mitigating to a certain extent the environmental thermal stress which influence adversely the breeding and milk production programmes in buffaloes thereby increasing the breeding efficiency and improving milk production in buffaloes in our State.



SHEEP REARING FOR RURAL ECONOMY

Dr. S. Rangaraj, B.V.Sc., NDPH.,
Additional Director, Animal Husbandry

Special Animal Husbandry programme:-

Sheep Husbandry plays a major role in the rural economy of Tamil Nadu. The bovine population of Tamil Nadu is fairly high and the mutton produced by them provides the people the much needed animal protein required for the maintenance of proper health for a large number of people in our State. Sheep has an added advantage over other classes of livestock in that, it adapts to the varying climatic conditions in different places very well. Besides the mutton produced by them, certain other products obtained from sheep such as wool, skin etc. are products of great significance which contribute to the National wealth. Sheep also enriches the soil fertility by the manure produced by them.

Sheep farming provides employment opportunities to a large section of the population particularly to the weaker sections, of the community in hilly, drought prone and dry areas. Sheep rearing in rural areas is being rapidly developed since it is a subsidiary occupation on a mixed farming basis in all

agro-climatic regions excepting heavy rainfall areas. Because of their ability to graze very close to the roots of herbage, sheep can utilise spares and low set vegetation on which other species of livestock may not be able to subsist.

Sheep droppings improve the fertility of soil considerably and penning of sheep in harvested fields (sheep folding) brings in additional income to the flock owners. Since sheep rearing does not require any large investment in buildings and equipment, it offers good scope for exploitation.

The sheep available in the State is predominantly of hairy type. The woolly sheep forms about 10 to 15 percent. They are mainly found in Nilgiris district and the hilly areas in the districts of Coimbatore, Madurai, Salem, Trichi and South Arcot. The sheep in the Nilgiris are of fine woolly type, while those of Coimbatore district etc. are of coarse woolly type. The woolly sheep in parts of Trichy and adjoining areas in South Arcot District are black in colour. The breeds that are found in Tamil Nadu are Madras Red, Trichy

Black, Kilkarisal, Ramnad White, Vembur, Mecheri, Nilgiri sheep etc.

The State had 6.1 per cent of the total cattle population of Indian union. The percentages for specific groups were 5.1 for buffaloes, 15.8 for sheep, 5.8 for goats, 7.8 for others. Eventhough Tamil Nadu possesses 23.4 million heads of livestock and 12.97 million of poultry, the per capita availability of foods of animal origin is far below the nutritional standards advocated for normal well-beings. The per capita availability of milk is only 63 gms. per head per day for the State as against 300 gms. considered necessary for the balanced diet. Against the per capita requirement of meat of 40 gms, per day the availability is only 26 gms. leaving a gap of 14 gms. The magnitude of the problem is huge.

PROGRESS IN SHEEP DEVELOPMENT

Animal Husbandry Programme for cattle development based on All India pattern like All India Key Village Schemes, Intensive Cattle Development Project etc. have functioned creditably in Tamil

Nadu. However no major effort have been made to increase the productivity of sheep except in recent years when we have introduced sheep development programmes on a small basis like ARDC Sheep Scheme, sheep development under Special Animal Husbandry Programme, Hill Area Development Programme and Drought Prone Area Programme. These are explained briefly below. These schemes have already started yielding good results. There is heavy demand for the supply of good quality sheep.

With a view to encourage traditional sheep breeders and other progressive agriculturists interested in sheep breeding to undertake such occupation, so as to enable them to get the maximum profit in sheep breeding activities and improve their economic conditions, Tamil Nadu Government have sanctioned a scheme for the development of sheep breeding in Tamil Nadu by establishing 39 Sheep Breeding Cooperative Societies in the districts of Tirunelveli, Salem, Madurai, North Arcot, Chingleput, Ramanathapuram and Dharmapuri. The total cost of the scheme is Rs. 8.308 million. The contribution of Agricultural Refinance Development Corporation to the scheme is Rs. 3.821 million. The Government contribution towards the share capital to the societies is Rs. 1.274 million. The expenditure of staff, furniture, medicines, equipment, typewriter, vehicles etc. is Rs.3.212 million which is given by the State Government as assistance.

Hill Area Development Programme:

Under this scheme, the Central Planning Commission has approved among other things, the scheme for the establishment of 4 sheep Breeding Cooperative Societies and 400 field sheep units through loan and subsidy to farmers and landless poor at a total cost of Rs. 1.5 million

in the Fifth Plan period in Nilgiris district during 1975-76. The scheme envisages the setting up of four sheep breeding cooperative societies with 100 members each.

Drought Prone Area Programme

Under this programme during 1978-79 itself, 1112 sheep units in Dharmapuri district and 326 sheep units in Ramanathapuram have been established and subsidy of Rs. 10.27 lakhs and Rs. 2.43 lakhs paid to the weaker sections of the community respectively in these districts. The total number of sheep units subsidised during 1976-77, 1977-78 and 1978-79 were 3413 with subsidy of Rs.26.21 lakhs. During 1979-80, it is proposed to establish 170 sheep units in Ramanathapuram district and 250 sheep units in Dharmapuri district with a government subsidy of Rs. 1.78 lakhs and Rs. 5.00 lakhs respectively.

Tribal Development Programme:

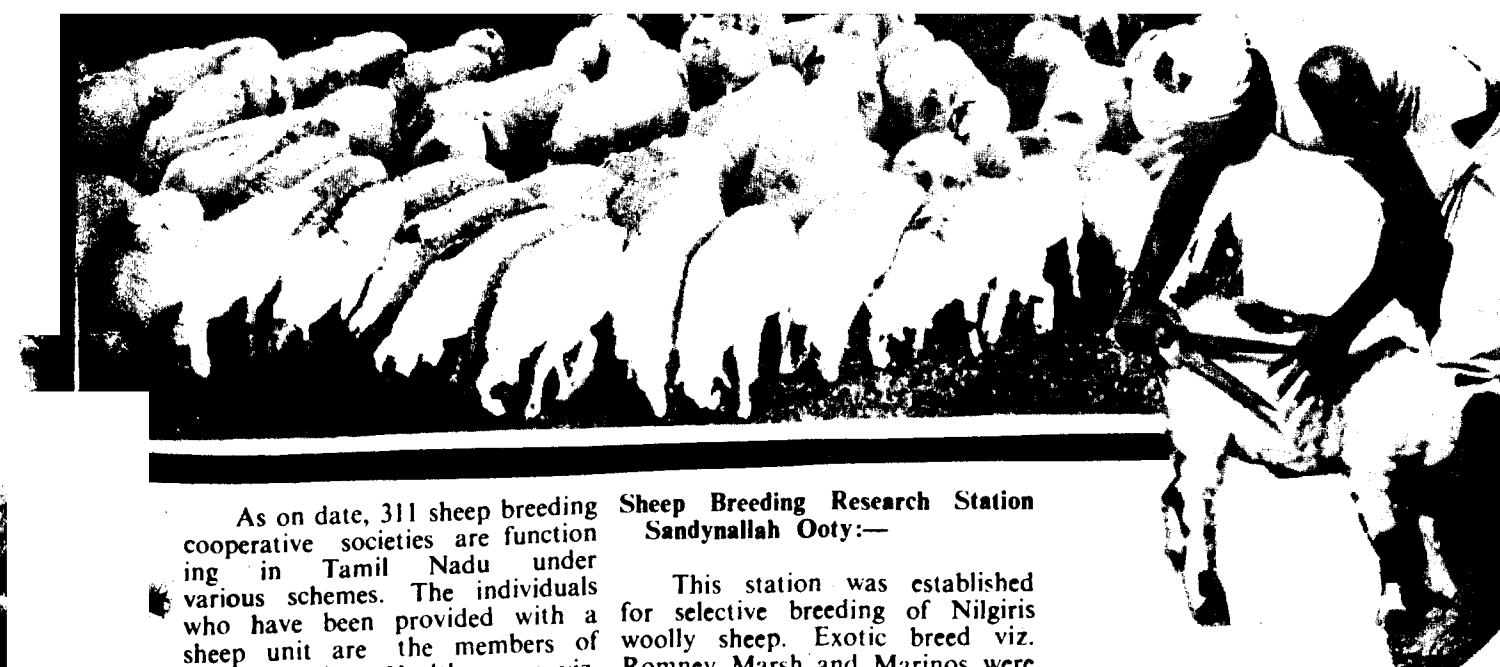
2377 tribals spread over the districts of North Arcot, South Arcot, Dharmapuri, Salem and Tiruchi districts have been benefitted under this programme by establishing 2377 sheep units paying government subsidy of Rs. 16.80 lakhs during 1976-77, 1977-78 and 1978-79. During 1979-80, it is proposed to establish 700 sheep units spread over the districts as mentioned above with a subsidy of Rs. 5.50 lakhs.

Special Animal Husbandry Programme

At the instance of Government of India, the Animal Husbandry Department formulated a Special



Animal Husbandry programme for the implementation in certain districts approved by Government of India in Tamil Nadu. Among other programmes, sheep production programme is under implementation in the districts of Salem, North Arcot and Tirunelveli for the benefit of 9,000 small/marginal farmers and agricultural labourers. As per the scheme, the selected small farmer will receive a subsidy amount to 1/4th of the capital investment of a sheep unit and marginal farmer and agricultural labourer will receive 1/3rd of the capital investment of the sheep unit of Rs. 3,000/- During 1976-77, 1977-78 and 1978-79, 5359 sheep units have been established and a sum of Rs. 48.58 lakhs as subsidy paid to small marginal farmers and agricultural labourers. During this year (79-80) it is proposed to establish 3,000 sheep units.



As on date, 311 sheep breeding cooperative societies are functioning in Tamil Nadu under various schemes. The individuals who have been provided with a sheep unit are the members of these societies. Health cover viz. deworming etc. are undertaken by the extension staff of the Animal Husbandry Department.

Sheep Farm and Sheep Units:

Two exclusive sheep farms and four sheep units attached to the Government Livestock Farms are presently distributing superior breeding stock of recognised South Indian breeds to sheep farmers.

Sheep Farm, Sattur:-

The breeds that are maintained in the farm are:-

1. Vembur. 2. Ramnad.

The performance of the progeny is studied in the farm.

Sheep Farm Chirnasalem:

Mecheri breed is maintained in the farm.

Sheep Unit, District Livestock Farm, Chettinad, Abistekapatti and Pudukottai.

Kilakaraisal breed is maintained in these farms.

Sheep Unit, District Livestock Farm, Hosur:

The breed maintained in the farm is Mandya. Only rams of exotic breed viz. Corriedale are reared in this farm for crossbreeding with Mandya sheep. The performance of the progeny at different levels of exotic blood is evaluated in the farm.

Sheep Breeding Research Station Sandynallah Ooty:-

This station was established for selective breeding of Nilgiris woolly sheep. Exotic breed viz. Romney Marsh and Marinos were introduced to raise nuclear stock and for cross-breeding with local Nilgiris sheep.

Marinos had a better nicking ability and their progeny with Nilgiri sheep excelled in performance. The introduction of Romney Marsh proved a failure with unsatisfactory performance in the farm as a pure breed for crossbreeding work. Russian Marino are now maintained in the farm. This farm is now under the control of Tamil Nadu Agricultural University, Coimbatore. The farm has expanded its orbit of activities in all aspects of sheep production and is recognised as done of the premier institutions for fine wool development in India. The farm has a highly equipped wool analysis laboratory.

ROLE OF SHEEP IN LEATHER INDUSTRY

When we examine the composition of India's export trade, it will be seen that hides and skins hold the third position among the export products. Hides and skins exports consists of raw skins, leather, leather manufactures and allied products which amounted to Rs.1896 million during 1972-73 and Rs.1942 million in 1973-74 which is Rs. 9.7% and 7.8% of the total export for the respective years. The value of hides and skins exported touched Rs. 3132.59 million during 1976-77.

During 1976-77, Madras port accounted for the export of hides and skins to the value of Rs. 1,751.76 million. This amount of export is more than 70% of the total value of hides and skins exported from India. The value of sheep and

goats skins alone is Rs. 1244.63 million and this is 71.05% of the total value of hides and skins exported from Madras Port for this period. The above facts will clearly present that Tamil Nadu holds a very unique position in the leather industry of India and a major contributor for India's world supremacy in leathers. The main species of animals which account for leather production in Tamil Nadu are sheep and goats. This favourable position of Tamilnadu in the leather export composition deserve to be improved by strengthening the sheep production and marketing in villages and modernisation of slaughter houses to accelerate the quality of leather exports.

A popular variety known as Red Hair sheep skins is exported in large quantities. Red Hair sheep are found only in certain parts of Southern region and mainly in Tamil Nadu. Their skins command premium prices and are used for best quality garment leathers.

Goat skins produced in Tamil nadu are of very high quality and value. As we proceed towards North, the quality of skins gradually goes down with the result that the value of Tamilnadu goat skins may be about 2 times that of goat skins of the same size produced in Northern most parts.

The Central Leather Research Institute, Madras is now a world recognised body and houses many eminent leather technologists. Its fortunate location in Tamilnadu, which has the most important tanning centres in India is of much benefit to the trade.



PROPOSED PROGRAMME FOR SHEEP DEVELOPMENT

Besides implementing various sheep production schemes under Special Animal Husbandry Programme, Drought Prone Area Programme, Tribal Development Programme, S.F.D.A., I.R.D.P. etc., a project has been drawn up for the purpose exclusively for the sheep development with the assistance of World Bank and Agricultural

Refinance Development Corporation in Tamil Nadu. The project comprises of two major components. The first, the core of the project will involve the organisation of sheep farmers and improving the extension service specifically for sheep production and improving the quality of sheep through the introduction of exotic germ plasma for sustained improvement in sheep production. The second would lay the base for marketing of sheep and sheep products through modernisation of slaughter houses, organisation of marketing channels, both for inland utility and export oriented production. The special identity of this project is the delivery of all goods at the villages and integrated rural development of small scale and cottage industries based on sheep production.

The following are the objectives of the proposed projects:—

1. To increase the productivity and quality of sheep by scientific breeding through introduction of exotic sheep breeds and Artificial Insemination.
2. To increase the production of quality mutton.

3. To increase the contribution of Animal Husbandry Sector to State income from 6% level to 12%

4. To generate more employment opportunities for unemployed rural population and provide adequate employment for under employed people in villages through development of small scale and cottage industries based on sheep production.

5. To double the income of agricultural labourers marginal and small farmers through sheep by increasing its productivity and proper marketing of sheep and sheep products.

The proposed projects envisages the improvement of the productivity of sheep by atleast 25% and enhancement of their value by another 25%

Such pragmatic planning and vertical approach in sheep development programme will vastly improve the economy of the sheep man who belongs to the neglected and downtrodden society of Tamil Nadu.

A MILESTONE IN VETERINARY BIOLOGICAL PRODUCTION

Dr. C. V. NARAYANA RAO

M.V.Sc.

Director, Institute of vety.

Preventive Medicine, Ranipet.

(i) PRODUCTION OF BIOLOGICAL PRODUCTS:

From a modest beginning in 1932, the Institute has gradually developed and expanded its activities in the course of last 46 years and is now manufacturing 26 products comprising of vaccines (both viral and bacterial), diagnostics and diluents.

As per livestock census 1977, in Tamil Nadu the total livestock population is about 24.14 million which is made up of 13.87 million cattle, 5.28 million sheep and 4.20 million goats and 6.78 lakhs pigs.

Among the diseases affecting cattle, sheep and goats, rinderpest is the most dreadful disease. For protecting the indigenous cattle, goat tissue rinderpest vaccine is produced (GTRV). To protect the crossbred cattle, sheep and goats, production of tissue culture rinderpest vaccine (TCRV) was taken up in 1971. This Institute is first among the State units to produce this vaccine besides the National Institute at Izatnagar, Uttar Pradesh. About 67 lakhs of Tissues Culture Rinderpest Vaccine are being produced annually to meet the requirements of Tamil Nadu and neighbouring State of Kerala, Pondicherry of Union territory and Karnataka.

HISTORY:

The Institute of Veterinary Preventive Medicine was established in 1932 at Madras exclusively for the purpose of production of anti-rinderpest serum against rinderpest which was raging in severe form at that time. Under post-war reconstruction programme, the meat dehydration factory with an area of 129 acres at Ranipet was acquired by the State Government and the Institute is functioning in these premises since 1948.

PRESENT ACTIVITIES:

The activities of the Institute can be categorised into production of biological products, disease investigation and research.

