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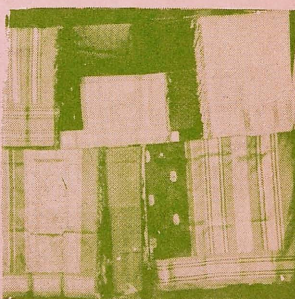
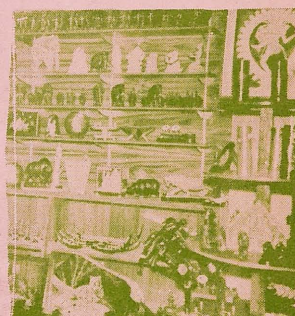
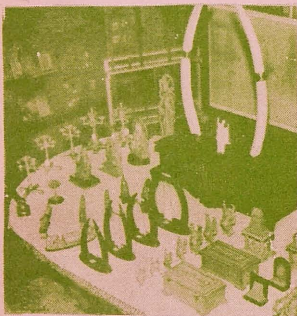
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MUTHU



Dr. M. Karunanidhi, Chief Minister, is seen greeting Dr. V. R. Nedunchezhiyan, Minister for Education, on the latter's 54th birth day on 11th July 1973.

Tamil Arasu

Vol. IV

AUGUST, 1973

Issue 2

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SILVER JUBILEE INDEPENDENCE YEAR AWARDS.

Thirumathi Sathyavanimuthu, Minister for Harijan Welfare, is seen handing over the Tamra Patrams to the Freedom Fighters at Cuddalore on 6th July, 1973.

A FRIEND OF MUSLIMS INDEED IS KARUNA

For long, Urdu lovers were disheartened
Karuna has made their hearts gladden.
Poor, helpless, forsaken were they through
'Forward'
Karuna has made them now 'Backward'
Concessions, Privileges denied to us so long
Generation so young will benefit for long.
Proclaim this to the citizens of this land O' Anwar
Beloved is Karuna, the Tamil Nadu Leader

FRIEND INDEED OF MUSLIMS IS KARUNA

Reigns of Tamil Nadu lies in his benevolent hand
The country who knows him by the name of
Karuna
Stalwart of Fair Play, Justice and Statesmanship
Hospitable to the core, a Dayalu, O' Karuna
A word so popular in every home is Karuna.
Worried and care-worn were the Urdu public
Cursing their Fate so long.
Who could forget the mosque 'episode' of T'Nagar
A matter so delicate handled so ably by Karuna.
Eye-Clinics opened for the sightless in every
District.
For time considerable, I am sightless too. ■
Birth days 121 may I wish you celebrate
For people may prosper so long. ■
Proclaim this to the people of the land O' Anwar
A friend of Muslims indeed is Karuna.

—A translation of Urdu poem published in the daily newspapers 'The Musalman' and 'The Ittehad', composed by Moulana Syed Abdul Barkath Anwar (aged 80 years) to serve as a form of felicitation to Tamil Nadu Chief Minister Dr. M. Karunanidhi on the occasion of the latter's 50th Birthday.

GOVERNMENT ORDERS ISSUED

At present, among the Muslims, the Labbais, the Mappillas and the Dudekulas have already been classified as Backward. Before the Backward Classes Commission, the Muslim Community represented that all Muslims including Urdu-speaking Muslims should be treated as Backward. But, the Commission did not make any specific recommendation on this question.

The Government, after careful examination of the representation of Muslims, have decided that all Labbais in Tamil Nadu, whether their spoken language is Tamil or Urdu, ought to be included in the list of Backward Classes, and direct accordingly in its G.O. Ms. No. 652, dated 25th July 1973. They will be eligible for educational concessions given by Backward Classes Department and Education Department from the academic year 1973-74. For admissions into educational institutions, they will be eligible with effect from the commencement of academic year 1973-74. In regard to reservation in Public Services, they will be eligible as Backward Classes from the date of this order.

GOVERNOR'S PRAISE FOR TAMIL NADU OFFICIALS

While inaugurating a Conference of Collectors and Police Officers, Governor Thiru K. K. Shah said:

May I thank the Hon'ble Chief Minister for inviting me to inaugurate this Conference? It is a pleasure to meet the Collectors and Police Officers who have been invited to attend this Conference.

My stay in Tamil Nadu for a little over two years now has convinced me beyond any shadow of doubt that the administration is in tune with the declared policy of democratic socialism and is capable of maintaining healthy standards and giving a lead to other States in recognising the common man as the real master. I had an occasion last year to refer to Manu Neethi Thittam, which is an eloquent example of an effort to carry power to the masses. What is necessary is to make an effort to develop a psychology of democratic way of living.

Sense of restraint

The political parties have exhibited a sense of restraint and realism. This is a distinct achievement and Government have done well in encouraging these trends. Several measures adopted officially and unofficially, either to mark the birthday of the Hon'ble Chief Minister or otherwise, are indicative of the healthy trend of a Welfare State for which Tamil Nadu ranks in the forefront. The concept of a Welfare State is getting crystallised, and planning at district level may percolate to block level. When it so happens, every one of you will be put to acid test. The success of planning at block level will depend on the ability of the village people to rise above petty considerations of caste, community,



AN

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SOCIALISM

religion and language and their anxiety to develop administrative ability to manage local institutions with efficiency, dignity and integrity. We have to remember that local institutions are training grounds for future leadership. Whatever habits they form in the beginning will either become an asset or liability for future.

Student unrest

I am glad that you have given top priority in your discussions to the question of student unrest and closure of educational institutions. It is true that this is an All-India phenomenon as part of student unrest in the whole world. But its intensity can be considerably lessened by careful handling. Even though frustration and lack of opportunities have been the main causes, it will be wrong to say that these are the only causes. The younger generation is searching for ideals to follow and when their search fails, their anguish is heightened and gets expression in undesirable ways. In some districts, I found that the Collectors and Police Officers had succeeded in creating a rapport between themselves and the students. That shows that good public relationship pays high dividends if it is combined with just handling of their grievances. The idea to have some sort of permanent body to tackle problems connected with educational institutions is a welcome innovation.

In some of the districts, I was extremely happy to find that the students did excellent work for flood relief. Recently they did splendid work during their vacation in the matter of famine prevention in rural areas. The Youth Service Corps Programme, which is implemented in our State with 50 per cent

financial assistance from the Government of India and which gives both employment opportunities and provides training in public service, has won the appreciation of UNICEF and has invited enquiries from other States, so that they can introduce the programme. This is also indicative of the fact that if talents are utilised for productive purposes, they are agreeable to divert their energies in other useful channels.

Labour Unrest

We cannot say industrial peace has not been disturbed in Tamil Nadu. But it has not assumed the proportions it has assumed in other States. Nobody can blame either the Government or the administration as it is part of a phenomenon which is most disturbing everywhere and has become a cause for anxiety. In fact, Tamil Nadu can still claim to have, by and large, succeeded in localising the trouble and in finding solutions. It must be said to the credit of Tamil Nadu labour that it is conscious of its responsibility to unorganised labour which is struggling for employment. If something can be done to make them more conscious of their responsibility to their brethren who are unemployed, this difficulty can be solved considerably.

The crash programme of rural employment which we have implemented so far as a Centrally sponsored scheme, the progressive land reforms which the Government of Tamil Nadu has been vigorously implementing, the latest being the law conferring right on the tenants to purchase landowners' rights, the provision of housesites, the village housing project over which we have spent Rs. 121.14 lakhs till March 1973, and the offer of loans by nationalised banks, ranging from Rs. 500 to Rs. 3,000 to individuals and groups belonging to weaker sections at a nominal rate of interest with no Government guarantee but only on personal security to facilitate their self-employment in petty trades and industry, are calculated to remove the age-old poverty of the masses and raise their standards of living to a decent level. Tamil Nadu has done pioneering work in this direction and it is the duty of the district administration to see that these schemes are vigorously followed, implemented diligently and judiciously.

I understand that the banks require assistance from the district administration in locating deserving applicants for loans. I do hope the Collectors and their staff, will have periodical discussions with the banks and extend their assistance in time and make the scheme a success.

Village Housing Project

In the case of village housing scheme, heavy arrears have accumulated in the repayment of loans by the beneficiaries of the scheme. The beneficiaries must be made to realise that unless they co-operate with the Government by promptly repaying the loans, the Government cannot go ahead with the implementation of such welfare schemes in other areas.