Haemorrhagic Septicaemia (H.S.) and 23 lakhs doses of Black Quarters (B.Q.) vaccines are produced annually. About 3 lakhs doses of Anthrax vaccine are supplied every year.

Vaccines are also produced against enterotoxaemia in sheep and bovine lymphangitis in cattle.

Brucellosis is a disease affecting men and animals. It is an occupational hazard and mostly cattle attendants, veterinarians, slaughter house workers and laboratory personnel are exposed to this malady. In human beings, it causes intermittent fever with head ache and pain in the joints. In animals it causes abortion. The disease is also of economic importance to the animal industry due to loss of valuable calves, reduction in milk yield and female stock becoming sterile. In bullocks it reduces the working capacity. A systematic survey conducted in livestock in our State reveals that the disease is endemic in the villages adjacent to the Western Ghats in the district of Coimbatore, Madurai and Tirunelveli. To control the spread of this disease extensive calf-hood vaccination is carried out in these areas with Brucella abortus S19 vaccine produced in this Institute.

Sheep Pox is an important disease of sheep with a mortality rate of 20%, the morbidity rate is also high. Apart from deaths, economic loss from this disease is considerable in terms of loss of mutton inferior quality of skin and wool. To combat this disease, cell culture vaccine using a local strain of sheep-pox virus was evolved and the same was released by on 18.10.1978 in the Livestock Show at Ooty.

Rabies is primarily a disease of Canines and man is only accidental host and gets the disease by bite of dogs. In India about 3 million people undergo anti-rabies treatment annually and the cost involved is around Rs. 306 million, considering the cost per course of post-exposure treatment and work loss incurred by patients. To control rabies in man, it is essential to control the disease in dogs. With this view "Rabies Vaccine" (LEP) is produced in this Institute from January 1978. Till now the rabies vaccine used in dogs was given for seven days for prophylaxis.

Further, recently Tamil Nadu Government has enacted a legis-

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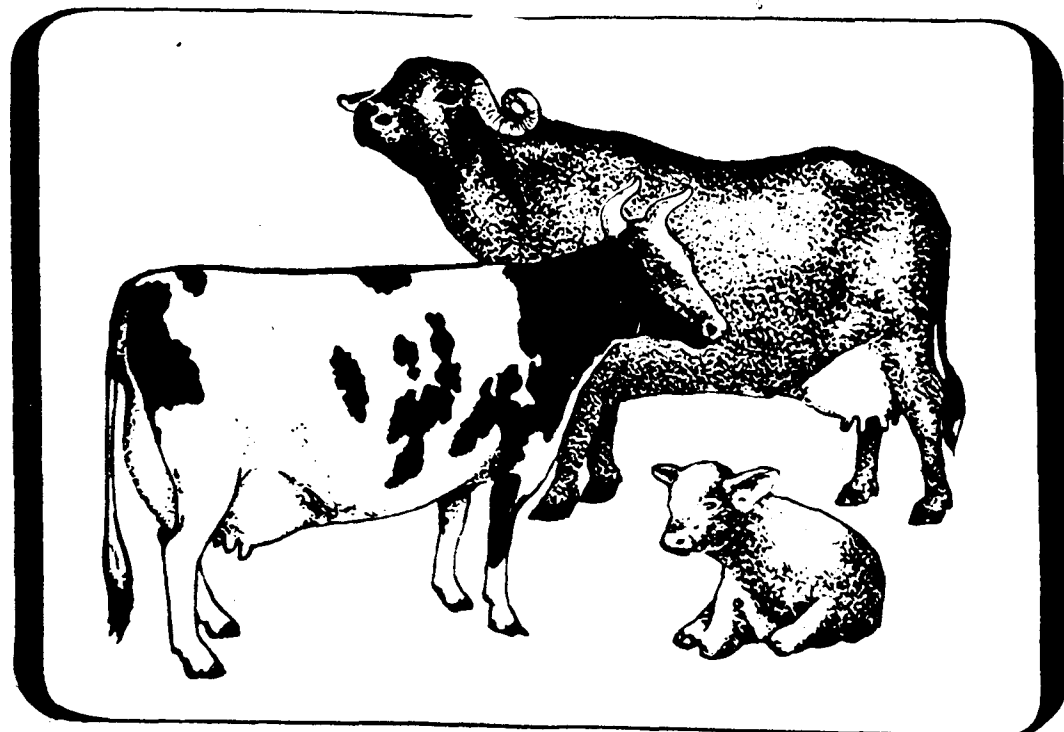
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(iii) RESEARCH:

Apart from production of biological products, continuous research work is being carried out in each section to improve the quality of existing vaccines and to evolve new vaccines.

This Institute is one of the five regional centres in which Indian Council of Agricultural Research Project for carrying out epidemiological studies on Foot and Mouth Disease is functioning. This centre is the typing centre for Foot and Mouth Disease virus isolates made from Tamil Nadu, Kerala and Pondicherry.

There is a well maintained library catering to the needs of technical staff working in the Institute.

FUTURE PROGRAMMES ENVISAGED:

The importance of the killer disease 'Marek's Disease' in poultry has been recognised and a laboratory for production of Marek's disease vaccine has been set up. Production of experimental batch of vaccine is under way.

Foot and mouth Disease in cattle is of major economic importance. The losses by way of reduction in milk yield, loss of calves and reduction in working capacity of work bullocks are considerable. At present, the vaccine against this disease is produced at India Veterinary Research Institute, Izalagar and by some private companies. Preliminary work has already been undertaken to produce this vaccine at this Institute.

At present canine distemper vaccine is being imported at prohibitive cost. Canine distemper is a viral disease of young dogs below the age of 1 year. It is proposed to manufacture this vaccine at the Institute and save valuable foreign exchange.

Steps have been taken to produce vaccine against Duck Plague, the incidence of which has been recorded recently in our State.

lation, making it compulsory for the dog-owners to get their dogs vaccinated against rabies to get the license from the local bodies.

During the last 3-4 years, poultry industry has made great strides in the State. As per 1977 census, our poultry population is about 14.34 millions. The major impediment to successful poultry farming is occurrence of diseases as Ranikhet disease, Coccidiosis, Marek's disease and Fowl Pox. At present, the Institute manufactures vaccines against Ranikhet Disease and Fowl Pox. It has made a name in the production of these vaccines as seen from the enormous demand from other States and private breeders. About 16.50 million doses of poultry vaccines are produced every year.

Diagnostics to detect diseases as brucellosis and coryza (Mycoplasmosis) in poultry are also produced. For artificial insemination, semen diluents are prepared and supplied to field staff.

About Rs. 6 lakhs worth of vaccines are being sold to other State Governments and private parties every year in addition to meeting the entire requirements of Tamil Nadu.

QUALITY CONTROL:

With the inclusion of Veterinary Biologicals under the Drugs and Cosmetics Act 1940 as per the third amendment to the rule 1964, the production of biologicals at this Institute comes under the purview of State Drugs Controller. A separate Test and Quality Control section carries out the various tests prescribed before the product is issued from the Institute.

(ii) DISEASE INVESTIGATION SECTION:

There are three officers in charge of disease investigation of cattle, sheep and goats and poultry. They help the field staff in diagnosis, treatment and control of diseases. They also carry out epidemiological studies of various diseases of livestock in the State which will help them to forecast the occurrence of diseases so that advance preventive steps can be taken. Clinical materials received from field staff are also processed and results communicated. The field staff manning the clinical laboratories are also given training in examination of clinical materials and in latest techniques in disease investigation. A recent contribution of this section is the confirmation of a disease causing heavy mortality in ducks as "Duck Plague".

FROZEN SEMEN

HAS COME TO STAY

IN INDIA

About 70% of the world cattle population is at present found in the developing countries, but this proportion only contributes 21% of the world milk production. This low level of productivity can be explained not only by the difficulty of raising cattle in these regions but also in many cases by the poor genetic quality of the cattle populations. Through artificial breeding mass improvement of a large population could be achieved in a shorter time. Hence artificial insemination has been accepted as a policy and it is being practised, all over the world.

Method followed at present:

Till recently semen was collected from superior bulls, volume increased by mixing with suitable semen diluents and stored at 5°C in the refrigerator, thereby lifespan of the sperms are prolonged. For short distant transportation, semen is shipped in a thermos flask filled with ice. This type of preservation is known as 'liquid semen', as the semen is in a liquid state. This system has gained popularity all over the world for the simple reason that cost of the equipment utilised is economical. No doubt this method can efficiently be used with good fertility rate as long as there is no fluctuation in storage temperature and it is utilised within few hours. Under field conditions liquid semen should normally be used within 48 hours from the time of collection from the bull. Beyond this time, the fertilising capacity of spermatozoa is reduced. This results in wasting of nearly 50% of the semen

Dr. M. JOHN EDWIN,
M.V.Sc.
&
Dr. U. S. KRISHNA MURTHY, Ph.D.
*Department of Animal Genetics,
Madras Veterinary College,
Tamil Nadu Agricultural University.*

collected from superior bulls imported from other countries.

Development of frozen semen technique

Attempts were made by scientists to evolve a better storage method wherein the spermatozoa could be kept in a state of suspended animation, so that its longevity could be prolonged. This object could be achieved by subjecting the spermatozoa to very low temperatures (sub-zero). This problem could not be tackled so easily, for the reason that mammalian spermatozoa do not survive such cold temperatures. A new era has been unfolded by the British scientists when they discovered that glycerol gives Cryo-protection to the spermatozoa against sub-zero temperatures. This ushered the new method of semen preservation known as 'Deep Frozen Semen'. The semen here is in a frozen state (solid form). The introduction of frozen semen has brought sweeping changes in laboratory processing, packaging, storing and shipping of semen.

Different methods of packaging of frozen semen

Frozen semen is processed, packed, preserved and utilised in

three different systems.

1. Pellet semen:

In pellet freezing semen is frozen in the form of pellets, roughly to the size of an aspirin tablet and preserved in liquid nitrogen. At the time of insemination pellet is thawed in semen diluent and used with glass insemination catheter.

2. Glass ampoules:

In this system, semen is filled into glass ampoules, sealed, frozen and preserved in liquid nitrogen. At the time of insemination, the ampoule is thawed, cut open and the semen is drawn into glass insemination catheter and used. Due to certain practical difficulties the above two systems are being used only to a limited extent.

3. Plastic straw technique:

This is the most popular method of freezing semen and it is adopted in more than 60 countries all over the world. This technique involves the use of "straws" made of Poly-venyle Chloride. Straws are available in 20 different colours which aids in positive identification of bulls. Semen is filled into these straws either manually or by using an automatic machine which can fill 12,000 straws per hour. The filled, sealed straws are frozen in liquid nitrogen vapour and preserved in liquid nitrogen, for long term storage. This being the economical and efficient method it is being adopted in all the existing Frozen Semen Banks in India.

Cryogenic agents used for frozen Semen:

In the beginning solid CO₂ (Carbondioxide) at 79°C was used as the cryogenic agent for freezing and preservation of semen. In the year 1964 liquid nitrogen at 196°C has replaced the use of solid CO₂. Liquid nitrogen has a low temperature of -196°C and it is the fourth coldest substance known. At this low temperature of storage practically there is no metabolic activity of spermatozoa and it thrives for several years.

Advantages of frozen semen in our Country

Frozen semen has got a greater role to play in tropical countries, where agroclimatic conditions varies from place to place. These factors are likely to affect the storage temperature of liquid semen during transport. Introduction of frozen semen will reduce the wastage of superior germplasm collected from the few bulls, available, because, no semen is discarded due to its age. The storage potential of semen will be prolonged to several years.

There are reports that healthy calves have been obtained from frozen semen stored as long as 14 years. Introduction of frozen semen will reduce the number of bulls maintained per cow population by nearly 50%. With the existence of poor transport system in this country, this new system will, certainly cut down transportation costs considerably. Instead of daily supply of liquid semen to the field A.I. Centres, frozen semen in and liquid nitrogen can be supplied once in 20-30 days. This system will enforce better temperature control of semen during transport and storage, resulting in better fertility rate.

Frozen semen will introduce selective mating possible, as the cattle owner or the inseminator can have the choice of any bulls semen. This is made practicable as more than 700 doses of frozen semen can be kept in a small frozen semen container. Frozen semen can safely be used in outbreak of diseases like foot and mouth (semen frozen earlier to the disease outbreak could be supplied). Last but not least book-keeping on semen sales and inventory will be simplified.

Frozen semen has come to stay in India.

At present there are eight well established frozen semen Banks in India engaged in deep freezing of bovine semen. In Tamil Nadu one Frozen Semen Bank with facilities for conducting research is functioning in Madras Veterinary College of Tamil Nadu Agricultural University, since 1973. Another unit is located in the Nucleus Jersey Farm, Ooty, under the Tamil Nadu Dairy Development Corporation. However there are certain constraints in introducing this system on a large scale. Difficulties are being experienced in importing of frozen semen containers, liquid nitrogen plant and other accessories, from other countries.

But no problem is unsurmountable as our Indian technologists have already come out with certain equipment which need little more perfection. The day is not far off when all these equipments could be manufactured indigenously which will revolutionize the artificial breeding in India. Hence there is no doubt that frozen semen has come stay in India.

LIQUID NITROGEN REFRIGERATORS AND CONTAINERS USED FOR STORING FROZEN SEMEN AND LIQUID NITROGEN





Madras S.P.C.A

S.N. RAJAH
Executive Secretary Madras
S.P.C.A

The first Society for the Prevention of Cruelty to Animals was formed in Liverpool, England in the year 1860. When Queen Victoria evinced a keen interest in the activities of the society and agreed to be its Patron, the name of the Society was changed into Royal Society for the Prevention of Cruelty to Animals and its headquarters was shifted to London. The Patron of the Society has till now been the King or the Queen of England.

The Englishmen formed similar Societies all over the British Empire in the later half of the nineteenth century. The SPCAs at Bombay, Calcutta and Madras were founded almost simultaneously in the 1870s.

The Madras SPCA was established in 1878. His Grace the Duke of Buckingham and Chandos the then Governor of Madras Presidency, was its first Patron and Rt. Rev. F. Gell, Lord Bishop of Madras was its first President. The Society was registered under the Registration of Charitable, Scientific and

Literary Societies Act of 1860. The objects of the Society are "the prevention and suppression of cruel and improper treatment of animals and the amelioration of their condition generally."

According to the Constitution of the Society, the Governor of Tamil Nadu is the Patron of the Society and a sitting or retired Judge or Chief Justice of the Tamil Nadu High Court is invited to be its President. Mr. Justice T. Ramaprasada Rao has been the President from 1971. There is a S.P.C.A. in every district headquarters in Tamil Nadu. These were started as Branches of the Madras SPCA but, later, in order that the local population might be induced to take active interest in their activities were made into independent and self supporting units.

The Madras SPCA has a band of eight Inspectors who are full time employees of the Society. These Inspectors are vested by the State Government with certain

Police powers and are detailed to enforce the Prevention of Cruelty to Animals Act (Central Act of 1960) according to which overloading of animal drawn vehicles, employing sick or deformed animals to work, abandoning a domestic animal, needlessly killing or mutilating an animal and such other acts are offences punishable with a fine or imprisonment. The SPCA Inspectors patrol the city, detect such offences and prosecute the offenders in a Court of Law. The fines resultant from such prosecutions are appropriated to the State Government which, in lieu of such fines, gives an annual grant of Rs. 30,000/- to the Society.

The Madras SPCA enjoys rental income from its properties. This, together with the annual grant of Rs. 30,000/- by the State Government and income from membership subscription totals Rs. 50,000/- per year which is just 50% of the annual expenditure of the Society incurred on salaries to its employees, overhead expenses, maintenance of its various services to animals in distress, payment of taxes etc. The other 50% is met from donations from the public.



Madras Pinjrapole has in its campus of more than 35 acres on Konnur High Road nearly 1500 cows, bullocks, donkeys and horses which had grown old in the service of man.

The Madras SPCA has continued its pioneering efforts down the

years. Though the Madras SPCA was established in the year 1878, it was only in 1898 that the Society acquired 5.5 grounds of land on Vepery High Road and it was in the year 1900 that the building which has since housed the Society was built with the aid of a munificent donation by the Rajah of Venkatagiri, Rajah Venugopala Bahadur.