We know the vagaries of the monsoon and erratic rainfall, necessitating power cut and affecting agricultural production. The need to conserve our water sources is, therefore, imperative. You will be discussing the need to maintain minor irrigation tanks in a better way. I am sure you will suggest a co-ordinated programme enabling the Panchayat Unions to carry out necessary repairs from time to time and to suggest measures for preserving the level of underground water and putting it to maximum use. I hope the investigations suggested by Government for exploring possibilities of maximum storage and utilisation of underground water will support the idea of check dams.

I need hardly remind the Collectors that we have to fulfil the target of Rs. 20 crores in Small Savings at least in 1973-74. I do hope you will launch a special drive in this case. If pay roll savings scheme and school bank schemes are pushed through vigorously, the results will be favourable.

Important Subjects in Agenda

The agenda includes many important subjects for discussion among Police Officers. A suggestion for setting up District Unit Laboratory for analysis in excise cases has been made. If one more sample is taken at the time, the contraband is seized and if that additional sample is sent to the Central Laboratory at State

Level, to be utilised in case of contest, sufficient safeguard can be provided. Lot of work at district level is technical and is likely to be disposed of without heavy contest. In such cases, the Central Laboratory need not be troubled about the sample sent.

An equally important case, which you will discuss, is the lapses in the present investigating and prosecuting agency. The first-hand information should never be taken down in a hurry. It should be completed in all essential particulars and every word should be taken down after understanding what the informant has to say. The absence of co-ordination between the prosecuting agency and the investigating agency is also on account of the lacunae that have been left while recording in a hurry either the first information or the statements of the witnesses. When the prosecuting counsel finds gaps in essential particulars and questions the investigating officer, a kind of misunderstanding develops and creates an impression that they are working at different ends, which in fact is not so. An intensive training based on cases where the lacunae were responsible for acquittal, can be imparted to remove these difficulties.

Illicit distillation has, I am glad to note, been brought well under control. Now that prohibition is to be re-introduced in a phased manner, the responsibilities of the Police Officers are bound to increase and they have to be more vigilant in checking smuggling of liquor and illicit distillation. I have no doubt you will rise equal to the occasion.

Cream of Devoted Officers

It is a happy augury that Tamil Nadu can claim to have the cream of efficient and devoted officers who have not allowed themselves to be swayed by pressures of personal convenience or greed. You have done commendable work during floods, students' unrest, etc., which I appreciate very much.

The discussions at this conference, based as they are on your practical experience and views, will be of great help to the Government in assessing our progress, removing bottlenecks in the day-to-day administration and effectively implementing development programmes for the benefit and welfare of the people. ☺

WE ARE IN POWER

At the end of a 2-day Conference of Collectors and top Police Officers held in Madras, on 12th and 13th July 1973, the Chief Minister declared in unmistakable terms that his Government was only interested in furthering the interests of Socialism and bettering the lot of the common men. He said :

Participating in yesterday's and to-day's debate and discussion in this high level official conference, you have offered a good number of constructive and valuable suggestions on the development schemes executed in the State. On the basis of your valuable suggestions, we have arrived at some conclusions and I hope on your return to your headquarters you will immediately set out on the course of action to translate these decisions into action.

As pointed out in my inaugural address, my Cabinet colleagues and I are proud of the fact that you all act and serve the society with a clear understanding of the socialistic principles of this Government. Your unflinching devotion and loyalty to these goals of this Government have earned for you the esteem of myself and my colleagues. I do hope you will strive still harder to receive more appreciations from the Government in the times ahead.

More Schemes for Village Improvement :

As a matter of fact, we are yet to formulate many more welfare-

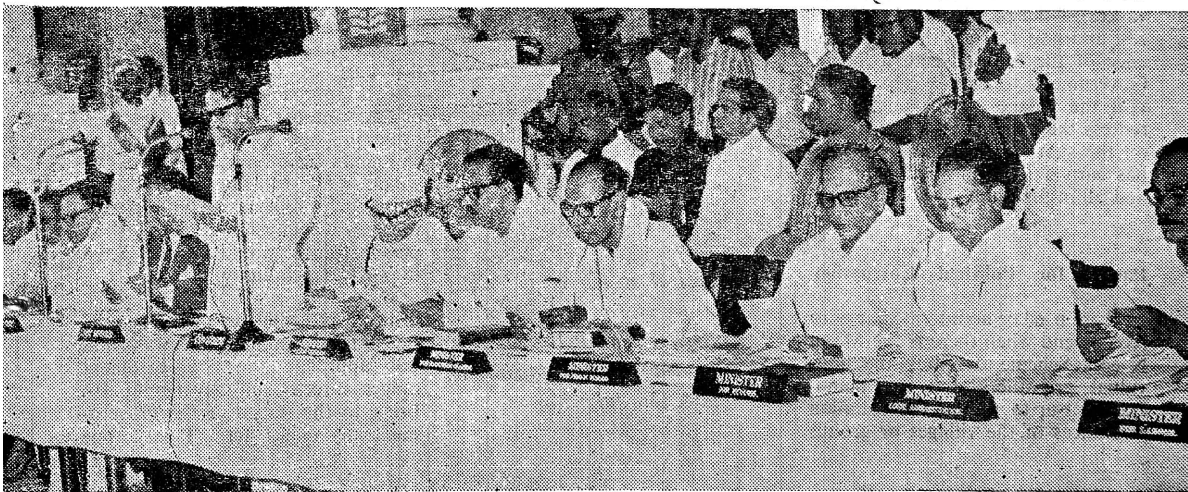
ONLY TO BE OF SERVICE

oriented schemes on the basis of the needs of the well-being of the rural folk. And I need not repeat here that we must continue to carry out, in the interest of the poor, be they labourers, workers, middle-class people, village people, agriculturists or agricultural labourers, all the schemes devised for their benefit, with added zeal.

As far as this Government is concerned, we are not interested so much in being in power as to be in a position to be of use to the people by being in power. On the other hand, we are interested in extending our selfless service to the general well-being of the weaker sections of the people in cities and the exploited sections in the rural population.

When this Government assumed the reigns of power in 1967, our leader, Dr. Anna pointed out in his address in the Legislative Assembly that every individual in authority should carry out his duty not as a Government servant but as a social worker towards the welfare and well-being of the oppressed, the backward and the middle-class people who groan under the weight of poverty. To encourage this Government which is following the policy of Dr. Anna, you have been all along extending your discerning support and you must continue to show the same spirit in your duty in future also.

C. M.



The Chief Minister addressing the Collectors Conference.

WHY INTERMEDIARIES

FOR LAWFUL CLAIMS?

These Conferences of Collectors and Police officers held annually serve the purpose of improving the efficiency of the administration and in helping the implementation of the several schemes formulated by the Government for the welfare of the people. We take this conference as a means of exchanging views with officials, i.e., mutual exchange of views between us who evolve and you who carry out the schemes; as a forum for you to bring up problems met with while carrying out official duties and to bring those problems to the notice of the Government for a solution.

The duties of the Government do not stop with mere tax collection and maintenance of law and order. The Government is also responsible for the progress and well-being of the people.

There was a time when the lower strata of society could not meet the Government officers. But today the officials function with a desire to serve the people, they receive representations from people of all walks of life and redress the grievances of the people with zeal and zest and now the fact that in pursuance of the Manu Neethi Scheme, Government officers personally visit the villages and hamlets, and redress the grievances of the people on the spot to the extent possible, has earned the approbation of one and all in the State.

Panacea for Political Corruption

There need be no intermediaries to recommend when there is the Manu Neethi Scheme to redress the individual grievances and the democratic set-up to redress the common grievances of the villages or groups

of people. Yet, there might be some common problems which could not be brought to the notice of the Government officers through the democratic institutions. There is nothing wrong in such cases for the elected representatives or individuals to approach the Government officers. Influential persons might approach the Government officers to get patently unjust things done. Please concede their request or accept their recommendation only if there is justice in it. If it is unjust, such recommendations can be spurned, however exalted the people, who make the recommendations, might be.

At times, unnecessary delay is experienced in the execution of just schemes and before the delay is averted, unjust acts take place here and there sporadically. Whether it be the officers who abuse such acts overtly or others who induce the officers to indulge in such acts, both will be considered anti-social elements.

Pressure for Personal Gains :

We should not lose sight of another important irregularity on the part of the officials. Some officers approach influential people or the elected representatives to bring pressure on the Government to gain their personal ends. I would like to say categorically that such officers, who arrange for such recommendations for their personal ends, would be subjected to strict disciplinary action.