The Madras SPCA is considered to be a model SPCA in this country and has been hailed as a pioneer in animal welfare work. The first Veterinary Hospital in Madras City was established by the Madras SPCA in the year 1900 in its own premises on Vepery High Road. A Home for stray dogs was established by the Society in the year 1906 and for the first time in India, stray dogs were put to death by electrocution at the Lethal Chamber which was part of the Society's Home for stray dogs. The equipment of the Society's Veterinary Hospital was given away free to the Government when it opened its own Veterinary College and Hospital on Vepery High Road in 1904. Similarly the electrocutor machine was given away to the Madras Corporation when it opened its Lethal Chamber for stray dogs on Basin Bridge Road in the year 1911. This machine continues to do service till to-day. The Madras Pinjrapole shelter for old and infirm animals was established in the year 1908 by the Madras SPCA and was later given away to the Mahajan Society for maintenance. To-day the Mad-

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The Madras SPCA has continued its pioneering efforts down the years. The Royal SPCA, London which is the mother of SPCAs, has been rendering invaluable help to the Madras SPCA. It has donated two ambulance vans to the Madras SPCA and has been a source of inspiration to the Madras Society.

A unique facet of the Madras SPCA's activities has been its 'distress service'. An Inspector is on telephone duty from 8 a.m. to 7 p.m. to receive calls from members of the public who might notice any animal in distress. On receipt of the call, the Inspector rushes to the spot in the ambulance van and transports the animal to the nearest veterinary hospital. On an average, about one hundred such distress calls are received every month over the telephone at the headquarters of the Madras SPCA.

In fact, the distress service of the Society has been so good that it has created for the Society and its cause an ocean of good-will from the animal lovers of the city.

The Madras SPCA has always believed in the efficacy of human education in promoting in man feelings of kindness and sympathy to all living beings, including animals. Such reformation can be brought about more easily in young minds because bias and prejudice are not entrenched in them. The Society, therefore, engages itself in doing continuous human education propaganda among school children by holding for them oratorical, essay and painting competitions on subject pertaining to animals and their welfare and by organising 'Kindness Clubs' in schools. The Society also has a Students' wing comprising of enthusiastic college students.

It is the duty as well as an obligation of each one of us to contribute actively to the promotion of animal welfare. Kindness to animal is more than an ideal. In this world of stress and strife among individuals and nations, we cannot afford to ignore the need for kindness. From Kindness to animals it is but a short step to kindness to fellow human beings.

The importance of SPCAs lies in the fact that they are the only institutions in this world which speak of kindness.

Though the Madras SPCA was established in the year 1878, it was only in 1898 that the Society acquired 5.5 grounds of land on Vepery High Road and it was in the year 1900 that the building which has since housed the Society was built with the aid of a munificent donation by the Rajah of Venkatagiri, Rajah Venugopala Bahadur.

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The Society celebrated its Centenary in the year 1978 and has taken up as its Centenary year project the 'Project ABC'. 'ABC' stands for Animal Birth Control and is aimed at reducing the population of stray dogs and cats in the city which not only suffer themselves but also are carriers of dangerous diseases. The Madras SPCA undertakes the sterilisation of dogs and cats and concentrates on sterilising as many destitute animals as possible. These animals are found homes. In carrying out this project, the Society is being helped with a

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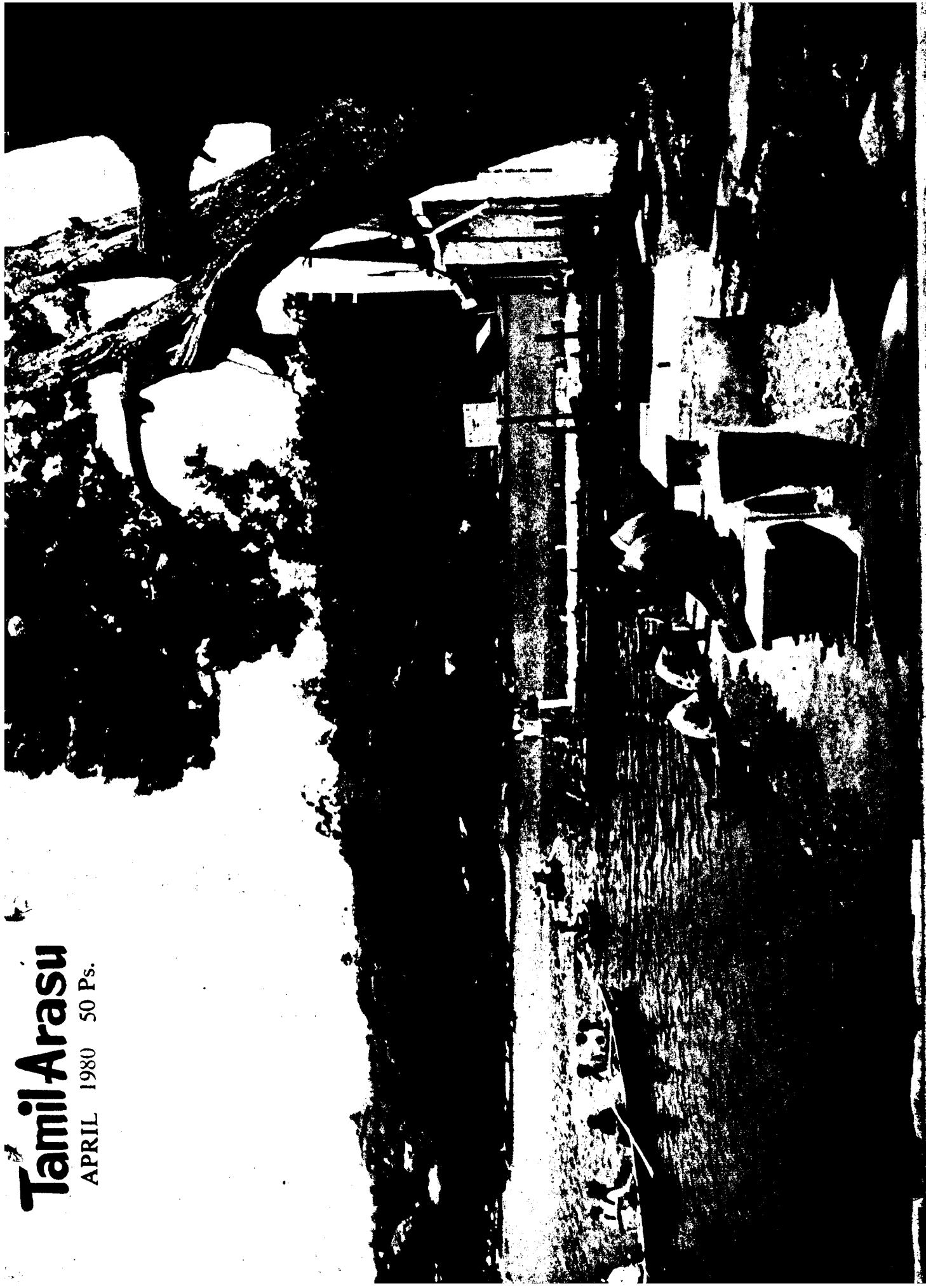
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Tamil Arasu

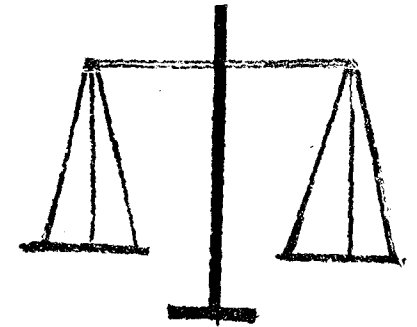
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THE SAGA OF UNIQUE AND EXTRAORDINARY SOCIAL JUSTICE

PRABHUDAS B. PATWARI

In this brief review of the Programme of the Tamil Nadu State Legal Aid and Advice Board, it may not be necessary to take up the history of the evolution of the concept of Legal Aid to the poor, the world over, about which there is now an abundance of studies. They have always recognised the twin principles that justice is the foundation of all good Government, and that justice, to serve its purpose, should be administered with an even hand to all.

These noble principles are enshrined in Art. 14 and Art. 21 of our Constitution which read thus:

Article 14: "Equality before law:—The State shall not deny to any person equality before the law or the equal protection of the laws within the territory of India".

Article 21: "Protection of life and Personal liberty:—No person shall be deprived of his life or personal liberty except according to procedure established by law".

The Law Commission of India in its 14th Report observed: "Equality before the law necessarily involves the concept that all the parties to a proceeding in which justice is sought, must have an equal opportunity of access to the Court and of presenting their cases to the Court; but access to the Court is by law made dependent upon the payment of

Court fee and the assistance of skilled lawyers is in most cases necessary for the proper presentation of a party's case in a Court of Law. Unless some provision is made for assisting the poor man for the payment of Court fee and the lawyer's fee and other incidental costs of litigation, he is denied equality in the opportunity to seek justice. The rendering of legal Aid to the poor litigant is therefore not a minor problem of procedural law, but a question of fundamental character."

Hon'ble Mr. Justice P.N. Bhagwati, now Judge of the Supreme Court of India, as Chief Justice of the Gujarat High Court, headed a Committee which submitted a report to the Gujarat Government in 1971. The Government of Tamil Nadu constituted a One Man Commission (Mr. Justice P. Ramakrishnan) to advise on Legal Aid, and his report was submitted to the Government in 1973. The Government of India, about the same time, appointed a high power committee under the Chairmanship of V.R. Krishna Iyer, now Judge of the Supreme Court, who was then a Member of the Law Commission, as Chairman of the Committee and it submitted a report in 1973.

The 42nd Amendment, effective from 1st February, 1977, added, by Article 39-A, an important provision to the Constitution. It can be viewed as the Constitutional Charter for legal aid in India. It is in the following terms.

"The State shall secure that the operation of the legal system promotes justice, on a basis of equal opportunity, and shall, in particular, provide Free Legal Aid, by suitable legislation or schemes or in any other way, to ensure that opportunities for securing justice are not denied to any citizen by reason of economic or other disabilities".

In fulfilment of the guarantees under Article 39-A, the Tamil Nadu State Government sponsored the registration under the Society's Registration Act of a society called the Tamil Nadu State Legal Aid and Advice Board. The formation of the Society was published in the Government Gazette Extraordinary dated 4-11-1976, and the Chairman and the Vice-Chairman were nominated in April, 1977. The Board has been functioning since then.

The Tamil Nadu State Legal Aid and Advice Board is one of the youngest Legal Aid institutions in the country. It is financed mainly by the Tamil Nadu State Government. The management and control of the Board vest in a high-powered body, constituted at present, with the Governor as the President, the Chief Justice as Patron-in-Chief, the Minister of Law as Patron, two retired Judges of the High Court as Chairman and Vice-Chairman, a sitting Judge of the High Court as Adviser, and the Advocate-General, First Member, Board of Revenue, the Secretaries to Government in the Departments of Home, Finance, Law and Social Welfare, the Registrar, High Court, the Inspector-General of Prisons, the Chief Probation Superintendent, as Members of the Executive Committee (Ex-Officio) and eight Non-official Members—6 selected and 2 nominated by the President.

On the 7th July, 1977, the policy of the Government in this aspect was enunciated by me as the Governor of Tamil Nadu in my Address to the Joint Session of the Legislature in the following words:

"In many regulatory aspects of Government, the poor and the weaker sections of the people continue to encounter delay and difficulty in securing simple justice in Administrative and Judicial Forums. The New

Government will give a special emphasis to the provision of Free Legal Aid to the poor".

The Legal Aid Programme in Tamil Nadu has been drawn up in accordance with the view mentioned above. It is not limited to assisting people to institute or defend proceedings in Courts or Tribunals. It gives equal, if not the first priority, to the giving of advice on a variety of problems which impinge on the welfare of the poor and backward and in which relief is to be secured through administrative authorities. The programme is also compromise-oriented based on the firm conviction that the problems of the poorer and weaker sections of the community are mostly of a simple nature and should be resolved as far as possible without recourse to protracted court proceedings. The Board's machinery for Legal Aid and Advice is geared with these objectives in view. In matters involving relief before Courts and Tribunals, the stress on the legal advice part of the programme provides initially an opportunity for compromise before resort to Court. I think that this should be a *sine-qua non* of all legal aid programmes in India and its importance cannot be over emphasised. Firstly, it will relieve the poor, who can ill-afford litigation, aided or otherwise; secondly it will reduce arrears in Courts.

MACHINERY: The Board has constituted District and Taluk Committees as the core of its organisation. The District Judge is ex-officio President of the District Committee and the senior most Judicial Officer serving in the area where a Taluk committee is formed is the President. The Executive Committee of the Board has laid down from time to time guidelines for the work of these Committees.

In the District Committees and the Taluk Committees, Presidents of the local Bar Associations are made ex-officio members. Representation is provided for the Government Departments of Revenue, Police, Labour Harijan Welfare as also for Members of the Bar in general and for social service organisations. In this way an endeavour is made to involve in the programme all the various agencies who can contribute effectively for helping the poorer and weaker sections of the

community. At present, there are 17 District Committees and 40 Taluk Committees. A counselling centre is attached to each. In addition, three more counselling centres—one at Egmore in the Court of the Chief Metropolitan Magistrate, Madras, another at Saidapet in the Court of the Metropolitan Magistrate at Saidapet and the third in the Court of the Metropolitan Magistrate, George Town—are functioning. If about 81 Committees are constituted, we will have an administrative machinery in every area where there is a District Munsif or First Class Magistrate, and the poor may be able to reach a Committee generally within 25 Kms. of their place of residence. Each District Committee maintains two panels of lawyers, Panel, 'A' and Panel 'B' which are selected by a Sub-Committee consisting of the Chairman, Vice Chairman and the Advocate General on the recommendation of the President of the District Committee (District Judge). Selection is made from social service-minded lawyers who have shown interest in the objectives of the Board. For 'A' Panel Lawyers, a minimum of three years' standing at the Bar is insisted upon and Panel 'B' Lawyers are selected from Senior Lawyers. The Apex Body has an office with a full time Secretary and Staff. Every District and Taluk Committee has an Office located in the Court premises in charge of a full time Administrative Assistant.

EFFECTING OF COMPROMISES: As litigation is costly and time-consuming especially for persons of inadequate means, the assistance to be given by the lawyers at the Counselling Centre is compromise-oriented and every effort is made to see that a just compromise is arrived at. After interviewing the applicant and locating the problem, the lawyer gives notice to the opposite party to attend at a subsequent hearing for working out an acceptable compromise. The Counselling Centres function at this stage in a purely advisory capacity. Considering the status and impartiality of the lawyers giving legal assistance at the Counselling Centres and the awareness of most people of the time and expense which would be entailed if they go to Court, it is found that a good number of cases can be solved in this way by compromise.

MEANS TEST: A flexible approach is being adopted now to determine the economic condition of the applicant. For the initial scrutiny for the purpose of advice at the Counselling Centre, no elaborate enquiry for the means test is prescribed and the declaration of the applicant about his means is acted upon. But when the Panel Lawyer decides to recommend aid for institution or defence of a proceeding before a Court or a Tribunal, he has to record a finding about the applicant's means. This can be normally determined on the basis of the information elicited from the applicant. The approach will be liberal in the cases of victims of Motor Accidents, Members of the Working Class, Women and members of the Scheduled Castes, Scheduled Tribes, Servicemen and Ex-servicemen and their families.

If, after examination, a lawyer of the 'A' Panel thinks that the problem involved is a difficult one and has to be examined by a Senior Lawyer, he draws up a reference indicating the points involved and the President of the Committee there-upon refers the matter to a member of the Committee who is a member of the Bar or a Member of the 'B' Panel for opinion. The guidelines provide that the duration between the presentation of an application and the date of institution of a legal proceeding, if any, should not exceed eight weeks. Presidents of the Committees have the discretion to dispense with the requirement of reference to Senior Lawyer in matters recommended for aid by a 'A' Panel Lawyer in cases (1) which present little or no difficulty like actions for maintenance, criminal trials and appeals, accident claims, workmen's claims etc., and (2) where relief is to be sought urgently and cannot brook delay.

Many of the expert committee reports recommended the principle of voluntary services of lawyers. It is hoped that more and more lawyers would come forward to render free service to the weaker sections of society and earn their gratitude. This will give an opportunity to the legal profession to come in close contact with the masses and help in making them enlightened citizens of democracy. Then we can give a fitting answer to Benjamin Brewster who said: "A lawyer

starts life giving five hundred dollars' worth of law for five dollars, and ends giving five dollars worth for five hundred dollars". What is wanted is a spirit of service on the part of the lawyers. What is reasonable fees is paid to the lawyers today under the rules.