The representatives of the people, except for common problems, should not approach the Government officers directly and they should also bring to the notice of the Government any unjust act. I have time

The inaugural speech of the Chief Minister of Tamil Nadu at the Collectors' and Police Officers' Conference held in Madras on 12th & 13th July 1973.

and again stressed that the elected representatives should not become a lever for recommending the cases of officers. I would like to reiterate here that this Government will be more firm on this point.

I earnestly hope that bearing all these points in mind this conference will pave the way for the successful implementation of the several socialistic and development schemes of the Government. I hope the District Collectors and the Police Officers will discuss in these two days the various subjects on the agenda in this background.

Socialism will remain a political slogan so long as a mere handful of people are afforded opportunities to climb up the ladder while the majority of the people rot in poverty. We cannot take any pride in the fact that we are enjoying the fruits of independence or that we rule ourselves unless and until the lot of Harijans and other Backward class people, who are in the last rung of the social ladder is improved. Hence, this Government sincerely feels, that their lot should be improved and is therefore implementing to the best of its capacity schemes which will ensure the improvement in the standard of their living.

Our Socialistic Measures

Extending concessions to them in the educational institutions and in employment sphere, assignment of Government lands to them; conferring ownership of house-sites occupied by them; assignment of houses - sites for the homeless; conferring right of ownership on the tiller of the soil; appointment of backward and depressed classes as trustees and Archakas in temples; construction of multistoreyed buildings for the slum dwellers; rehabilitation of beggars; conducting eye-camps and abolition of handpulled Rickshaws are steps that the Government have taken to usher in improvement in their life. This is a peaceful revolution for the uplift of the Harijans, the backward class and the middle-classes people. The achievements of this Government should be obvious to those who view them dispassionately without any feeling of bias or prejudice.

The co-operation of the District Collectors is necessary for the successful implementation of any

scheme. If they lack enthusiasm in their duty no scheme could be implemented properly. Whether it is the implementation of the Family Planning Scheme, the Small Savings Drive, the conduct of elections or the maintenance of law and order, they should evince keen interest and function with a remarkable drive.

When Misery Struck

Towards the end of last year, several districts were affected by the flood havoc and standing crops, roads, irrigation tanks and houses were damaged thereby. We can't help paying tributes to the drive and enthusiasm shown by the District Administration and the higher officials of the Government in the flood relief operations. It is because of this prompt and swift action, the Tamil Nadu Administration is being applauded as the best one in the whole of India. We can emphatically say that the efficiency of the administration has not in the least gone down. To criticise that the administrative efficiency has gone down is but a political stunt and all impartial observers will realise it.

Now, we have attained self-sufficiency in food production. Scarcity of food articles is non-existent in our State. Yet, it cannot be denied that the prices of food-grains have gone up to a little extent in the belt areas of our State. Steps have been taken for the proper distribution of food grains and the stabilisation of prices in those areas. However, the officials in those areas should be vigilant. They should apprise the Government from time to time of the situation prevailing there and take all suitable measures to avoid shortage of food stuffs and to arrest the rising trend of prices. Police officials should function effectively to prevent the smuggling of food grains.

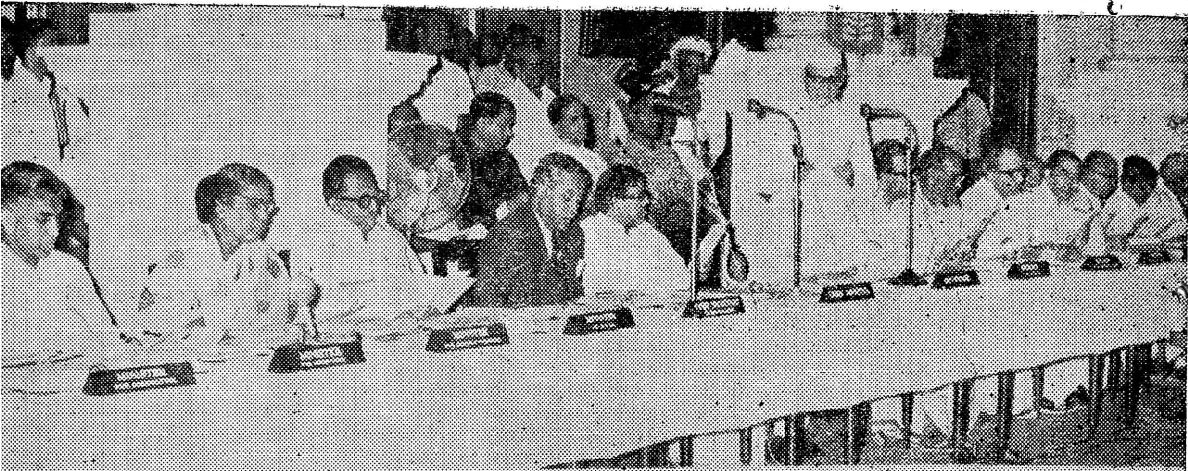
Last year, as a result of the failure of the monsoon, we could not generate enough power from our hydle power stations. Our neighbouring States could not provide us with the usual quantum of power this year as they had done hitherto. To a certain extent this has affected the agriculture and the industries in our State. In particular, production of yarn in our Mills has been affected, which directly hit the handloom-weavers. You have

done splendidly well in providing credit facilities to the handloom-weavers and in implementing the fair distribution of the available yarn to them. In such circumstances, it is your duty as district administrators, to keep a strict watch over the distribution of yarn so that even a small error does not creep in.

Violence Must not raise its head

You might come across people who seek political gains by creating disturbances and exploiting the simple demands of the students and the labour which could have as well been settled across the table. As those who maintain law and order, it is your duty to see that in any agitation violence does not rear its ugly head pushing the justness of the cause to the background. In any agitation we cannot specify clearly how a particular officer should handle a given situation. In the context of the situation and in deference to the rules, decisions should be taken quickly and at the same time with circumspection and implemented. The decisions taken should not give room for complaints. Municipal Elections and By-Elections are soon to take place. During the Election the feelings of jealousy and bitterness inherent in human nature, might erupt leading to violence and paving the way to disturbances undermining the law and order situation. You should effectively control any situation as you did so in the past.

In the course of today and tomorrow debate and discussion you will have opportunity to aim your views about several subjects such as the problems arising out of the maintenance of law and order, distribution of essential articles of food to the people, the Youth Corps Scheme, the Rural employment scheme, the scheme for the sanction of loans by the nationalised banks for the benefit of the poor, the strides made by us in the implementation of the Land Reform Legislations, distribution of Pattas, Tenancy Rights and Pass Books to the Agriculturists, maintenance of minor irrigation tanks, Rural housing, assignment of house-sites, rehabilitation of the repatriates from Burma and Sri Lanka. I am sure that we will discuss about them in detail and arrive at positive decisions.

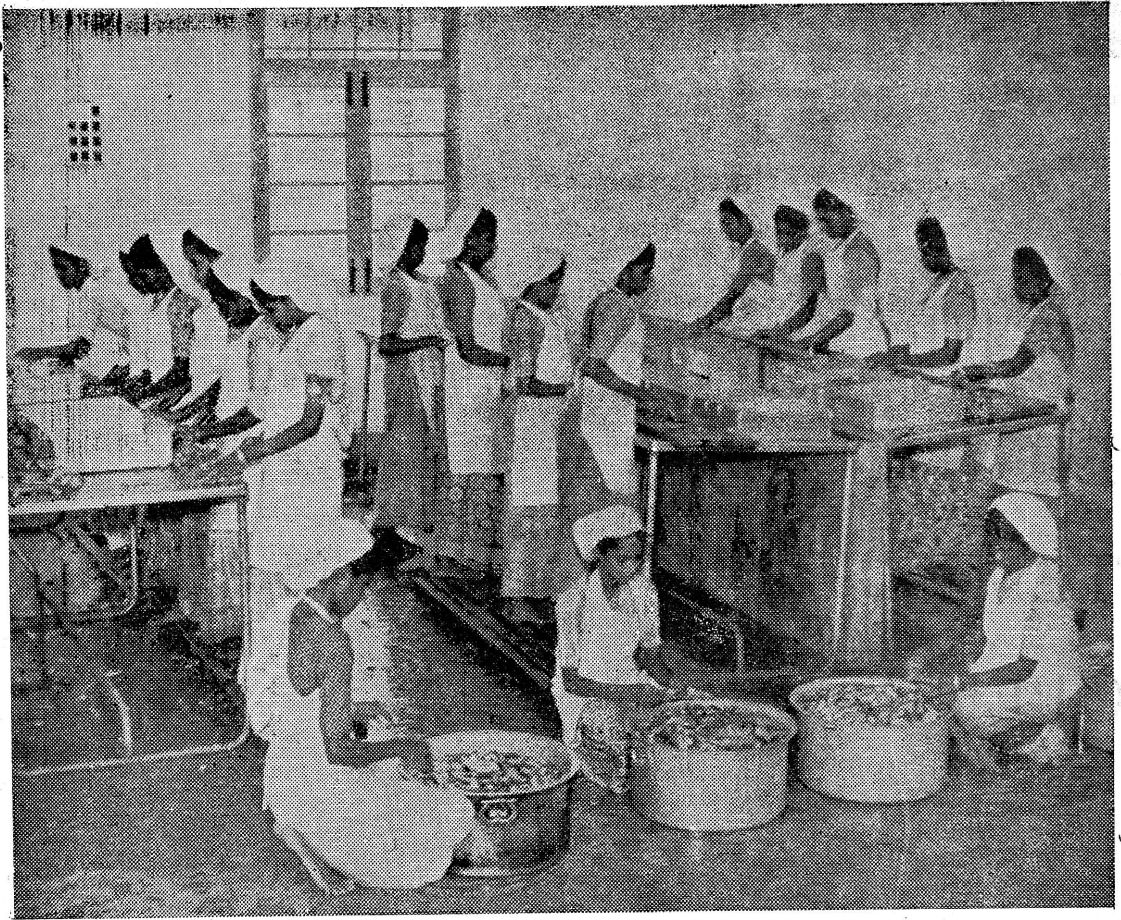


Thiru K. K. Shah, Governor of Tamil Nadu, is seen addressing the Collectors' and Police Officers' Conference held in Madras on 12th and 13th July, 1973.

Another view of the Collectors' Conference.



GREAT STRIDES IN MARINE PRODUCTS



Tamil Nadu has created enormous facilities for hygienic shelling, freezing and packing of prawns which find a ready market abroad. The processing and packing practices conform to pre-shipment inspection standards as also standards prescribed by I.S.I. for in-plant quality control.

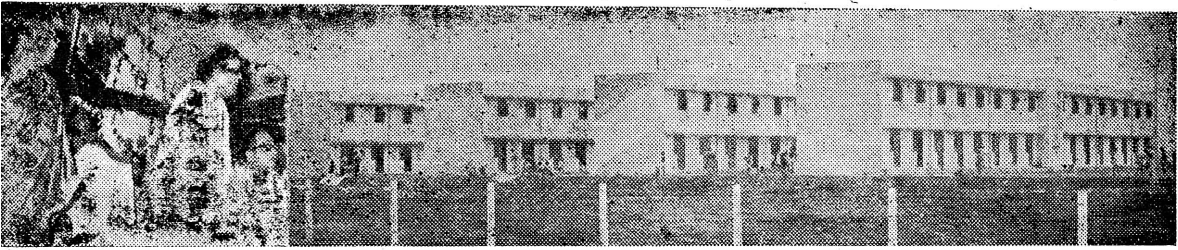
Somuch so, the total export of fresh, frozen and canned marine products in Tamil Nadu in 1972 was 26 lakhs kgs., valued at Rs. 5.41 crores. The export of dried marine products in 1972 was 14 lakhs kg., valued at Rs. 41 lakhs.

As marine diesel engine is required in larger numbers for the mechanised fishing vessels, the State Government has decided to set up a project for the manufacture of marine diesel engines. The estimated investment is expected to be around Rs. 3 crores and is likely to be located at Ennore.

To have indigenous capacity for building deep sea fishing trawlers, TIDCO will be putting up a unit at Mandapam for building such fishing trawlers. This unit will also undertake maintenance and

repairs of sea going vessels which will enable the unit to earn foreign exchange. The estimated investment in this unit is expected to be about Rs 1.5 crores.

SIPCOT will be assisting a freezing plant to be set up near Madras. The project envisages the setting up of a freezing plant besides the acquisition of trawlers for deep sea fishing. In the context of the Workshop on Development of Marine Products on 1st and 2nd August 1973 two articles on the subject are published in this issue.



The Chief Minister declaring open the Beggar Rehabilitation Home at Mallavadi near Tiruvannamalai on 4th July 1973.

THE EIGHTH 'TEMPLE' OPENED

The eighth Beggar Rehabilitation Home, out of the 10 such homes planned for the State, was declared open at Mallavadi near Tiruvannamalai on 4th July 1973 by Dr. M. Karunanidhi, Chief Minister of Tamil Nadu. The construction of these ten Beggar Rehabilitation Homes are financed from the Rs. 1 crore Chief Minister's Birth Day Fund collected in the year 1971, and are conceived as the first step towards the eradication of beggary in the State. In the present lot of Rehabilitation Homes leprosy beggars are admitted on voluntary basis for care, cure and teaching of skill in some occupation so that they can, on discharge, lead a useful life, on their own without resorting to beggary.

Voluntary admission of leprosy beggars.

Beggars suffering from leprosy are admitted into these Homes voluntarily and also on the

recommendations of the Sub-Inspectors of Police and also by the Medical Officers of the Government Leprosy Control Units. Some of them are also persuaded by the Police to join the Rehabilitation Homes. Each Leprosy Beggars Rehabilitation Home has a capacity to accommodate 500 leprosy beggars, though the Mallavadi Home has provision for 700 persons. There is provision for separate rooms for such of the leprosy beggars who have families.

Thorough Medical check-up on admission.

Leprosy beggars on admission are given a thorough medical check-up and are allotted to convenient and suitable dormitories. The inmates are given free food (two times tea, a breakfast and two meals a day) and on days of National importance special diet is being given. They are given two pairs of dress a year and a pair of micro-cellular rubber chappals.

The President of the Government Press Workers Union Thiru Nagalingam handing over a cheque for Rs. 25,000 to Dr. M. Karunanidhi, Chief Minister, for the Cycle-rickshaw Fund.



Deformities are also attended to and rectified through orthopaedic and physio-therapy.

All the Leprosy Beggars Rehabilitation Homes are situated in vast campus and there are provision for cultivation. Able-bodied inmates are given training in mat-weaving, tailoring, carpentry, shoe-making, poultry keeping, kitchen work, agriculture and gardening. Wages are also given to the inmates as pocket money to enable them to buy some personal requirements. The wages range from rupee one to two a week according to the nature of the work done by them. The inmates are provided with protective gloves to prevent their hands being damaged while attending to work involving handling tools. Inmates who are incapable of attending to any work, are given 25 paise a week as pocket money. Arrangements are also being made for the running of canteen and a bunk shop in the campus where the inmates can buy their personal requirements. The inmates are also given washing soap and coconut oil once a week and toilet soap once a month. Each inmate is being provided with a mat and a pillow and a plate and a tumbler.

Recreation for inmates.

There is a library and recreation-cum-radio room in each of the leprosy beggars rehabilitation homes where the inmates spend their leisure hours. Adult literacy campaign also is organised with the help of the few literate inmates. Provision is also being made for games and sports, music, dance, etc., and the Government have set apart funds for these items. Arrangements are also made for the exhibition of film shows in the Beggar Homes by the State Publicity Department.

Inmates are allowed leave for a maximum period of seven days at a time to enable them to visit their friends and relatives and visitors coming to see the inmates are also permitted to meet them.

Hospital facilities.

Each Leprosy Beggar Rehabilitation Home is provided with a Hospital and dispensary, operation

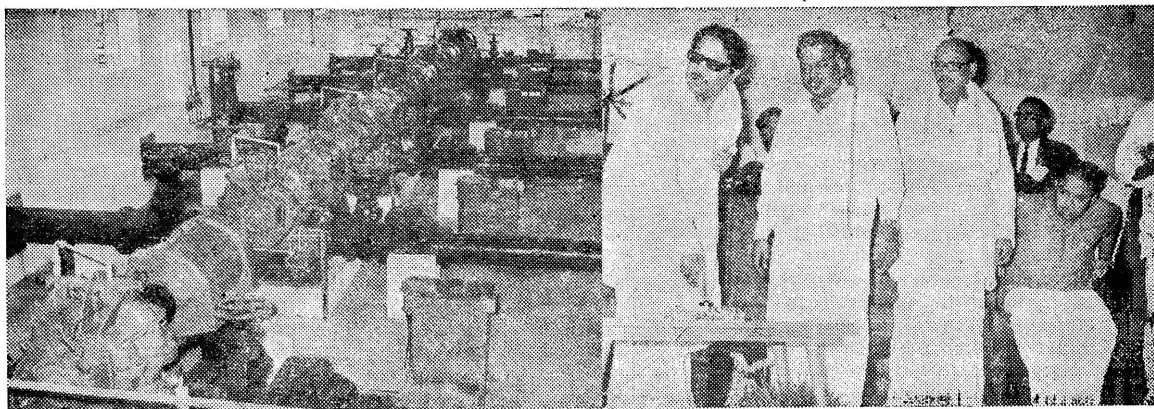
theatre, physio-therapy unit, etc., and manned by qualified medical staff. The general administration is by a Superintendent, assisted by ministerial staff. There is also provision for a Social Welfare Officer to attend to the personal needs of the inmates and enable them to be accepted by their families with love and respect due to them.