ENTERTAINMENT OF APPLICATIONS WITHOUT REFERENCE TO TERRITORIAL JURISDICTION

It is the desire of the Board that the poor who approach the Board, should be able to do so without much difficulty and expense. When a person presents an application, the examination of his problem at the Counselling Centre will not be declined on the consideration that if and when the litigation springing from the same has to be instituted, it has to be before some other Court in the same District or another District. The application will be entertained and after examination, if the Committee decides that aid should be granted, the papers will be processed and forwarded to the appropriate Committee which will not examine afresh the applicant's eligibility for aid again, but acts on the recommendation already made in the case.

MOTOR ACCIDENT CLAIMS TRIBUNAL

This Board has launched a programme of assistance to victims of Motor vehicle accidents who are not able to afford a lawyer. The Tamil Nadu Government have issued from time to time administrative orders as well as rules under the rule-making power. There have been frequent complaints of exploitation of these unfortunate people. From the beginning, it was felt that this was an area where the Board could help. The State took another important step in August 1976 by introducing a rule in the Motor Accident Claims Tribunal Rules, viz., Rule 3-A. The rule requires the investigating Police Officer to obtain an application for compensation signed by the victim or legal representatives of the deceased victim and send it to the Claims Tribunal without waiting for the result of the investigation into the accident.

LEGAL AID IN CRIMINAL CASES

The Tamil Nadu Board, soon after it

commenced to function, considered a scheme for Legal Aid in Criminal Cases.

The Supreme Court in 1978 delivered two important judgments. In *Motiram and others Vs. The State of Madhya Pradesh* (AIR 1978 SC 1594), the Supreme Court enlarged the scope of bail and laid down that release on bail includes taking of a bond without sureties-personal bond.

In another judgment *Madhav Haya-wardanarao Hoskot Vs. State of Maharashtra*, (AIR 1978 3 SC 544) the Supreme Court held:

"A prisoner, deprived of his freedom by court sentence but entitled to appeal against such verdict, can claim, as a part of his protection under Article 21 and as implied in his statutory right to counsel to prepare and argue his appeal. This is a necessary incident of the right of appeal conferred by the code and allowed by Article 136 of the Constitution. The inference is inevitable that this is a State's duty and not Government's charity".

In the meanwhile, Mr. Justice Ismail (now Chief Justice of the Madras High Court) who was appointed as one-man commission to go into the treatment of political prisoners, has in his report, stressed the need for providing legal aid to prisoners and the convicted prisoners.

Guidelines were issued for processing requests from prisoners, not only for aid in respect of their indictment but also with regard to the problems relating to their family and property, etc.

For the purpose of helping under-trials, the Board felt that the following categories of undertrials should be taken up on a priority basis for assistance for securing bail and for defence:

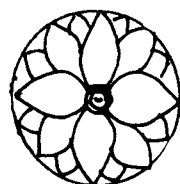
1. Undertrial prisoners who are old and infirm including women, who are pregnant or have babies to be nursed;
2. Undertrials who have spent a considerable period say exceeding three months in Jail and have no means to engage a Counsel;

3. Persons arrested on suspicion under Sec. 41.Cr.P.C. who have been in jail beyond a period of 15 days and
4. Undertrials who, the authorities of the Jail have reasons to think may not have completed eighteen years of age and who should ordinarily be kept away from adults.

The Board is taking steps to make workmen aware of the facilities available with the Board to workmen through the Department of Labour.

The Tamil Nadu Legal Aid and Advice Board has also a scheme for free Legal assistance to servicemen, ex-servicemen and their families.

PUBLICITY: Publicity and promotion of legal literacy are an important part of our programme. In recent years, the State and Union Governments have enacted various statutes to help the weaker sections of the society. The Board has made efforts in this regard to spread information to the people about their rights under various Acts and Executive Orders of Government. Our dedicated and devoted Chairman Justice P. Ramakrishnan and Vice-Chairman Justice N. Krishnaswami Reddiar, the live wires of the Board, during their tours of the districts, address the public to explain the facilities available with the Board. Mr. Justice Krishnaswami Reddiar has visited more than 200 villages and his visits are going on.



STATISTICS: From the inception of the Board upto 31.12.79, the Board received 3747 non-legal applications, 657 applications for claiming maintenance, 972 in accident claims, 353 in criminal trials, 107 criminal appeals and 6143 applications in legal matters other than the categories referred to. 3125 of the applications were from women, 1940 applications belonged to Scheduled Castes, 152 Scheduled Tribes, 90 applications were under Tenancy Laws, and 109 applications were under Labour Laws. 534 matters have been settled under the aegis of the Board. 367 matters have been disposed of in Courts and 819 matters are pending in Courts. Of the matters disposed of in Courts, decisions in over 70% have gone in favour of the assisted persons. The Board has secured awards of the value of Rs. 3,83,400 for victims of accidents and Rs. 14,850 to workmen under Workmen's Compensation Act. The Board has reason to be happy about it all.

SOME PERSPECTIVES: The movement cannot go on for long with the driving force supplied by a few persons at the top. Wider publicity is needed for the purpose of creating an awareness in the minds of the people about the functioning of this Board for their benefit. It may well be that there are areas where the progress is inadequate, and a great deal remains to be done. It is hoped that all those participating in the implementation of the programme will have this perspective in view so that this movement in our State, which has already attracted the attention of many other States in India, could forge ahead and be a pace-setter.

DENTAL CARE for the poor and needy

J. N. Lakshmi Narayanan, I. A. S.,
ADVISER TO THE GOVERNOR.

I FEEL privileged to participate and preside over the inaugural function of the newly created Madras Dental College. From its humble beginnings in 1953 as a Dental Wing of the Madras Medical College and Hospital it has grown from strength to strength and today, in an epoch making event, it has been accorded the independent status of a Dental College. We are very fortunate in that His Excellency the Governor is inaugurating this College, thus ushering in its independent status.

I have been struck by the commendable achievements of this institution. It has had, I gather, a very chequered history. When the Dental Wing was started way back in 1953, most of the teaching staff had to be inducted from this State and elsewhere and many of them had their Dental Education imparted in other universities. The year 1966, marked the beginning of the real development of dental education in the State with Post-graduate Courses being offered in this institute. From that time onwards there has been no looking back, and in 1978 this wing celebrated its Silver Jubilee. This celebration acquired a new import and dimension in the sense that along with the Silver Jubilee function, which was celebrated with great eclat, the reservoir of knowledge held by the dental profession has effectively disseminated by the holding of rural dental camps throughout the State. *These camps provided the rural community, including young*

children, the benefit of expertise and experience of leading Dentists, both in the Government and in the private sector. One of the basic features of such camps was not only the provision of curative treatment but also what is more important, the imparting of dental health education, preventive in character, based on dental care and oral hygiene. This represents a significant breakthrough in the concept of transfer of technology and technological skills from urban elite to the rural poor. Today we read constantly of the ravages caused by poor dental hygiene and incorrect dietary habits which wreak havoc among children who fall a prey to dental caries.

Dental Health Education imparted to the people, especially the weaker sections of the community, thus goes a long way towards arresting and eliminating dental decay, thereby leading in turn to improved health and well-being of the community, especially the younger and more vulnerable sections.

I cannot stress in stronger terms the importance of preventive dentistry. I have often heard the statement that while dental diseases may not generally lead directly to mortality, the side effects of dental decay, which would impinge on the vital organs of the body, does lead to extreme morbidity and in some

cases to mortality itself. Indeed there is an old adage that "you dig your grave with your teeth," which very pithily puts the importance of dental good health for general well being and longevity. Dentists have, therefore, a very major role to perform in expeditiously locating the root of the infection and treat these in time, so that such interventions effectively lead to reduction in morbidity and thus indirectly to reduced mortality.

It is in this context that regular dental camps, including the provision of rural camps, would be of utmost importance and should be continued in the future, instead of being treated as a once for all attempt made in the euphoria of the Silver Jubilee Celebrations.

Now that your wing has attained the status of the Dental College such forays into the rural areas should be more frequent and should be imaginatively conducted so as to provide a lasting benefit to the vulnerable sections of our population. I would submit for your earnest consideration the chalking out of a programme for such regular camps on a year to year basis in consultation with the Directors of Medical Services and Public Health & Preventive Medicine so that teams of doctors can go on fixed dates to rural areas, after provision of adequate publicity, so that these

camps can attract the people in need of dental care in large numbers and would be productive instead of being merely publicity stunts.

Often in the papers and in medical magazines we come across reports that in Tamil Nadu there are pockets which have a high incidence of dental diseases, both in the form of caries and other dental problems. Ignorance, poverty, unhygienic habits, all contribute to a staggering figure of the diseases of the mouth, not encountered anywhere else in the world. Rough estimates have indicated that nearly 70% of our population are drinking unfluoridated water. All these call for dental health education which can lead to better oral health. Dental health programmes in schools and colleges; in urban areas and in rural Communities could ensure the spectacular reduction in the incidence of dental problems.

The newly created Dental College could effectively interact with the other medical colleges in the State and with the District Headquarters Hospitals so that these ideas could be effectively translated into action plans and implemented throughout the State.

The formation of a separate Dental College, without imaginative programmes and building up on its strengths and eliminating its weaknesses, cannot be an end in itself and may even prove self-defeating. If the College does not address itself to the task of providing the much needed direction in the field of curative, promotive and preventive dentistry the dental college would remain static without the dynamism and direction, which it would have intended to provide. This does not mean duplicating the resource facilities available in other institutions, notably the Madras Medical College Hospital. What the Government hope is that the Dental College would provide facilities for training service oriented Dental Surgeons who would provide the lead to the State and bring fame and name to their Alma Mater.

I find that Post Graduate Courses are already available in various specialities in the institution. Step by step, other specialities and super-specialities would also have to be



offered so that the College stands on its own legs. At the same time, research in various areas should not be neglected at the altar of financial self-improvement. The Dental Education itself needs to be restructured to suit the requirements of the community, especially the rural community. If we have to translate into action our cherished dream of bringing primary health care to all by 2000 A.D. as enshrined in the Alma Ata Declaration of 1978, we must think in terms of training and motivating a vast body of para-medicals who could be deployed in our rural areas, in our Primary Health Centres and sub-Centres. We must produce and gainfully employ auxilliary forces consisting of dental hygienists and dental mechanics. To these tasks your newly designated principal and his able colleagues must address themselves on a full time basis and most whole-heartedly.

I must also stress one other point; your link with the Madras Medical College has not been a tenuous one but is one which has been forged in the crucible of time and experience. This link should not be totally severed or weakened. I think a lot of clinical material is

available in that great institution which could be profitably used for the benefit of the dental students of the College. Till such time you get adequate space for beds to cater to the inpatients, the facilities available in the General Hospital would still have to be used. This aspect of the matter may also engage the attention of your Principa

I would also recommend for your consideration the Dental College conducting periodical refresher courses for Assistant Dental Surgeons based in other Government institutions as well as reorientation training for Dental Surgeons in the private sector. The support for this would certainly be provided by this Government.

Let me congratulate all of you who have worked with so much zeal and devotion to the cause of dentistry & dental education in this State and let me wish this institution all the best in the years to come in its endeavour to provide succour to the poor and needy of this State.

(Speech made at the inaugural function of the Dental College, Madras on



THE MADRAS DENTAL COLLEGE

Dr. B. P. RAJAN, B.Sc., M.D.S.

*Principal,
Madras Dental College.*

The Madras Dental College had its inception in 1953 in a small portion of the outpatient block of the Government General Hospital with just two staff members and 15 students. The first batch of Dental Graduates came out in 1957 and were immediately absorbed in the teaching cadre. When Post-graduate courses were started in the country the staff in this institution too took-up the post-graduate courses in new specialities.

From an intake of 15 students in 1953 for the composite Madras State the strength of undergraduate admission has risen to 40 per year for Tamil Nadu alone. As on date, there are about 300 students on the

roll. In 1966 post-graduate courses in oral surgery and periodontology were introduced. In addition, the college now conducts Master's Degree Courses in five different specialities of dentistry, with an intake of 21 post-graduate students per year. There are at present 30 post-graduate students in various specialities. The college has a sanctioned strength of 18 paid and 12 unpaid House surgeons, 21 Assistant Surgeons and 11 Civil Surgeons.

The advancement made in the field of Dentistry during the past twenty years surpasses all the progress that has been achieved in that discipline during the preceding hundred years. The Madras Dental College, for its part, is also sparing

no efforts to equip itself with sophisticated equipments as would facilitate rendering modern treatment, in keeping with the times.

The Rural Dental service was introduced in the State in 1956 and the staff and students of the College are actively involved in this scheme. A fully equipped mobile Dental van donated by the Government of Czechoslovakia has come in handy for implementing the above scheme. The College has plans to introduce community dentistry as part of B.D.S. Curriculum. There are proposals to send students and staff to the villages periodically to take up both preventive and curative treatments to the rural people.

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PLACEMENT ASSISTANCE TO THE PHYSICALLY HANDICAPPED

Tmt. Latika Padalkar, I.A.S.,
Director of
Employment and Training

THE process of physically handicapped rehabilitation consists of 5 distinct stages: (i) Medical (ii) Psychological (iii) Educational (iv) Vocational (Placement) and (v) Social. These stages are closely inter-related and profoundly influence the progress of each other. The rehabilitation process reaches its culmination in the ultimate social integration of the handicapped individual in the society and this in turn is aided by success achieved in the most crucial fourth stage viz., the Vocational and placement rehabilitation of the physically handicapped person. Placement rehabilitation means and includes selective fitting of a disabled person in a gainful employment either in an open industry or in a sheltered environment, choosing a job that best fits the handicapped person's residual abilities, mental make-up, physical build, educational background, and occupational preferences.

the area on the need and value of providing equal job opportunities to the disabled brethren, so that they could become productive citizens of the community, contributing their mite to the nation's wealth.

REGISTRATION & GUIDANCE

These Special Employment Exchanges render selective placement assistance by registering the under-mentioned categories of physically handicapped persons :

- (i) Blind— Including totally blind, partially blind and one eyed persons.
- (ii) Deaf— including deaf and dumb, deaf only, dumb and persons suffering

from various degrees of hearing loss.

(iii) Orthopaedically handicapped— covering all types of loss or disfigurements of muscles, bones and joints including hunch backs, dwarfs, club-feet, cleft palate, facial disfigurement cases etc.

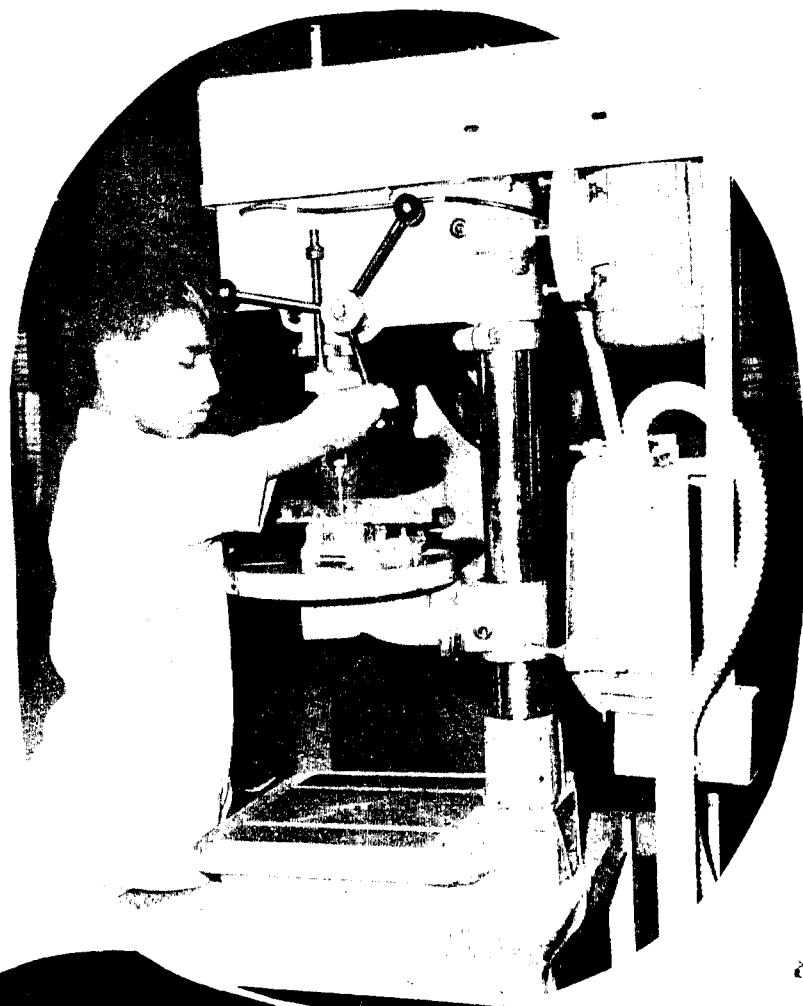
(iv) Leprosy cured persons whose finger extremities or bones have been lost

The Special Employment Exchange in Madras City set up on 1.4.1962 has been the first one to come into the scene in this State. Considering the growing need for selective placement assistance to the physically handicapped residing in the district, four more such special Employment Exchanges have been started as a Special Wing of the normal Employment Exchanges in the Districts of Coimbatore, and Madurai with effect from August '76 and from May '78 in Salem and Tiruchirappalli. The chief objectives of these Special Employment Exchanges are to educate and motivate the employers in



or deformed due to Hansen's disease.