All Modern Facilities Provided In The Beggar Rehabili- tation Homes

Trained inmates are given appointments in the Homes in occupations such as para-medical work, kitchen work, sanitary workers, peons, Nursing Assistants, etc., and they are given a consolidated salary of Rs. 70 a month in addition to free boarding and lodging and so far nearly 18 such inmates have been employed in the various Leprosy Beggars Rehabilitation Homes as a first step towards the rehabilitation of leprous beggars. The Government in the Social Welfare Department have also evolved a scheme of giving financial assistance to selected inmates through Nationalised Banks to start petty trades which will go a long way in the ultimate rehabilitation of a good number of leprous beggars after discharge from these Homes.

Located in vast area.

The Beggar Rehabilitation Home of Mallavadi is situated in an area of 24 acres of forest land, seven miles from Tiruvannamalai on the Polur Road. There are four storied terraced dormitories which will accommodate about 700 inmates including 128 family rooms. There are two work sheds where mat-weaving, shoe-making, tailoring, carpentry, etc., are being done by the inmates. There is a poultry unit with 250 birds under the supervision of a poultry assistant. There is a beautiful garden in front of the main building which adds beauty and serenity to the campus and helps the leprous beggar inmates to spend their leisure hours in the most exhilarating surroundings. There are quarters for the Superintendent, Medical Officer, Pharmacist, Nurse and also for the last grade servants. An area of about 10 acres are to be brought under horticulture and grain crops. There are at present nearly 500 inmates in this home looking forward to their eventual rehabilitation. ☉



Dr. M. Karunanidhi, Chief Minister, inaugurating the Southern Head Works on 3rd July 1973.

WATER-SUPPLY IN MADRAS CITY

Madras City is a narrow strip which has developed along the coast and unaccountably the growth pattern has been for the northern portion to attract industries to avail the harbour and broad gauge railway facilities and the Southern portion to attract more and more residential units. The present water-supply source being located to the north of the city, the extensive residential areas of the South suffered from lack of water-supply due to lack of sufficient pressure in the water-mains. A set of booster pumps were located in South Madras in the Rs. 78 lakhs Southern Head Works of Madras Corporation which was inaugurated by Dr. M. Karunanidhi, Chief Minister, on 3rd July 1973. The scheme has been executed with the sole purpose of facilitating the water-supply to South Madras.

Past History of Water-Supply

The Water-Supply System of the City of Madras dates back to 1872. The raw water was drawn from Red Hills through open channel by gravity to Kilpauk and distributed from there through pipe lines branching off to various parts of the City. Later on, between 1914-18, it was filtered at Kilpauk Water Works and pumped into the Distribution System which was simultaneously enlarged.

Till the Second World War, the per capita supply was maintained at 115 litres (25 glns.) per day and since then the rate of supply has been steadily declining on account of influx of population. Though the storage capacity was doubled

BOLD NEW SCHEMES TO KEEP PACE WITH DEVELOP- MENTS

by construction of Poondi Reservoir in 1944, the daily per capita supply was never brought up to 115 litres (25 glns.) in spite of further increase in the sources as the population was increasing by leaps and bounds beyond all expectations. Of course, the Corporation and the Tamil Nadu Government were actively considering the proposals to bring Cauvery water to Madras City.

Short term measures

From 1969, we were able to reap the benefits of some of the short-term measures taken to increase the daily supply gradually from 180 million litres (40 m. glns.) to 225 to 235 million litres (50 to 52 m. glns.). Now there is demand for more water mainly on account of modern amenities and vertical growth, and Plans are being made to obtain adequate quantities of water required for a population of 40 lakhs anticipated in the year 2001 at the rate of 180 litres (40 glns.) per head per day.

With the augmentation of the City's water-supply by Veeranam Scheme, the City will be able to obtain about 145 million litres (40 m. glns.) per day in a few years. Every effort is being made to re-design the Distribution System to supply water equally to all parts of the city. One of the steps taken to re-design is to establish a separate Pumping Station at Prakasa Mudali Road, T'Nagar and boost the pressure for southern zones of the city. As the total quantum of supply cannot be increased with the existing sources, the pattern of supply will be modified in such a way that the same

quantity is distributed to the various parts of South Madras at a higher pressure, but for a shorter duration.

This Headwork is supplying water to the Southern Zone areas such as Theagaraya Nagar, Teynampet, Mylapore, Adyar, Guindy, Saidapet, Kodambakkam, etc. Filtered water from Kilpauk will be pumped through a portion of the existing Trunk Main by pumpsets erected at the Kilpauk Water Works into 3 New Underground Reservoirs of 5.3 million gallons capacity at Prakasa Mudali Road. Separate pumpsets will pump this water through an 80 feet high Overhead Tank of 1 million gallons capacity to the various zones. The cost of the Scheme is Rs. 78.00 lakhs and this scheme is financed by the State Government, half as grant and half as loan.

Filtered Water Reservoirs and Connecting Mains :

Three filtered water reservoirs have been constructed side by side with common partition walls in between. Two of the tank measure 163' x 148' inside while the third tank is 208' x 118'. The arrangement of tanks has been made to suit the available space at site. The tanks are 13' — 6' deep with 12' depth of water. The tanks are partly above ground level, the top of roof slab being about 6 feet above road level.

Suction Chamber :

The 48" C. I. pipe line leading from the outlets of the underground tanks connects to a rectangular suction chamber in which are located the suction strainers of the six pumps. The chamber is in two halves with controlling penstocks so that any half can be isolated and emptied for attending to repairs on the suction pipe lines.

Pump House :

Six pumpsets have been installed at the Southern Headworks each with a duty of 6,000 g.p.m., against a head of 110 feet. Four pumps working together will discharge the peak requirements of 24,000 g.p.m. and two will be standby. The pumps are of horizontal split casing with slipping splash proof motors with

VEERANAM PROJECT A BOON TO THE RESIDENTS OF MADRAS CITY

16 inlet and 12" outlets. Each pump is directly coupled to 415 V. 275 HP., 1,440 r.p.m., 3 phase 50 cycles motor.

Necessary H.T. and L.T. control panels, motor starters, capacitors, etc., conforming to regulations have been provided. A 5 tonnes hand operated travelling crane has been provided for maintenance.

Delivery Pipe Lines :

The delivery header of the six pump sets is connected to a 42" iron pipe line to which is also connected the 1 million gallons overhead balancing reservoir.

For the present, water from the Southern Headworks will be pumped directly into trunk mains feeding the various Southern Zones. After the completion of the overhead

tank which has been taken up recently, the overhead tank will serve to balance out the fluctuations in demand and the supply head will be more uniform.

The construction of civil works and supply and erection of machinery were entrusted to various contractors while the pipe laying works were done departmentally.

Distribution of water from Southern Headwork.

Of about 50 m.g.d. of water that can be drawn from the existing sources for the City supply, about 16 m.g.d. will be the proportionate quantity available for the various zones in South Madras and this quantity will be pumped from the Southern Headworks. As it is, this Southern Headworks is intended to feed the following zones :

The Zone. 6-A comprises of Gopalapuram, Royapettah, Krishnampet and North Mylapore. The Zone 7 comprises of T. Nagar, Teynampet, Alwarpet, South Mylapore and Raja Annamalaipuram. The Zone 8-B comprises of Choolai Medu, West Mambalam, Vadapalani, Saligramam, Ashok Nagar, etc. The Zone 7-C comprises of Saidapet, Guindy, Government House and Kottur area. The Zone 9 comprises of Adyar, Gandhi Nagar, Indira Nagar, Shastri Nagar, etc. Hitherto, the supply to the zones mentioned above has been direct from the Kilpauk Water Works. Though the pressure during peak hours has been inadequate, the supply has been maintained for a longer period. After commissioning the Southern Headworks, the pattern of supply to these zones will change and the supply will be made from the Southern Headworks at a higher pressure but for a lesser period. The quantity of water that can be supplied, can be increased after the Cauvery water from Veeranam is made available in another two years time.

Utilisation of Southern Headworks for distributing Cauvery water.

With the commissioning of the Veeranam Scheme 1st Stage, about 32 m.g.d. of water will be made available to the City. Out of this

quantity, 5 m.g.d., will be let off en-route near I.I.T., Madras for meeting the requirements of I.I.T., and zone 9 (Adyar, Gandhi Nagar, Kasturba Nagar, Shastri Nagar, Besant Nagar, Indira Nagar, etc.) and the balance quantity will be brought to the Southern Headworks from where it will be pumped to the Southern zones, viz., Zone 6-A, 7, 8-B and 8-C. Additional underground tanks are proposed to be constructed in Nungambakkam Lake area near the Southern Headworks for storing the Cauvery Water.

When another 40 m.g.d., of Cauvery water is made available on the completion of second state of the Veeranam Scheme, the pattern of feeding some of the zones will be changed utilising the existing system after adding pumping stations, underground storage, overhead reservoirs and strengthening the existing distribution system suitably.

Future Planning.

With the rapid increase in the population and building activities all over the city and the need for increased water supply, the entire distribution system has to be re-designed. We may have to provide water supply for a population of 40 lakhs anticipated in 2001 at not less than 40 gallons per head per day at a minimum tail end pressure of 35 ft. Consequently, we have to go in search for more water, increase the pumping capacity and increase the pressure. Future planning should be to utilise about 50 to 55 mil. gls., of water from the existing sources, about 70 mil. gls., of Cauvery Water to be brought from Veeranam in two stages and Krishna Waters from Andhra. As it may take considerable time to obtain Krishna waters from Andhra, the immediate planning will be to utilise the existing system with a few additions and alterations for distributing Red hills and Cauvery waters.

The Fifth Plan has been drafted to complete the Spillover schemes of the Fourth Plan for providing equal supply throughout the city and it include new schemes to increase the per capita supply from 25 gls. to 40 gls. per head per day and the tail-end pressure from 25 to 35 feet.

Redesigning The Entire Distribution System Of Water Supply In The Offing

Spillover Schemes.

The Spillover Schemes of the Fourth Plan which are to be carried out in the Fifth Plan include :—

1. Construction of eighth Underground Filtered Water Tank of 2 million gallons capacity inside Kilpauk Water Works ;

2. Construction of Mechanical Filters of another 20 mil. gls. per day capacity ;

3. Construction of Underground filtered water tanks in Nungambakkam Lake area to supplement the tanks at Southern Headworks to receive the increased supply consequent on commissioning of Veeranam Scheme ;

4. Laying of Cast Iron Trunk Main, Sub-mains, Feeder mains and Distribution mains in various zones wherever such mains have not yet been laid and

5. Bringing 40 m.g.d. of Cauvery Water from Veeranam (executed by Tamil Nadu Water Supply and Drainage Board).

New Schemes proposed to be taken up for execution are :

1. Bringing another 40 m.g.d. from Cauvery (to be executed by the Tamil Nadu Water Supply and Drainage Board) ;

2. Constructing an overhead tank of higher staging ;

3. Installing new pumpsets of higher head and higher capacity ;

4. Construction of another masonry conduit ;

5. Laying another Pumping Main from Kilpauk ;

6. Providing boosting stations in high level areas ;

7. Redesigning the distribution system in all the zones to meet the ultimate demand in 2,001 with additional pumping stations, underground storage tanks, overhead reservoirs, etc.

The experience of the last 50 years has been that development has always outstripped the planned targets. So, a bold and imaginative plan for the future is necessary. There is no doubt that Madras City and its environs forming Greater Madras will continue to develop rapidly especially in the matter of industries. The Greater Madras-Area is taken roughly from Ennore in the North to Mahabalipuram in the South, including the already developed Avadi-Ambattur Industrial belt, Tambaram, etc.

The various component parts of Greater Madras will continue to get their water supply partly from river sources and partly from ground water. But, as the available are limited and already fully utilised, the Cauvery Veeranam Project for Madras City from the South and the Krishna Project for feeding Madras City from the northern portion of Greater Madras have to be carried out early.

FINANCE FOR INDUS- TRIAL CO-OPE- RATIVES IN TAMIL NADU

The most unfortunate members of our society are those who, though skilled, find themselves unemployed by no fault of theirs. Most industrialised countries have provision for unemployment relief. As Galbreith has observed, unemployment relief is better than nothing, but work is better than unemployment relief.

Our State is unique in India in this respect that it has formed a number of industrial co-operative societies which have, for their primary objective, the provision of employment to a large class of people who would otherwise have remained unemployed. The various co-operative societies which are functioning with these socio-economic objectives are engaged in the following principal activities:—

1. Co-operative Tea Factories
2. Co-operative Sugar Mills
3. Co-operative Textile Mills
4. Weavers' Co-operative Societies
5. Metal Workers' Societies
6. Match Producers' Societies
7. Match Workers' Societies
8. Leather Workers' Societies
9. Wood Workers' Societies
10. Potters' Societies
11. Mat Weavers' Societies
12. Gem Cutters' Societies

The wages paid to the labourers engaged in these various societies are much lower than the wages earned by labourers in organised industries as manual labour or labour with elementary tools can never compete with the efficiency of modern machinery. Realising this, the State has come to the rescue of several classes of the weaker members of our society. The handloom societies are subsidised by a levy on the mill industry. Various handicraft societies get loans at subsidised rates. Even so, many of these societies are incurring losses and are on the point of closure. A classic example is the various match workers' industrial co-operative societies in which thousands are employed. Here the heavy incidence of the excise duty on the one hand and the powerful competition of an organised industrial unit using up-to-date machinery and owned by foreign interests are driving them out of existence.

When the various industrial co-operative societies were formed, it was Government's intention that they should be financed by Tamil Nadu State Co-operative Bank and the various District Co-operative Central Banks which were and are primarily intended for financing agriculturists in the co-operative fold. But it was found that the State Co-operative Bank and the District Co-operative Central Banks on account of the twin factors of their agricultural bias developed over a long time and their dependence on demand and short term deposits took little interest in financing these industrial co-operatives. It was then that the Government, for a time, financed these societies direct. Then they conceived the idea of starting a separate bank for the purpose and thus came into existence the Tamil Nadu State Industrial Co-operative Bank whose genesis and the "Raison-D'Etre" for functioning is, as the Damry Committee pointed out, the apathy and indifference of the State and District Co-operative Central Banks. Even now there is a Government Order that the State and the district co-operative central banks can finance all the industrial co-operative societies. But the apathy and indifference of the State Co-operative Bank and the District Co-operative Central Banks to which the Damry Committee referred, continues, and so the time has come for the Reserve Bank to do rethinking on the subject and recognise this Bank, so that it can not only open branches at various important centres in the State but also have the benefit of refinance and credit guarantee.

The R. B. I.'s Role.

There was a time when the Reserve Bank tried very much to induce commercial banks take to industrial finance in a large way. But commercial banks following English traditions were reluctant to undertake term financing of industries. Depending as they are on demand and short term deposits, they are understandably reluctant to lock up their funds in long term loans to industries to any sizable extent. It was then that the Reserve Bank of India adopted various measures to augment the resources of the State finance co-operatives which are best suited to undertake term finance to industry. Now the Reserve Bank has been expecting the State and

By
S. Rajaratnam.

District Co-operative Central Banks which are primarily interested in financing agriculturists to undertake industrial finance. They have to this day showed no enthusiasm to undertake the financing of industrial co-operatives. An additional reason for their reluctance is their natural fear of jeopardising their liquidity position—a fear which they share with the commercial banks and for similar reason. Under these circumstances it is sad to observe that the Reserve Bank of India is putting all kinds of impediments in the functioning of this Bank. They are goading unwilling horses to go in a direction contrary to their will and riding a willing horse like this Bank to a standstill.