The physically handicapped job seekers coming under the above mentioned categories are registered at Employment Exchanges. While registering the candidates, vocational guidance is also imparted to the job seekers so as to enable them to formulate realistic career plan for themselves. They are encouraged to take up some sort of training, either technical or non-technical, so that their chances of getting a job are brightened. On an average, the Special Employment Exchange in Madras City registers about 100 physically handicapped job seekers every month. This office registered 12,861 handicapped persons till 31-1-1980 from its inception on 1.4.62. Of them, 2060 are blind, 1670 are deaf and the rest are the orthopaedically handicapped. Invariably, all the job seekers calling at the Special Employment Exchanges are referred to the Vocational Rehabilitation Centre for the physically handicapped established by the Government of India at Guindy for undergoing 1-month evaluation. The findings of that evaluation aims in matching the subject's disability-



condition and psychological aptitudes and recommends suitable avocation for the individual. This is used by the Special Employment Exchanges in making more purposeful nominations of the Physically Handicapped persons to the employers.

REFERRALS :

The Special Employment Exchanges cull out extracts of vacancy notifications flowing into the local normal or general employment exchanges and sponsor the most suitable and fully qualified disabled registrants for employers' consideration and interviews. Wherever possible, such nominations are followed up with personal visits at officer's level, with a view to motivate and appeal to the particular appointing authorities to extend their helping hand. Besides, the Special Employment Exchanges also contact the employers, particularly in private sector to canvass job openings for the handicapped in their organisations. Wherever necessary, the Special Employment exchanges assist the employers in identifying suitable job openings where the disabled per-

sons can be productively employed by conducting job studies and job analysis. By means of these special efforts, the Special Employment Office for the Physically Handicapped in Madras City places in gainful employment about 30 persons on an average every month. Since its inception from 1.4.62, the Special Employment Office for Physically Handicapped at Madras has been successful in getting 3334 placings, of which 211 related to blind, 402 to deaf and 2721 to Orthopaedically Handicapped persons.

FOLLOW UP SERVICE AFTER PLACEMENT :

The placement of the handicapped in employment needs a close follow up to ensure that the individual is adjusting to his new work environment with his disabilities and to see how far he is able to discharge his duties. For this purpose an officer from the Special Employment Exchanges visits the work-spot where the disabled person has been placed and enters into dialogue both with the employer as well as with the handicapped employee to ensure that the subject is not facing or causing any adjustment problem in his new environment. The whole process aims in helping the disabled to settle down satisfactorily in their occupational career.

SELF EMPLOYMENT LOAN ASSISTANCE :

Salaried jobs alone may not be able to meet the menacing problem of growing unemployment prevailing in our economy, be it for normal bodied or handicapped. Self employment opportunities with its less capital investment and vast employment opportunities appears to be the only available panacea to tackle this tricky issue. Towards this end, the Special Employment Offices identifies the prospective entrepreneurs, counsel, and motivate them to take up self employment as a career and assist them to get loans from various banks particularly nationalised banks nearer to their shops or trade ventures. The Special Employment Office for Physically Handicapped in Madras City is actively concentrating in diverting a substantial number of Physically Handicapped to take up self employment ventures. From September '74 to January '80, a total of 205 handicapped persons have been

sanctioned low interest loans (4% p.a.) the loan amount aggregating to Rs. 3,93,067/-

OTHER ASSISTANCE RENDERED BY THE SPECIAL EMPLOYMENT EXCHANGES TO THE DISABLED :

In addition to regular placement service and help towards self employment scheme, the Special Employment Office for Physically Handicapped, Madras also engages itself in other projects to help rehabilitation of the handicapped. A few such schemes are mentioned below.

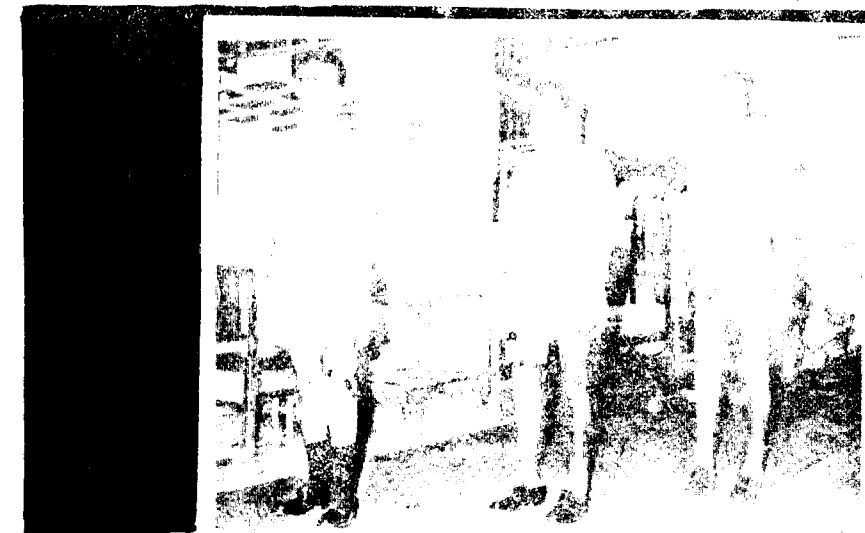
(i) The Special Employment Office in Madras city has been instrumental in forming a co-operative society for Blind Caners with 20 caners as its members. This society is now functioning inside

trainees are assisted in getting jobs in government Offices, firms or helped to execute binding job works on piece-rate basis.

(ii) The Special Employment Office for Physically Handicapped arranges for free medical examination of the Physically Handicapped candidates selected for posts in Group C and D cadres in Central Government/Central Quasi Government offices.

(iii) The Special Employment Exchanges recommend deserving and qualified cases to the Revenue Authorities for grant of an old age pension of Rs. 25/- p.m.

(iv) The Government of Tamil Nadu is implementing through the Directorate of Social Welfare, a Massive Bunk-cum-Stall scheme, under which the deserving and



the Vocational Rehabilitation Centre for Physically Handicapped.

(ii) The Special Employment Office in Madras City also canvasses, job orders in Book Binding and entrusts the work to the skilled handicapped binders who are given the binding charges on piece-rate basis.

(iii) A Book Binding Training Centre for the Physically Handicapped inside Madras Museum Compound is functioning under the Special Employment Office for Physically Handicapped. Sixteen handicapped persons (14 Orthopaedically Handicapped and 2 Blind) are imparted training in Book Binding Trade. The duration of training is 6 months. During this period, the trainees are paid a stipend of Rs. 50/- p.m. After successful completion of training, the ex-

interested Physically Handicapped youths are assisted to set up bunk-cum-stalls in various points of commercial interest in the State. The Government proposes to rehabilitate about 1000 physically handicapped entrepreneurs in this way. The selected handicapped beneficiaries are allotted bunk sites; pre-fabricated bunks are installed at the site and working capital is provided to the handicapped in each. In addition, the State Government is also granting Rs. 500/- as subsidy. A loan of Rs. 4000/- repayable in 60 months on a marginal interest of 4% p.a. is also arranged. The Special Employment Office, Madras assists interested disabled youth to benefit themselves under the scheme by recommending such cases to the Director of Social Welfare.

(vii) The Special Employment



Exchange is also assisting the disabled youth to join as apprentices under a "Special Apprenticeship Drive" to place the Physically Handicapped now being implemented through the Directorate of Social Welfare in Tamilnadu. Under this Scheme, the Government of Tamilnadu pays a stipend of Rs. 150/- p.m. for a period of 12 months for every handicapped apprentice recruited by an employer. This will be an incentive to the private employers to take up physically handicapped as apprentices. On satisfactory completion of this 'on the job' apprenticeship for 12 months, the employer undertakes to absorb the physically handicapped apprentices as a regular employee in his concern. The Special Employment Office in Madras City has so far placed 30 apprentices under this Special Programme.

(viii) The Special Employment Exchange also assists the blind to become Members of the Handloom Workshop for the blind proposed to be started very soon in Madurai.

(xi) The Special Employment Exchange assists the suitable and interested handicapped youths to get admitted into various training institutes in the area by keeping close and cordial liaison with all the training institutes/rehabilitation centres in the area.

(x) The Special Employment Exchange pays a sum of Rs. 2/- per head per day whenever handicapped job seekers are called for interviews by the Special Employment Officer.



(xi) The Special Employment Exchange reimburses the return journey by rail/bus fare, whenever blind call at the Employment Exchange for job assistance purpose.

(xii) The Special Employment Exchanges are actively implementing /helping the physically handicapped to benefit themselves by availing the various concessions granted by the Central Government/State Government.

The most important of them being:—

- Relaxation of upper age limit by 10 years.
- Grant of preferential treatment (priority III) in nomination of candidates by Employment Exchanges.
- Nomination of Physically Handicapped both for priority as well as for non-priority vacancies in State Services by Employment Exchanges.
- Exemptions from payment of application fees for appearing for Tamilnadu Public Service Commission Exams, if monthly income of Physically Handicapped persons is Rs. 200/- p.m. or less.
- Reservation of all vacancies for the posts of lift Operator for the Physically Handicapped in the State Service.

(f) Grant of Rs. 25/- p.m. as old age pension for physically handicapped destitutes.

(g) Free Travel concessions to blind persons in Madras City Bus Service.

(h) Preference in the matter of admission to Physically Handicapped in the Industrial Training Institutes for Training as artisans.

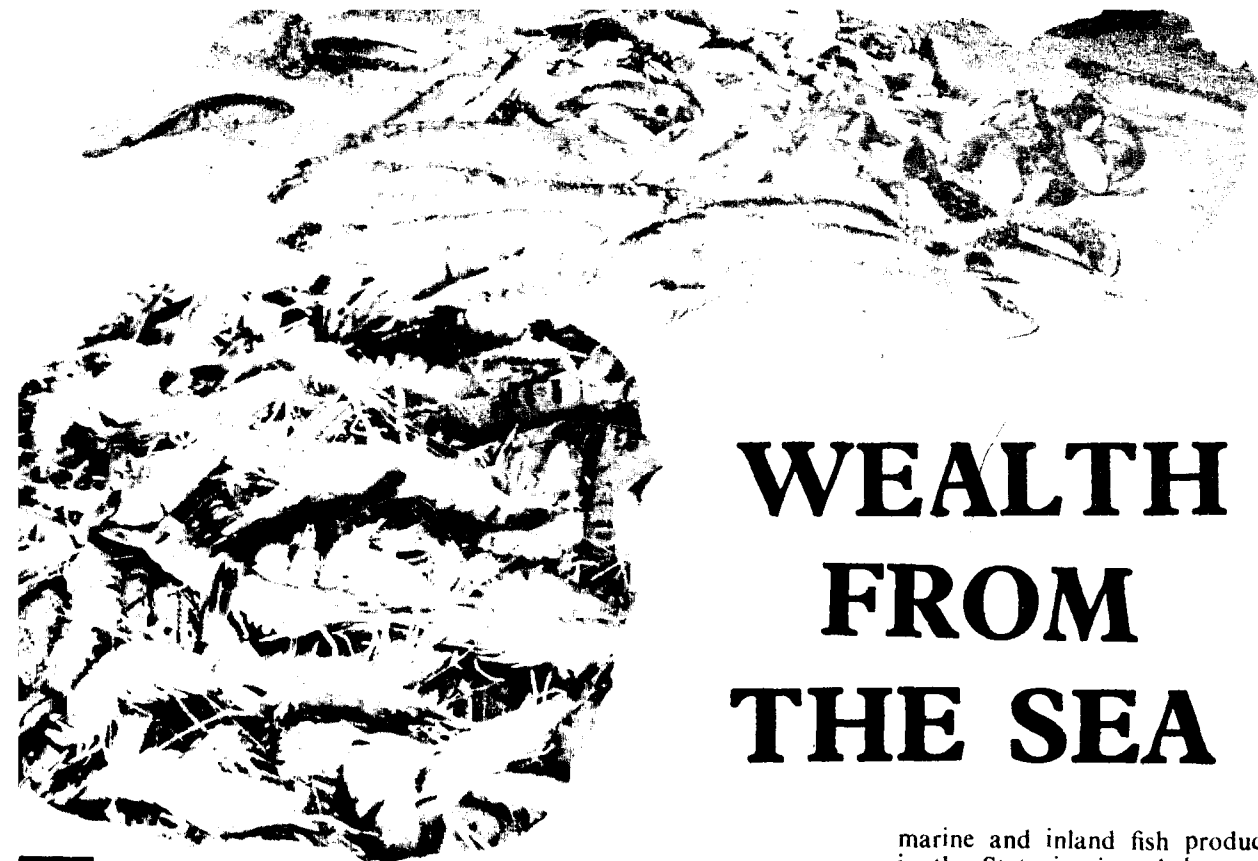
(i) Implementing the reservation of 3% of vacancies for the Physically Handicapped in the Central / Central Quasi Government.

(j) Exemption from passing typing tests for Physically Handicapped selected as Clerks in Central Government Offices, if their disabilities prevent them from requiring typing skill.

(k) Free Medical Examination of the Physically Handicapped selected for Group C & D posts under Central Government.

MANAGING OF THE REHABILITATION PROBLEM

Despite these programmes and concessions now under active implementation, the rehabilitation of physically handicapped continues to pose to be a massive socio-economic problem. More than 10,000 physically handicapped job seekers are on the rolls of the Employment Exchanges in the State. To tackle this socio-economic problem, speedily and effectively, it is necessary to mobilise help from all quarters, both from Government as well as private agencies / industrialists, etc. Every third Sunday in the month of March is being observed as the World Day of the disabled. One of the very basic objectives of celebrating the World Day of the Disabled is to kindle an awareness in the minds of the public at large to the worthy social obligation of lending a helping hand to our less fortunate brotherhood and infusing in their hearts a ray of cheer and hope. Let us remember what the handicapped want is not our alms or pity. But they need our helping hands to be used as crutches to stand on their own legs. Special Employment Offices in Tamilnadu are striving their best to fulfil this noble objective in their own humble way.



WEALTH FROM THE SEA

marine and inland fish production in the State is given below.

SHRIMP CULTURE

Scientific aquaculture is a profitable industry and is the hope of the future for augmenting fish production. Brackishwater prawn culture has gained momentum on account of the high unit value obtained for prawns, both in the internal and external markets. Tamilnadu has about 80,000 ha. of brackishwaters adjoining the sea shore, out of which, about 27,000 ha. can be readily utilised for prawn culture.

The Department had been doing considerable research work on the brackishwater fish culture in the pilot farms at Adyar (in Madras), Portonovo (South Arcot District) and Manakudi (Kanyakumari District). Two more such research units have been established one in Pulicat (Chingleput Dist.) and

Tamilnadu has a coastline of 1,000 kms. with a continental shelf of 41,412 sq.kms. It also has an inland waterspread of 3.51 lakh hectares. Tamilnadu is thus endowed with rich natural resources for both Marine and the Inland fisheries development.

Tamilnadu has not been lagging behind in taking efforts to tap these rich fishing resources.

FISH PRODUCTION

Fish production in Tamilnadu has increased from 0.82 lakh tonnes in 1951-52 to 3.70 lakh tonnes in 1978-79. Marine fish production increased from 0.46 lakh tonnes to 1.10 lakh tonnes, and the inland fish production from 0.36 lakh tonnes to 1.60 lakh tonnes during the same period. Tamilnadu stands third in Marine fish production, the first and second being Kerala and Maharashtra respectively and stands second in Inland fish production, the first being West Bengal and contributes about 16% to India's total fish production. The export of marine fishery products from Tamilnadu during 1978-79 is valued at Rs. 28.70 crores, as against Rs. 234.62 crores for the entire country.