In this connection I must mention the case of the various industrial co-operative tea factories which have been started by the Directorate of Industries, for the purpose of processing green leaves into made-tea in up-to-date factories and sell the finished products by modern selling methods and distribute the profit among the various small tea growers who are the members of these tea factories. Before the establishment of co-operative tea factories, the small tea growers were the victims of the rapacity and greed of middleman, brokers and bought leaf factories. The co-operative tea factories have brought a measure of prosperity to more than 5,000 tea growers in the Nilgiris who own 5 or less number of acres. The co-operative tea factories in order to get quality green leaves during the season give advances to their members for purposes of buying manure and meeting other cultivation expenditure. On this ground, the tea factories are sought to be taken out of the purview of this Bank and placed under the jurisdiction of the State Co-operative Bank and the District Co-operative Central Banks.

Any factory with enlightened management undertakes activities which assure supply of raw materials of requisite quality in adequate quantities. Many sugar factories in order to assure themselves of regular supply of sugarcane, extend credit to sugarcane growers and even supply seedlings and manure. In some cases, the sugarcane growers

are share-holders of the sugar company to a sizeable extent. The sugar factory does not cease to be a factory because of the so-called agricultural activities undertaken by it. These sugar factories are considered eligible units for industrial finance and are in fact financed by term lending institutions. In fact, if a sugar factory has not made adequate arrangements in the manner above prescribed, for assuring itself of supply of sugarcane, we may consider it in-eligible for financial accommodation. Some sugar factories which did not undertake such measures found themselves in difficulties as the sugarcane in the area were diverted to gur and kandsari manufacturers.

The tea factories are in a similar situation. Their efforts to assure themselves of regular supplies of quality green leaves by extending credit to the growers for purchase of manure and meeting other agricultural operations must be appreciated.

The suggestion that the requirements of the tea factories should be bifurcated into industrial and agricultural credit and the first may be financed by this Bank and the second by the district central banks is also not practical. Small borrowers like these societies should not be forced to go to different lending agencies by an artificial division of their needs.

The tea factories are among the best customers of this bank and a very sizeable sum is invested by the bank in these factories. In fact, the success of these co-operative factories has led to a demand by a large number of small tea growers in the Nilgiris for starting similar co-operative tea factories and the department is organising some more co-operative societies.

I must here say that before the starting of these co-operative tea factories by the initiative of the department of the Directors of Industries and Commerce, when the small tea growers were put to untold hardships on account of their dependence on money lenders brokers and bought leaf factories, neither the Reserve Bank nor the

district central banks thought of coming to their rescue by meeting their credit needs. Now that the department of the Director of Industries and Commerce has started these factories and arranged for their financing by this bank and they are functioning successfully, this business is sought to be taken away from this Bank to the district co-operative central banks. This is fair neither to the department nor to the bank.

When I attended a Conference of co-operators at Poona, convened by the Vaikunth Mehta Co-operative Institute last year, representatives of the Andhra and Mysore areas complained that while Tamil Nadu was having an Industrial Co-operative Bank for financing industrial co-operative societies, they suffered very much, because they do not have similar institutions in their States. The Andhra and the Mysore representatives stated that their State Co-operative Bank and district co-operative Central Banks either openly refused to accommodate industrial co-operatives or were very indifferent in meeting the credit needs of industrial co-operatives. The experience of this State is also similar. Therefore, this bank should be recognised at the earliest and all steps should be taken to make it viable. We have already agreed to have ourselves affiliated with the State Co-operative Bank. While the district co-operative central banks are divided geographically we are divided functionally from the other banks affiliated to the State co-operative Bank and so we must be allowed to operate over the whole State, side by side with the State Co-operative Bank and the district co-operative central banks, so that the various industrial co-operative societies will have a choice as between two competing agencies—a facility which is available to traders and industrial borrowers in a much larger measure. However as we look at it, there are compelling reasons for the continued functioning of this Bank, which has been practically the only source of credit for the industrial co-operatives of the State most of which by the nature of the members and the nature of their business are weak and non-viable requiring a measure of Government support which is best routed through an institution which functions with sympathy and specialised experience.

RECOMMENDATIONS FOR INEXPENSIVE PANCHAYAT

ADMINIS- TRATION

The Administrative Reforms Commission headed by Thiru T. A. Varghese, Retired Chief Secretary, presented to the Minister for Local Administration a comprehensive report on the Panchayat-Raj. The Commission has reviewed the performance of that organisation during the last 15 years and made many useful recommendations.

The Commission felt that Village Panchayats, as now constituted, are far too small to be financially viable and has suggested regrouping them to the extent practicable into larger units of about 5,000 people each. Suggestions have been made to improve the collection of Panchayat taxes and to augment their resources by tapping new sources of revenue and also by graded grants specifically earmarked for village sanitation. To ensure unflinching street-lighting, which is the major amenity provided by panchayats the Commission has recommended that the responsibility for the replacement of fused bulbs, should be transferred from the Electricity Board to the respective Panchayats and that the supply of power should be charged for, on the usual metered basis. Attention has been drawn to the unsatisfactory state of Panchayat accounts and to reduce the many malpractices arising therefrom, remedial measures have been suggested such as the provision of clerical assistance to Presidents and frequent checks by inspecting officers.

The Commission has analysed the causes for the generally unsatisfactory performance of Panchayat Unions on the Agricultural front and made many recommendations for streamlining the Agricultural extension organisation. In assessing merit for promotion from amongst the ranks of Gramasevak, Extension Officer (Agriculture), Block Development Officer and Revenue Divisional Officer, the interest shown in Agricultural Development should be the prime consideration. The organisation of the many special drives for various purposes such as family planning, small-savings, etc., should be timed carefully so that they do not clash with periods of intensive agricultural activity. To give an agricultural orientation to the Panchayat organisation and to co-ordinate the work

of District Collectors in this respect, an officer of the rank of Member of the Board of Revenue is to be appointed as Commissioner for Agricultural Production and Panchayat Development. In order to reduce stagnation and consequent loss of morale, the Commission has indicated avenues of promotion for the different ranks of the Panchayat organisation. Gramasevaks will be made eligible for promotion as Extension Officers after suitable in-service training. Competent Block Development Officers will be promoted as Deputy Collectors with a special quota of posts reserved for that purposes. The Commission has envisaged the gradual integration of the personnel of the Panchayat Development and Revenue Departments into a common service over the next decade.

In view of the scope for malpractices in the system of indirect election of the Chairman of the Panchayat Union and to give him greater freedom of action, the Commission has advocated direct election by the people. It has also recommended that Members of the Legislature should not be permitted to stand for election to this office.

The Commission has suggested the constitution of a Panchayat Finance Commission, a high power body to assess the needs of the organisation over a five-year period and to recommend the devolution of funds and their distribution amongst the different units on a rational basis. The local option given to Panchayat Unions to levy a surcharge on Land Revenue has become outdated on account of its haphazard and marginal impact on the total revenues of Panchayats. The Commission has therefore suggested that this power be withdrawn and that the Government should impose this surcharge directly on a uniform basis, to be distributed according to the advice of the Panchayat Finance Commission.

To encourage local initiative and to speed up the administration, the

Commission has recommended more liberal delegation of powers all-round and in particular, the enhancement of the powers of the Union Engineers on the technical approval of Rural Works. It has suggested relaxation of some of the restrictions placed on Union Councils in sanctioning expenditure on new welfare schemes out of their general funds.