The Fisheries Department of Tamilnadu, one of the oldest in the

Thiru C. CHELLAPPAN,
I. A. S.,
Director of Fisheries,

country, is the main administrative organisation responsible for developing the marine and inland fish potential of Tamilnadu.

The various schemes which are implemented by the Department of Fisheries and Tamilnadu Fisheries Development Corporation, which was started in 1974 aim at stepping up marine and inland fish production improving the living standards of small scale fishermen, increasing employment opportunities and supplying fish to the consumers at a reasonable price.

In Tamilnadu, there are 402 marine fishing villages wherein 3,37,713 fishermen are living. About 80,000 fishermen are actively engaged in marine fishing. They use traditional fishing crafts like catamarans (29,744) canoes (7,340) and various types of fishing nets. About 70% of the total marine fish production in Tamilnadu is accounted for by these traditional fishing crafts.

A brief account of the efforts taken by the State in stepping up the



another in Marakanam (South Arcot District.)

In Adyar, in a 1.14 ha pond, an yield of 515 Kgs ha of *Penaeus monodon* was obtained in 80 days with an average weight of 35 grams. In the same farm, an yield of 700 kgs/ha of *Penaeus indicus* was also obtained in the same period.

With the encouraging results obtained in the pilot experiments, large farms for commercial production of prawns are being established in Kovalam (36 ha) and in Killai (50 ha.)

Large number of private parties were interested in learning prawn culture techniques and in setting up prawn farms. In order to encourage and assist them, the Department of Fisheries arranged to give training for 80 persons and among them, about 59 persons availing themselves of these training have taken up prawn culture in brackish-water spread in Tamilnadu.

Recently, Government have ordered that brackishwater spreads which are away from the reach of the villages and where capital expenditure will be more should be exploited by the Government Agency (Fisheries Department) and the area close to the fishing villages should be allotted to Fishermen Cooperative Societies consisting of actual working fishermen as members. Following this policy, the Department had undertaken a survey to identify all suitable brackishwater spreads. In places where cooperative society could be formed enlisting active fishermen, the Department would provide them the required staff to give technical guidance in developing and managing the farms. The Department would also assist them to secure the required finance from institutional agencies, as the Government may not be able to provide the entire finance.

The Department is also taking action for setting up one hectare demonstration prawn culture farms in the following 10 places along the coastline of the state, in order to propagate the advantages and the sizeable return from the prawn farms established in brackishwater areas in the State.

1. Pulicat
2. Chemmencheri
3. T.V.S. Pettai

4. Tranquebar
5. Adirampattinam
6. Kattumavadi
7. Kannamunai
8. Veppalodai
9. Punnakayal
10. Rajakkamangalam

The Government have also sanctioned a scheme for training 600 rural youths in prawn farming in 10 selected centres. These measures, in course of time will help to utilise the extensive brackish-water areas for increasing the production of crustaceans in the State.

A major brackishwater fish farm extending over 50 hectares would be established at Adirampattinam in Thanjavur District under the plan scheme. Another one will come up at Karangadu in Ramanathapuram District, the latter under Draught prone scheme. Active fishermen in these two places would form cooperative societies and take up farming and exploitation with the guidance of the departmental staff.

FISH SEED PRODUCTION:

The total requirements of fish seeds to stock all culturable inland water spreads in the State, extending over 3.50 lakhs hectares has been estimated as 350 million of fingerlings. But the present level of production is only around 50 millions. It has therefore been proposed to step up the level of production to 150 million per annum within another 3 years. In order to achieve this, it has been proposed to develop additional nursery space of about 30 ha. to facilitate the additional production of 100 million fingerlings at a cost of about Rs. 100 lakhs.

But expanding the nurseries and other facilities in 8 existing induce carp spawning centres and by establishing two more new centres at Jedarpalayam and Upper Aliya the additional infrastructural facilities required will be created for this purpose.

FISH FARMERS DEVELOPMENT AGENCY:

The coordinated project for composite fish culture under ICAR has reported a production upto 900 Kgs. per ha. based on experiment conducted in small tanks of 0.1 and 0.2 ha. Even if such a result could not be achieved under actual field conditions in large water spread, a conservative production of 1,500 Kgs/ha. on an average in perennia and along seasonal water spreads is definitely possible with the dissemination of knowledge regarding scientific culture of inland water fish, like composite fish culture with artificial feeding. With this object in view the Fish Farmers' Development Agencies have been formed in this State.

The Fish Farmers' Development Agency envisages the adoption of a package of practices such as grant of long term lease of ponds, supply of inputs such as quality fish seeds, fertilizers, feeds etc. on subsidised cost, providing the latest technology in fish culture, extension services, institutional finance, training, marketing etc.

The Fish Farmers Development Agency sanctioned for Thanjavur District started functioning from 1976 while those in Tiruchy, Manadurai



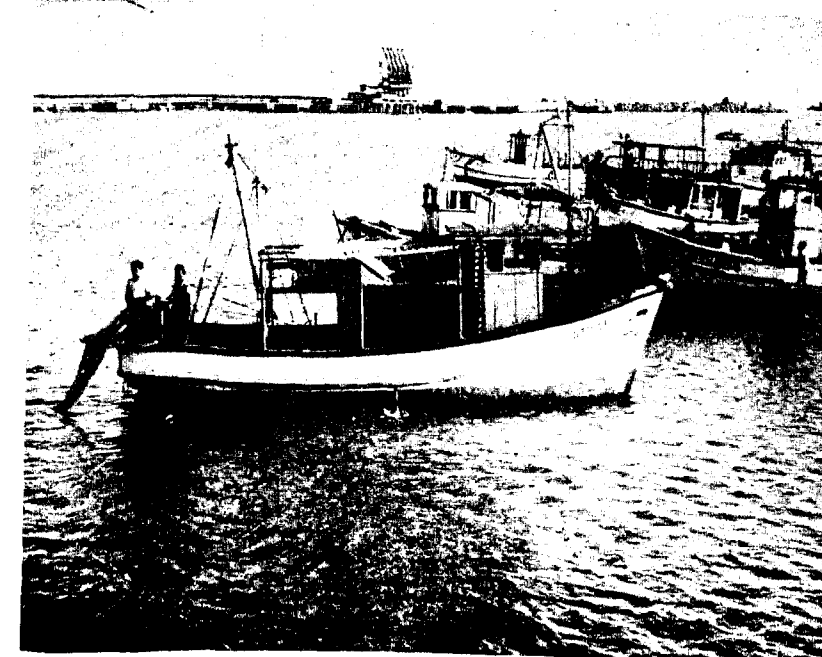
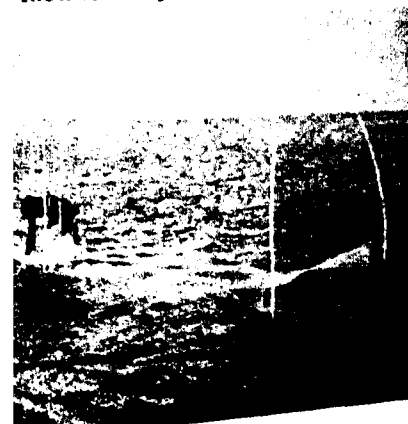
and Dharmapuri started functioning from 1978.

So far 359 fish farmers have been given training and 623.04 ha. ponds have been covered in the four Districts. The progress so far achieved by the Fish Farmers' Development Agencies is commendable.

Every one is convinced that through the Fish Farmers' Development Agencies, the inland fish production could be stepped up considerably, as individual fish farmer is made to take greater interest in stocking, rearing and exploitation. It has therefore been proposed to expand the programme to cover another 200 hectares in East Thanjavur and also to set up 3 more new agencies in the Districts of Tirunelveli, South Arcot and Chengalpattu during 1980-81. The development of inland fisheries through Fish Farmers Development Agencies provides vast scope for generating employment in the rural areas, because the inland water sources are scattered in the villages all over the State.

LANDING FACILITIES:

The Department has already established small landing jetties at Cuddalore, Nagapattinam, Mardapam and Rameswaram. A major fishing harbour has been developed at Tuticorin at a cost of Rs.210lakhs. Another major harbour is now



being developed at Madras at a cost of Rs. 1153.50 lakhs. Similarly, small jetties are also being developed at Kodikarai (14.40 lakhs) and at Mallipattinam (Rs. 10.60 lakhs) in Thanjavur District.

A proposal for developing a major fishing harbour at Chinnammattam in Kanyakumari District is under the consideration of the Government of India. A Master Plan for developing major, medium and minor landing facilities all along the coast line of Tamilnadu is now under examination.

HOUSING

A massive housing programme is being implemented by the Department through the agency of Tamilnadu Harijan Housing and Development Corporation to provide free housing facilities for the fishermen in all the marine fishing villages in the State. So far 3846 have been constructed under this programme. During the current year viz. 1979-80, a provision of Rs. 100.00 lakhs has been made for the execution of this programme.

INTRODUCTION OF FIBERGLASS BOATS:

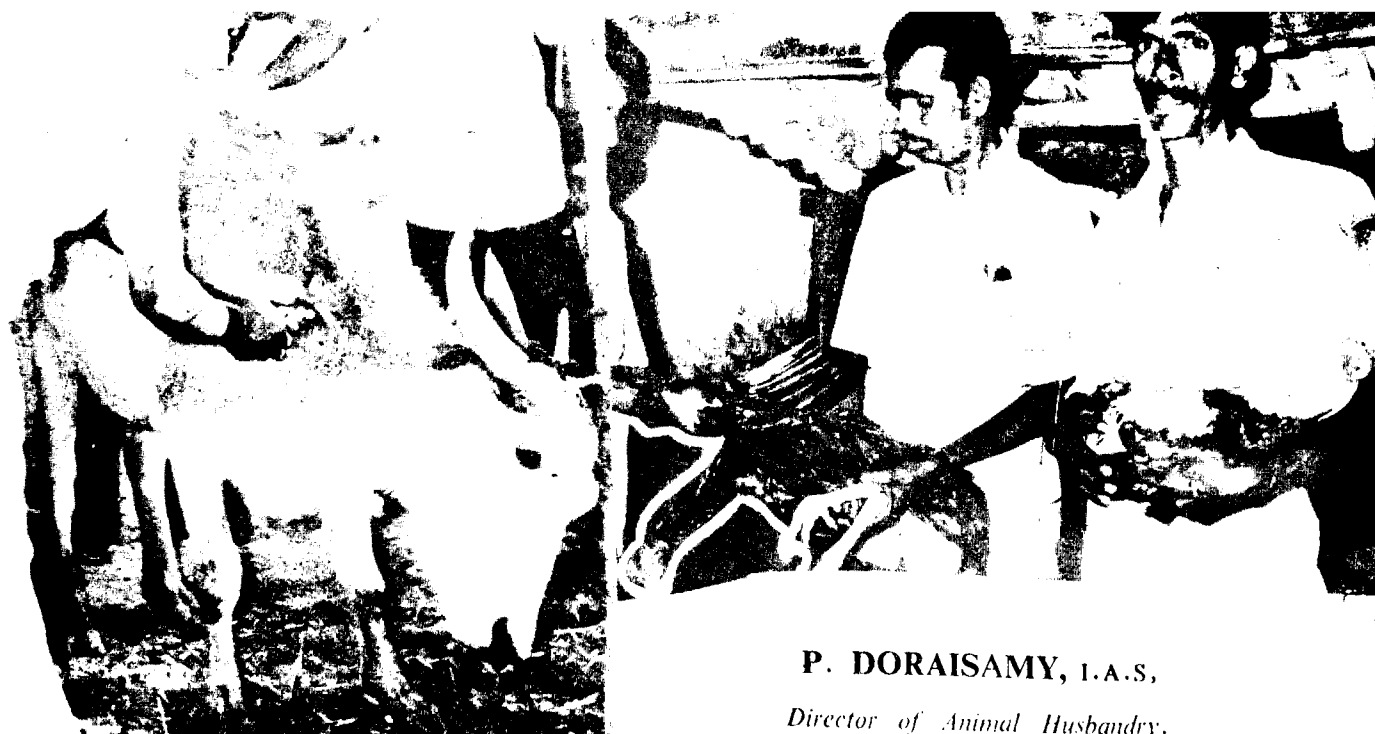
The Tamilnadu Fisheries Development Corporation has introduced a few small size fibre glass boats fitted with outboard motors to selected fishermen on an experimental measure and is watching their working and their economics. If

these experiments prove successful, the Tamilnadu Fisheries Development corporation will launch a massive programme of large scale introduction of fibreglass boats to increase the fish production and to improve the economic lot of small scale fishermen.

MARKETING:

Soon after the formation of the Tamilnadu Fisheries Development Corporation, the marketing activity has been taken up by them. With a view to supply the public at reasonable price, the Tamilnadu Fisheries Development Corporation has opened 34 retail fish stalls in Madras, Coimbatore, Udumalpet, Pollachi, Madurai and Palayamcottai, etc.

With improved technologies in production, processing, transport and-marketing, the Fisheries Department will make more and better quality fish available from trawler to table.



P. DORAISAMY, I.A.S.,

*Director of Animal Husbandry,
Madras.*

Animal Husbandry approach



Quite in keeping with the spirit and concept of Mahatma Gandhi's article of faith "Rural India is real India," Animal Husbandry Department has been in constant contact with the weaker and below the povertyline sections belonging to the remotest rural parts. The latest is the one relating to their mass contact programme conducted by the Department for Karappakkam and Sholinganallur villages, on 22nd and 23rd February 1980. The camp was arranged at Karappakkam Village. Wide publicity was given by the All India Radio for the camp. Over a thousand cattle were protected against the killer disease Rinderpest (Cattle Plague.) Hundreds of sheep and poultry were protected against worms and diseases. Quite a few farmers availed the opportunity of getting their animals operated upon for conditions of Chronic Luxation of Patella (Hind Legs), that had crippled their work animals. These apart, one team of Doctors conducted gynaecological examinations to solve problems of non-conception and absence of heat, infertile and infected genitalia of cows and buffaloes.

At a meeting the villagers were told how animals and birds were distributed at subsidised cost, about the credit facilities extended by schedule banks and how risks are covered by the Insurance Institutions, in addition to the health cover rendered by the Department through their field agencies.

Highly informative and educative pictures of the Information Divisions and Indian Council of Agriculture Research about Poultry Keeping, sheep and Dairy Farming, Piggery and raising fodder were screened till late in the night, to the delight of almost the entire rural folk. Sound public relations between the teachers and their wards were established. There has been tremendous response for such camps. The Animal Husbandry Department is pledged to dedicated but silent service to the masses through such programmes and to prove "Never was so much owed by so many to so few!"



World day of the disabled

A. PITCHAI, M.B.A.

*Secretary State Board
for the Handicapped*

The World Day of the Disabled is celebrated throughout the World on the 3rd Sunday of March every year. It was first organised by an International Organisation for Physically Handicapped in Italy on 28th March, 1960. This was done in co-ordination with the other International Agencies working for the rehabilitation of the handicapped in the world.

In India, the World Day of the Disabled was celebrated in 1964, but in Tamilnadu, we have been celebrating this since 1967.

The objects of the celebrations are :

- To focus the attention of the Public on the cause of rehabilitation of the Handicapped and the role and duty of the Society in the above cause.
- To integrate the handicapped with the non-handicapped.
- To bring the workers of all categories of the handicapped together viz. visually handicapped, hearing handicapped, mentally retarded, orthopaedically handicapped and leprosy affected.

As part of the World Day of the Disabled, a Sports meet for the Handicapped children was conducted on March, 15, 1980. The Handicapped children drawn from various institutions for the handicapped in





and around Madras City participated in the Sports meet. Five Rolling Shields/cups were awarded to the best institutions for the handicapped in Sports under each category of the Blind, the Deaf, the Orthopaedically Handicapped, the Leprosy-cured and the Mentally Retarded.

most efficient handicapped employee, the best teacher of the handicapped and the best training institution which imparts education training to the handicapped.

Other Awards :

The following Shields and Awards were also presented to the best employers and institutions for the handicapped.

Thiru A.M.M. Murugappa Chettiar Silver Rolling Shield was awarded to the employer who had given employment to the largest number of handicapped persons.

Rolling Shield donated by Lions Club of Madras-Pudur was presented to the institution which had put up the best performance among all categories of handicapped institutions.

National Awards :

The President of India gives awards to the best employers of the handicapped and the most efficient handicapped employees in India. Out of 36 National Awards presented by the President of India every year, Tamilnadu has won four awards this year.



STATE AWARDS

State Awards instituted by the Government of Tamilnadu were presented to the best employers who had given employment to the largest number of the handicapped, the



Over one-third of the population of Madras City, capital of Tamil Nadu, live in slums. Slums are mostly one-room huts, used as living room cum kitchen. Many slums are vulnerable to fire accidents and inundation.

A majority of the slum dwellers are daily wage earners who belong to low income groups, many of them coming from some of the most backward classes in the community.

The Government of Tamil Nadu decided to eliminate completely the 1202 and odd slums in Madras and constituted the Slum Clearance Board in 1970. The Board not only proceeded to re-settle the slum families in storeyed tenements equipped with basic amenities, but also established the New Residents Welfare Trust and enlisted the co-operation of various voluntary agencies in a determined bid to guide the 'new residents' to a higher standard of living.

PROJECT ORIGIN

The Government noticed the successful use by CARE of creative

advertisement techniques to spread nutrition awareness in their mass communication projects in Uttar Pradesh and Andhra Pradesh and decided to sponsor a one-year nutrition education project, in collaboration with CARE, in the first twelve slum clearance areas in Madras city.

SLUM CLEARANCE NUTRITION PROJECT

Nutrition surveys have established that ignorance is at the root of much avoidable malnutrition even among the low income groups in the population. Food fads and prejudices, disregard of mother and child care practices, neglect of personal hygiene and sanitation have been the direct cause of many nutritional and nutrition related disorders among the vulnerable groups.

There are three sections of the population which are particularly vulnerable nutritionally:

- infants from 6 months to 2 years
- pre-schoolers from 3 to 5 years.

- pregnant and lactating mothers.

The nutrition education programme is directed generally towards the slum clearance families and specifically towards the vulnerable groups above. The mothers are the prime focus of education programming. The project aims not only at extending awareness of nutrition but also at 'habit change' i.e. the inculcation of right habits in place of harmful ones. The project goals are:

- to promote an awareness of the concept of better nutrition.
- to promote an awareness of the priority needs of the pregnant/lactating mother and the weaning infant.
- to promote an awareness of the close interrelationship between nutrition, sanitation, health care and health.
- to motivate the mothers to 'habit change' in the light of the extended awareness as above.

In view of the low income status of the target population families, particular care is taken to recommend only such dietary and other practices as are within the means of the average family. Education also enables the new residents to look for and take advantage of health and medicare programmes sponsored by welfare agencies in their areas, which they may have failed to avail of thus far, owing to ignorance, neglect or prejudice.

The project educational messages are :

a. Nutrition

- i A pregnant mother needs to eat for two and should include green leafy vegetables in her daily diet.
- ii An infant's diet should include solid food from the age of 6 months onwards.
- iii The school lunch is a supplement and not a substitute ; a pre - schooler should be helped to eat a little more of what he normally eats, more frequently.
- iv Breast-feed the child as long as you can.
- v A lactating mother needs even more food than the pregnant mother.
- vi Mixed cereal diet / tuber vegetables should be consumed.

b. Health

- i A pregnant mother should have regular medical check-up; avail of the existing health care services.
- ii Have your children immunised ;avail of existing facilities for deworming, administration of Vitamin-A and iron & folic acid, available from the nearest Corporation maternity centres.
- iii Do not starve a child during diarrhoea or fever; take the child to a regular doctor for advice and treatment.
- iv Lactating mother must, for the sake of the young infant, take proper care-get post natal check-ups done.

c. Sanitation

- i Keep home, surroundings and person clean.



- ii Keep food and drinking water covered.
- iii Wash hands before feeding the child and before eating or handling foods ready to be eaten.
- iv Do not let a child defecate in all places, toilet train your child.

d. others

- i Importance of periodic weight assessment for a pre-school child.

PROJECT COMPONENTS

1. Education Channels



Mass media and extension education are the two channels of imparting nutrition education to the target population. Extension is central to the project. Mass media supports and sustains the extension effort.

2. Extension Educators

The extension educators are young women drawn from the project areas with 8 to 10 years of formal schooling. A two week training was arranged for 25 selected women in the basics of nutrition practices and recipe demonstration by the Mobile Extension Unit of the Government of India. For an additional two weeks, the girls were trained



on-the-job in the project areas on an assignment of target population enumeration as part of a benchmark survey. The final selection of 22 women for appointment as extension educators was made at a subsequent interview. A two months' intensive training followed, in hospital practicals and theory and practice of nutrition extension techniques at the Sri Avinashilingam Home Science College, Institute of Child Health, Mothers Clinics and lastly at the individual Day Care Centres in the project areas. Thereafter, every year since 1971 these 22 workers undergo reorientation training course. A training allowance of Rs. 50/- per month plus actual bus fare to and from residence was paid during the initial training

period of 4 weeks. They draw an honorarium of Rs. 115/- per month for work as Extension Educators.

The work of the extension educators is supervised by a Nutritionist, who is a graduate in Nutrition. The Nutritionist meets the extension educators weekly and prepares a monthly report of the activities accomplished.

3. Extension Work

House visits and group demonstration meetings comprise the twin vehicles of extension education. Each worker makes 180 individual contacts per month, each mother being visited at least once a month.



Low cost demonstration recipes are also taught at Group meetings.

House visits and group demonstrations are scheduled for three quarters, or nine months, during the project year. All the mothers in the project areas are divided into groups of approximately thirty mothers, each. Thus, all the mothers in the project areas are exposed to the educational messages through group meetings / individual contacts subject, of course, to their regularity in attendance. In addition to these contacts, the extension educator makes selective house visits and contacts the pregnant/lactating mothers, mothers of pre-schoolers influential, opinion-changers and progressives.

4. Media

a. Films

An audio visual van, complete with a 16 mm projector, filmstrip cum slide projector and public address system, is in use in the project areas. Film shows are programmed once a month in each project area. A film programme normally lasts about an hour and a half and consists of two entertainment shorts plus three nutrition education shorts. The Telugu film produced by CARE for the mass communication project in Andhra Pradesh has been dubbed into Tamil, and proved to be very successful. CARE-Tamil Nadu then produced colour films in Tamil on Vitamin-A, family planning and nutrition/health /sanitation, which have proved to be very popular with the audience. In addition, selected film shorts are borrowed from the State Health Education Bureau and Directorate of Information & Public Relations.

b. Puppet shows/Villu Pattu

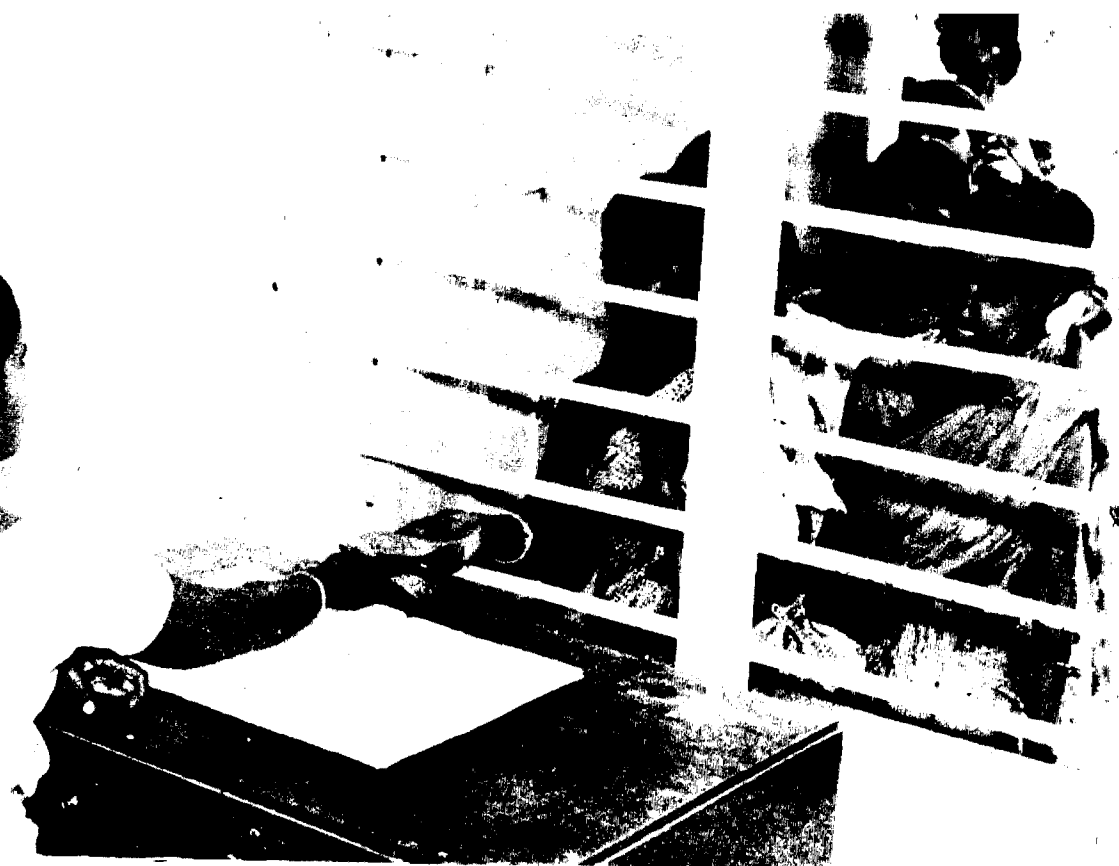
In an innovative breakthrough in education through entertainment, the project hired talented folk artistes and developed song and puppet shows to project the educational messages of the project. Care was taken to present the effects of good nutrition. These are immensely popular among the target group.

c. Hoardings

Environmental sanitation is the theme. One hoarding is displayed in each of the 28 areas.

d. Radio dramas

A popular soap opera type 20-week serial is broadcast over the All



India Radio every Saturday. CARE has assisted in the production of these dramas.

PROJECT EVALUATION

1. Benchmark Survey

This was conducted before the commencement of the campaign in order to determine the pre-project levels of knowledge, attitude and practice in respect of the educational messages. The report is available.

2. Mid Term Survey

This survey is scheduled to be conducted in May/June 1981 when 3 years of programming will have been completed.

3. Final Evaluation Survey

As for the benchmark, both quantitative and qualitative methods will be used. These will be conducted on the conclusion of the campaign at the end of the 5th year.

SUPPLEMENTARY ACTIVITIES

The Institute of Child Health and Hospital for children has come forward generously with assistance in the administration of immunizations, clinical assessment and deworming, and also DPT and Polio vaccine administration. Referrals for ailments are

made to nearby Corporation dispensaries and health centres.

PROJECT EXPENDITURE

The Slum Clearance Nutrition Project is jointly funded by the Government of Tamil Nadu and CARE. CARE's contribution of Rs. 1,00,000/- every year is towards M & E inputs like media, Stationary items, drugs and vaccines. This is apart from CARE's P&O expenses (budgetted at Rs. 15,000/- for FY-80). The Government of Tamil Nadu contributed Rs. 64,000/- towards cooking demonstrations, screening of films, transportation costs (mobile film unit van), salaries of 22 Nutrition Workers, 1 Project Nutritionist and the film projection staff.

PROJECT ADMINISTRATION

The project is administered by the Department of Social Welfare and CARE. The Institute of Child Health, Madras, plays a major role in the administration of the health/medical inputs of the project. CARE's Coordinator of Extension Educators play a leading role in the weekly deliberations and project implementation.

HIGHLIGHTS & HARDNUTS

The selection of local girls for appointment as extension educators

bids fair to be a main highlight in the project endeavours. Coming from the same areas, the girls needed no special training or culture orientation to strike rapport with the slum clearance families, which is no small advantage.

The sharp increase in the cost of living is a big hurdle. It accentuates the need for nutrition education on the one hand, but on the other, cuts at the roots of the community's enthusiasm for a nutrition programme.

CARE has consistently sought ways and means of cutting costs and avoiding duplication. The collaboration with various government and other agencies in project training and education programmes, which resulted from CARE's initiative has helped cut costs and further increased the resource base for the project.

PROJECT CONTINUITY:

India's annual rolling plan lays special stress on the importance of nutrition programming. Government of Tamil Nadu has a nutrition plan for the whole state, which plan includes nutrition education. Accordingly, Government of Tamil Nadu and CARE have held discussions and concurred on the continuation of the project duration to effect habit change.

REHABILITATION OF THE HANDICAPPED



R. NARASIMHAN

Superintendent, Vocational Rehabilitation Centre for Physically Handicapped, Government of India.

Even while the world is celebrating the World Day for the Disabled on the third Sunday of March, there are still a large number of physically handicapped as well as public who are unaware of the facilities available for physically handicapped. That the handicapped are objects of charity and pity is no more tenable in a futuristic society looking forward to restoration of the dignity of man. This presupposes that the handicapped are to be afforded opportunities to work and that rehabilitation facilities are to be opened to ensure this. Rehabilitation is a generic term covering the continuous medical, paramedical and vocational processes through which a person disabled by congenital causes, injury or illness can, to the extent possible achieve his full acceptance as a working member of the society.

With this as the objective, various voluntary organisations and the Governments, both State and Central have opened up facilities to help the handicapped. The Government role in the rehabilitation of the handicapped started in 1959 with the opening of Special Employment Exchange for Physically Handicapped at Bombay and subsequently at all State capitals and a few large cities including Madras and Madurai. While these Special Employment Exchanges registered and took special

care to place the handicapped, they lacked the personnel and technology to scientifically assess the medical, psychological and vocational needs of the handicapped. The Government of India therefore opened Vocational Rehabilitation Centres at different places which have specially qualified personnel to assess the aptitude, physical and mental capabilities of the handicapped and where the physically handicapped are given an opportunity of vocational exploration through the use of real or simulated work samples, vis-a-vis jobs. One such Centre established at Madras in May 1976 has been able to assess 2371 handicapped persons up to January 1980 and assist in the placement of 534 persons in training Institutes, 599 in jobs and 259 in self-employment. All this could be achieved by maintaining a continuous and sustained relationship with various rehabilitation agencies, other professionals, organisations, and employers for placement and on-the-job training sites.

More than establishing these contacts any rehabilitation agency should be involved in education of the



and are paid a stipend of Rs. 100/- p.m. The Centre was also able to procure scholarships from various voluntary agencies such as the Lions Club and Rotary Club to those under-going training in regular training institutions under a Special Adoption Scheme. The Centre has so far helped 97 persons under this Scheme with a financial assistance to the tune of Rs. 1,02,500/-.

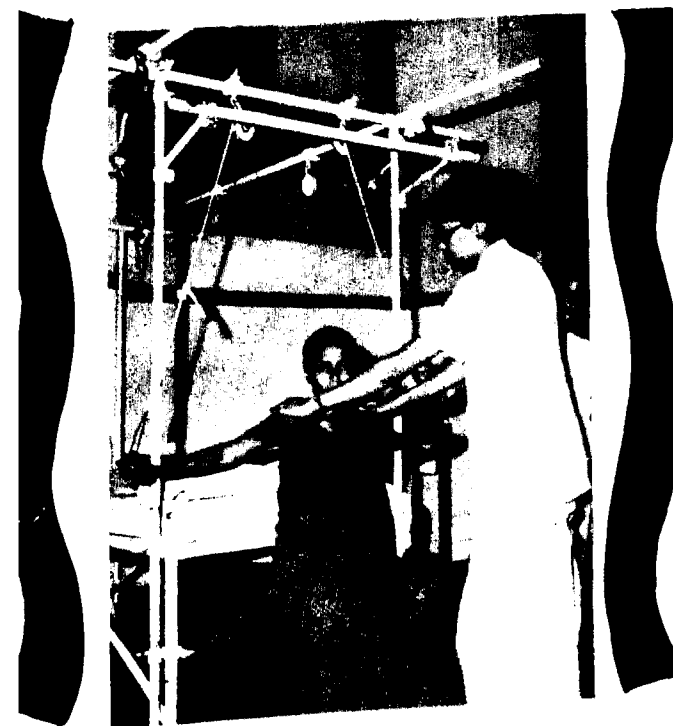
For those who are residing outside Madras City a Scheme of self-employment has been started through which the handicapped could correspond with the Centre for financial assistance. The Centre has helped 54 persons for self-employment under this scheme. Rehabilitation Camps are organised with co-ordination from Lions Clubs or Rotary Clubs by which the services of the Centre are taken to the Villages.

The Centre also has been responsible for the formation of a physically Handicapped Welfare Co-operative Society including 22 blind persons who take up job orders for recaning of chairs. A Transformer Unit consisting of 6 persons was added to it in September 1979, which is getting assistance from the Centre in pro-



community and work as a public relation agency to the cause of the handicapped. Besides this, they should act as catalysts in bringing together organisations to provide concerted and effective service to the handicapped. A review of the activities of the Vocational Rehabilitation Centre at Madras and the various other efforts taken up by the Government at the Centre and the State level would be relevant at this stage.

The Centre admits the blind, deaf and orthopaedically handicapped people for one month and after assessing their needs provide rehabilitation assistance in the form of appliances, opportunities for training, placement in job or procure finance for self-employment. They are also paid a stipend of Rs. 70 during this period. Those who are educationally less qualified to attend regular training institutions but are found to have necessary aptitude are admitted to the Centre for a non-formal training for one year in trades such as radio repair, coil winding, carpentry, turning, fitting, welding, cutting and tailoring and silk screen printing



curing job orders. A third unit, the Screening Printing unit, consisting of another six handicapped persons was inaugurated on 14.3.1980, on which date the 'World Day for the Disabled' was celebrated.

While the Vocational Rehabilitation Centre was able to procure Rs. 3,88,305/- towards Self-employment and Rs. 2,26,331.43 under other assistance such as job orders, adoption and for appliances, the State Government also has not lagged behind. Tamil nadu takes the pride of place in being the only State Government to have established a State Board for the Handicapped to look after the rehabilitation needs of the physically handicapped in the State and the only State to have taken a census of the handicapped. Besides the Special Employment Exchange at Madras financed by the Central Government, the State has opened up Special Cell, in the District Employment Exchange at Madurai, Trichy, Coimbatore, and Salem. With a total live register of the Physically handicapped in the State at the different employment exchanges at 4566 the State has also taken up a massive programme of providing bunk stalls, calipers, tricycles and hearing

aids. A Modern Training cum production Centre has been opened to train and absorb the physically handicapped in trades such as Sheet metal work, turning and fitting. Various other concessions such as scholarships, priority in submission, age relaxation by ten years for entry to Government service provided by the Central Government have already been extended to the handicapped in the State. There is also a move to extend the 3% reservation made by the Centre.

According to the available statistics only 4566 are registered at Employment exchanges forming a meagre 8% of the total physically handicapped population in the state. A random analysis of those admitted to Vocational Rehabilitation Centre indicated that over 53% are less than S.S.L.C, and almost all of them aspire for a Government job and prefer a white collar one. One of the most important problem that the placement agencies such as the Self Employment Exchange and Vocational Rehabilitation Centre face is the disinclination (though physically capable) on the part of the physically handicapped person to work as a blue collared worker and go to a workspot even a couple of Kilo Metres away. There is a need to change this attitude among the physically handicapped. Beside this, the over ambitiousness of the worker and expecting concessions in terms of punctuality, extra salary have hampered the placement efforts. At the other hand of the spectrum is the reluctance of some employers to engage the handicapped on the plea that they are useless and cannot do anything. There is therefore a need to resort to mass education in clearing some of these misconceptions on the part of employers as well as educating the handicapped that they should be realistic in their outlook. Satisfactory placement of a handicapped person has never failed to open up new opportunities for others.



TAMILNADU GOVERNMENT SERVANTS GENERAL PROVIDENT FUND

A friend stands by one in distress and one's savings help one in need. All are aware that a fixed percentage of a Government servant's monthly salary is withheld and credited to the Tamil Nadu Government Servants' General Provident Fund. This savings helps a Government servant in need like a true friend. It is of immense help to him for the higher education of his children, for meeting the marriage expenses of his daughter, for purchasing house sites and constructing houses and is very useful to him after he retires from service. It also saves the family from distress in case of untimely death of the Government servant.

After the close of each financial year, the Accountant General, Madras sends to the subscriber to this fund an Account Slip indicating the subscription for the year, withdrawal, the interest credited and the balance due to his credit in the Fund Account. Details of the months in which the credits are missing in his account are also indicated and the concerned subscribers are asked to communicate to the Accountant General immediately omissions, if any, noticed in the details furnished in the Account Slip. While writing to the Accountant General, they are requested to furnish, in case of missing credits, details of the pay bills in which deductions were made,

the treasury voucher number etc. But excepting in a few cases, the response is very poor. Omission to take timely action entails much delay in finalising the Provident Fund Account at the time of retirement of the Government servant. To avoid this, it is essential that in respect of missing credits, the required details are furnished to the Accountant General soon on receipt of the Account Slips. Lapse of time also renders collection of the relevant details later difficult.

We have also now taken up a review of the missing credits for the entire span of service of the subscribers to end of March 1978. After review, a statement showing the missing credits for all the earlier years is prepared and arranged to be communicated to the subscribers. In the review completed so far (31.1.1980), in respect of 1,32,000 subscribers, relating to nine departments, viz., Registration, Land Revenue, Commercial Taxes, Judicial, Jails, General Administration, All India Service Officers, Stationary and Printing and Miscellaneous departments, missing credits have been noticed in respect of 73,000 subscribers. The statements containing the details of missing credits have been sent in these cases along with the Account slips for the year 78-79 or by special letters. The subscribers have also been requested to intimate the Accountant General the

details of deduction with particulars of the relevant pay bills, if G. P. Fund deductions have actually been made in respect of the cases of missing credits shown in the statement. The State Government have also nominated Liaison Officers in various departments for rendering assistance for this purpose. Though the special statements have been sent to 73,000 subscribers, replies have been received only from 6,720 and even in these cases for want of full details, the accounts of 2,000 subscribers only could be set right.

The extent of cooperation forthcoming from the subscribers decides the success of the scheme. The quickness with which the Accounts are set right depends on how soon the required particulars for the missing credits are furnished. Subscribers are requested to avail of this opportunity and furnish the required details immediately. By setting right the subscribers accounts, we have a satisfaction of seeing the scheme yield the desired results and the subscriber is happy to see that all his subscribers have been correctly credited to his account. Further this renders possible settlement of the G.P. Fund Accounts soon on retirement. The subscribers to the G.P. Fund are therefore requested to help us and give their share of cooperation without reservation to render the review a success.

PREVENT
FIRES
TO
AVOID
PERIL



N. DEVASAHAYAM, I.F.S.,
Director of Fire services.

FIRE in an uncontrolled form proves dangerous to life and property. While fire cannot be avoided as it is an essential ingredient of our living, it can well be prevented from assuming the dangerous forms it occasionally takes. A quotation from Shakespeare may not be out of place here.

"A little fire is quickly trodden out,
which, being suffered, rivers
cannot quench."

With the advancement of urban civilisation and the rapid growth of modern towns and cities, along with the attendant growth in the density of population and the number of hutments, fire unrestrained is a potential danger to life and property, especially in the context of houses and hutments being built with combustible materials in larger numbers. Presence of highly inflammable materials like petrol, kerosene and gas-cylinders add greatly to the hazards of fire. However, fire unlike many other calamities does not occur of its own accord except in a rare lightning stroke or equally rare forest fire caused by violent rubbing of trees. Hence it is quite possible to be free from fire mishaps if necessary precautions are taken in time and rigid discipline adopted while handling fire-prone articles. Preventive action is two fold—the preventive action adopted by the public and the part played by the techni-

cally qualified members of the fire service. Human carelessness, deliberate arson, faulty electric fittings etc, are the main causes of fire accidents. Of all these, human carelessness can be classified as the major factor in the bulk of fire accidents.

Statistics reveal that almost in every country fire accidents in dwelling areas account for a very high percentage, about 80%, while the remainder are equally distributed to industrial areas, public places etc. Hence it is imperative that more care and preventive action are taken in the dwelling areas. Like many other developing countries, India too has many problems as far as construction of dwelling houses are concerned. For cheapness in house construction people have to depend more on combustible materials like leaves, grass, wood, etc.,. Closely clustered houses and ill-planned townships encourage quick spread of fire. Construction of houses and setting up of colonies in a planned manner would reduce to the minimum the scope for fire outbreak as well as its spreading.

Fire protective pastes or even liquid lime coats may be smeared on inflammable thatched roofs as a measure of fire proof protection. Concrete has been found to be a good fire resistant. It is advisable therefore that these materials are freely used in the construction of

buildings and hutments. Ovens and cooking gadgets must be so placed that fire cannot spread to loosely hanging articles, roofs etc. Electrical wires and switches noticed in a deteriorated or damaged condition must be replaced without delay. Avoidance of inflammable clothes like Polyester, nylon etc., while engaged in cooking or heating operations, will add to fire safety. It is important that people should desist from the habits of throwing cigarette butts carelessly around and smoking in bed. Children should not be allowed to play about with crackers and match-sticks. If care is not taken to close the stoppers in the gas cookers properly, gas escapes and its very invisibility provides for a fire hazard that would at once be highly dangerous and explosive. These precautionary measures are well within the reach of the public who would do well not only to rigidly follow them but advise the children and neighbours also to adopt them. The fire service personnel for their part are advising the public during their rounds as well as through various media like press, radio, television, etc., whenever occasion arises. The Fire Service Day celebrated every year must be fully utilised in this regard. This year's motto for the Fire Service Day is "Prevent Fires to avoid Fire Fighting", which explains for itself. If as per the above motto fire fighting could be avoided at both the public

and fire service levels, it would mean that the public have to become aware of the perils of fire hazard and the precautionary measures to be adopted.

As far as multi-storeyed complexes of dwelling houses are concerned, there are certain precautions to be mandatorily followed in them for better fire protection. The buildings are normally in cement concrete and so afford fire protection, but furnishings with modern draperies in polyester, wooden furniture, gas stoves, electrical gadgets etc, have in them the potential for great fire risks. The staircases and lifts are normally inside the buildings and do not have enough space to accommodate a great number of persons at the same time. Hence provision of spare escape routes in these types of buildings are to be conceived in the construction stage itself. The multi-storeyed buildings should be provided with sufficient number of fire extinguishers for use at the time of out break of a fire. In centrally air-conditioned buildings fire detectors as well as automatic sprinklers should be installed as a way of fire protection. Segmentation in air conditioning ducts will reduce the possibility of spreading of fire from one room to another.

In public places and industries the appropriate Government machinery ensures certain safeguards in fire protection by insisting on provision of fire fighting equipments and proper construction free from fire hazards, which become a necessary condition, for the issue of a No Objection Certificate by the Fire Service and the Explosive Department.



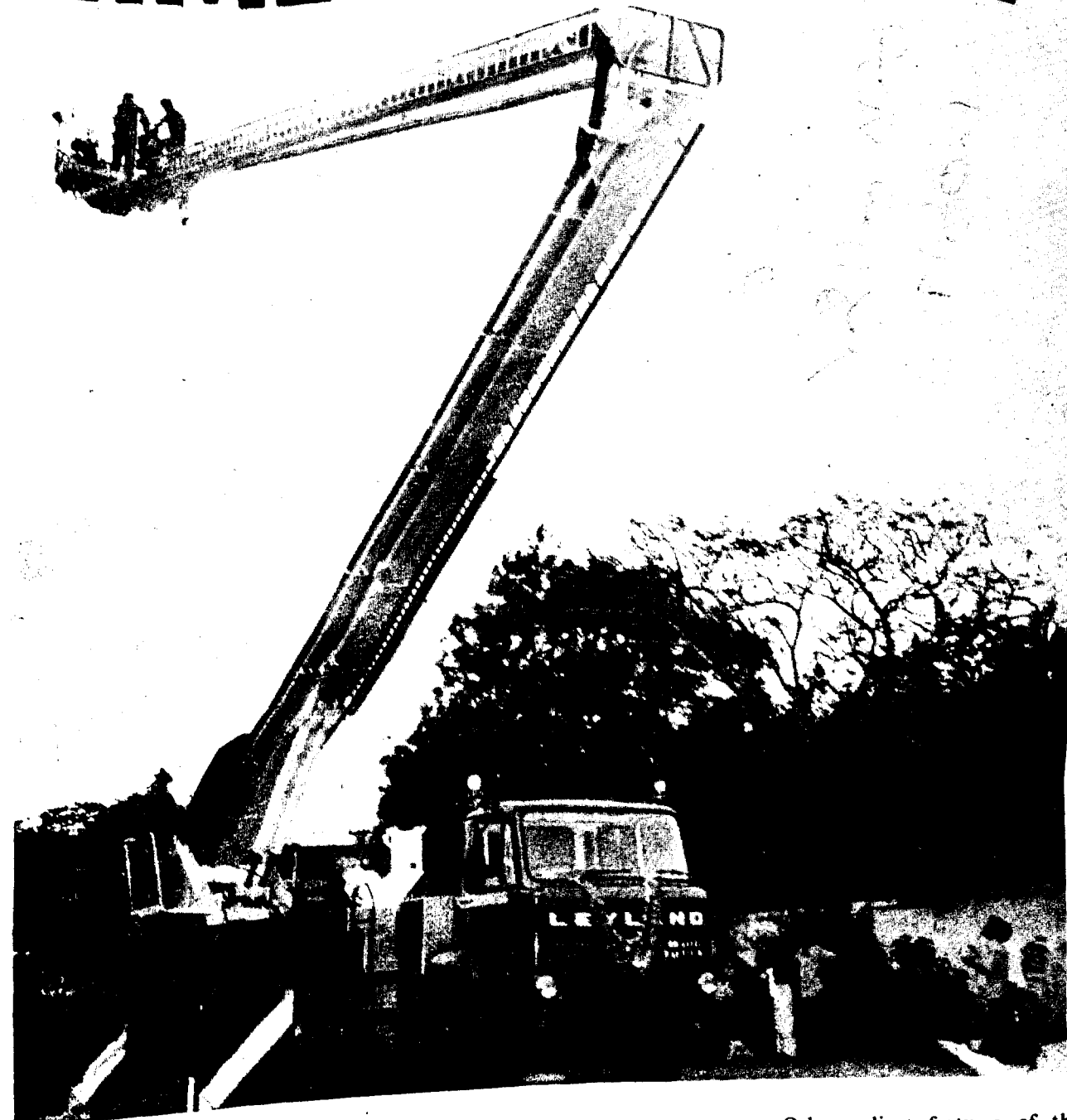
ments. Even so, it is to be stated that mere observance of these regulations would not by themselves be fully effective, unless the people who frequent these public places are fire conscious and trained to handle the fire equipments available in case of an emergency. The explosive areas in industrial complexes must be well secured and properly guarded from public access.

Sufficient importance should be given in schools and colleges towards imparting knowledge on fire cons-

ciousness by introducing such a syllabus in the curriculum. In certain advanced countries this sort of education is already in existence and it may be emulated in our country with advantage.

The Fire Service Department in the State of Tamil Nadu is the biggest in India with 108 Fire Stations, with 21 more fire stations to be opened shortly. The State District and Taluk headquarters and many key villages in the State are provided with fire stations. Tourist centres like Rameshwaram, Tiruchendur, Kanyakumari and Kodaikanal will also be provided with fire stations soon. A sophisticated vehicle "SNORKEL", costing about Rs. 42 lakhs with an extension ladder to a height of 103' and a revolutionary orbit of 360°, has been recently secured at the State headquarters. The Fire Service Department in the State could claim itself to be well equipped and trained for extending full assistance to the public in the event of a fire. With such advanced technology and well-trained personnel to operate it having been made available to it, the fire-service department is envisaging a future in which fire hazards in the state will be reduced to a great extent with the public extending its co-operation by observing the necessary precautionary measures.

SIMON SNORKEL



THE State Fire Service now has a prized possession - a hydraulic platform, three booms of which can go upto a height of 103 ft. to fight fire in high-rise buildings for rescue of victims.

"Simon Snorkel" as it is called has been imported from the U.K. at a cost of a little over Rs. 42 Lakhs.

It consists of hydraulically operated and articulated booms built into a turntable. The whole unit can be mounted on a carrying vehicle-a truck, lorry or any other type of vehicle. The booms can be raised simultaneously under the control of the operator and the turntable rotates in vertical and horizontal movement by simple control.

Other salient features of the new machines are the capacity to carry seven persons at a time, ability to throw heavy jets of water at any angle even while moving, capacity to reach widest range of position without having to move forward and elevated entry point into buildings with connections for houses, breathing apparatus, power tools and equipment as also escape route for victims.



it's time for a beautiful change

CO-OPTEX

Wipe-Easy Towel

Export quality.
100% Cotton.
Handwoven towels.
Wipes the wetness clean.
Quick Easy.



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*Delay the first
Space the Second
Stop the third*