Intensive Auditing

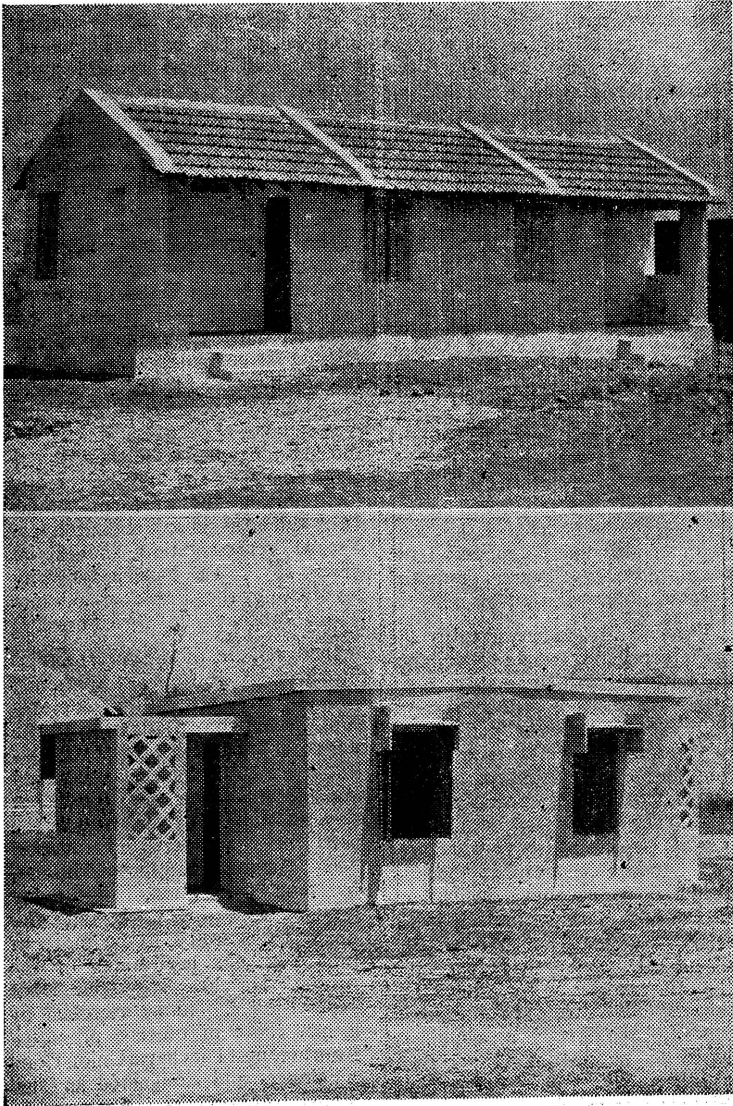
The Commission has drawn attention to the large volume of pending audit objections and recommended the constitution of an efficient accounting organisation and also a high power Committee on the model of the Public Accounts Committee to deal with major audit objections.

The Commission has suggested many measures for enlivening the proceedings of the District Development Council. It should be associated in the drawing up of the District Development plan and in the evaluation of the benefits accruing from schemes already implemented. The action taken on the recommendations of the Council should be reviewed and the reasons for rejecting any of them should be explained at subsequent meetings. Special representation should be given to Town Panchayats by nominating the President of one Town Panchayat to the Council.

In a minute of dissent recorded by Thiru A. R. Subbiah Mudaliar, M.L.A., Member of the Commission, he has drawn attention to the undesirability of the Revenue Divisional Officer, exercising supervision and control over the Panchayat organisation. He has stressed the need for the supervisory function being entrusted to officers who are, by long association, thoroughly familiar with this work and who might be expected to be more in tune with the aspirations of the people. He has suggested that supervision should be exercised by a new cadre of officers promoted from amongst Panchayat Union Commissioners and designated as Divisional Development Officers, under the direct control of District Development Officers and the overall supervision of the District Collector.

VILLAGE HOUSING PROJECT

NEW IMPETUS AND MORE MONEY



Model houses for Village Housing Project.

A vigorous impetus is to be given this year for providing houses to the rural population under the Village Housing Scheme, with a provision of about Rs. 80 lakhs. The Village Housing Project Scheme is a State Plan Scheme for the development of selected villages in Community Development and National Extension Service areas of the State of Tamil Nadu, to encourage villagers to uplift their living condition on "Selfhelp basis" by advancing loan amount to a maximum of Rs. 4,000 in three instalments, to such of those persons who possess land of their own with repaying capacity of the loan with interest in twenty equated annual instalments. The loan amount of Rs. 4,000 per house is the 80 per cent of the estimated cost of the building. The rest of 20 per cent has to be contributed by the beneficiaries by way of labour, local materials and savings gathered in the course of his work. The house built under this aided self-help basis stands to his stead as a shelter and property acquired in the long run of twenty years.

The Village Housing Project Scheme is being implemented in the districts through the panchayat union staff and the revenue staff. The Divisional Engineer, Rural Housing Cell, gets allotment from the Government and reallocates the amount to various Panchayat Unions according to their requirements, who in turn disburse the same to the beneficiaries.

The Government have spent a sum of Rs. 121 lakhs till March 1973, for the implementation of the Village Housing Project Scheme. The Government have provided a sum of Rs. 28.99 lakhs in the Budget Estimate 1973-74 for this Scheme. In addition to this, the



Thiru K. Rajaram, Minister for Labour Welfare and Housing visiting a model house built under the Village Housing Project.

Government have allocated a sum of Rs. 50 lakhs for the sanction of loan under the Village Housing Project Scheme from the Tamil Nadu Special Welfare Fund. The entire amount provided in the Budget will be utilised in the current financial year.

AT MADHAVARAM

The Madhavaram Panchayat Union near Madras is one of the blocks where the scheme has come up well. This is situated on the main road from Madras connecting Tirupathi, Nellore and Tiruthani, via Red hills. The total area of this block is 86.42 sq. km. (3,337 sq. miles) with a population of 45,520. There are 19 village panchayats and 2 town panchayats with 39 revenue villages and 51 hamlets in this Panchayat Union.

NATURE OF THE BLOCK.

The major population of the block is industrial workers. Major factories like Manali Refineries, Madras Fertilisers, Indian Organic Chemicals, Pilot Pen Company, Southern Screw Factory, etc., are lying in the block. The special feature of this block is that it has got much industrial atmosphere rather than agricultural.

MODEL HOUSES

As a Pilot Scheme, five model Houses worth of Rs. 2,500 each have been constructed in the four selected villages such as Polal, Kadirvedu, Soorapattu and Mathur by Rural Housing Cell with the technical staff from Highways and Rural Works Departments.

instalment of loan of Rs. 1,000 each was disbursed as below :—

	Cases.
Polal	20
Kadirvedu	24
Soorapattu	3
Total	47

LOAN SCHEME

The villager has to construct the house on aided self help basis. The maximum quantum of loan assistance is Rs. 4,000 which is 80 per cent of the cost of building. The rest 20 per cent the villager has to contribute by way of labour and savings. The loans are distributed in four instalments after the careful watch over the progress of the buildings of the beneficiaries by the technical staff. The loans are distributed only to those who possess 5 cents of own land and the repaying capacity of loan with interest in 20 years.

HOUSING PROJECT SCHEME

This Scheme is being implemented in the year 1972-73 in Polal, Kadirvedu and Soorapattu villages. The following new cases were taken up for implementation and the first

During the year 1973-74 as many as 4 new cases in Soorapattu and one new case in Kadirvedu Village are taken up. Out of these 52 houses, most of them have reached roof level and will be completed shortly. During 1973-74, the second and third instalments of loan were disbursed to these cases. A sum of Rs. 1,49,000 has been sanctioned for the year 1973-74. Out of this a sum of Rs. 71,000 has been disbursed.

The whole scheme at the State level is under the power and perview of the Tamil Nadu Ministry for Labour and Housing and at the district level, it is under the control and supervision of the respective District Collector.

This Rural Housing Scheme is very attractive and is very helpful to the villagers in this area and is bound to be a grand success. *

Rs. 12 CRORES FOR PROVISION OF HOUSE-SITES TO RURAL WORKERS

The Government of India have formulated a scheme for provision of house-sites to landless rural workers as a Central Sector Scheme under which 100 per cent grant will be made available to State Governments outside the State Plan Ceilings. The Scheme has been introduced in Thanjavur district. The Government of India have sanctioned a sum of Rs. 75.51 lakhs for the scheme as detailed below :—

	Rs.
(a) Cost of acquisition of 548 acres of land (Rs. 4,575 for one acre).	25,07,000
(b) Cost of development of 33,692 house-sites at Rs. 150 per site.	50,44,000
Total ..	75,51,000

The Government have decided to introduce the above scheme in all the districts of Tamil Nadu except the Nilgiris and Madras since the Kudiyiruppu Act has been extended to all the above districts. When the Government of India were approached for additional funds towards cost of acquisition and development of house-sites to meet the actual cost of acquisition and development for four cents instead of two cents per house-site, they have stated that an exception cannot be made in the case of Tamil Nadu and that the Government of India are following the same yardstick in respect of projects received from other State Governments. Preliminary discussion with the Collectors and Officers concerned at the district headquarters to finalise the programme of introduction of the above scheme as contemplated by the Government of India has been completed in the following districts :—

Salem.
North Arcot.
Coimbatore.

Chingleput.
Ramanathapuram.
Kanyakumari.
Dharmapuri.
South Arcot.
Tiruchirappalli.
Madurai.
Tirunelveli.

It is approximately estimated that the total number of beneficiaries under the above scheme will be 12 lakhs in all the 12 districts including Thanjavur. The approximate cost of implementing the above scheme in all the 12 districts will be as follows :—

	(RUPEES IN CRORES.)
Cost of acquisition at Rs. 5,000 per acre for 30,000 acres.	15
Cost of development of 12 lakhs sites at Rs. 150 per site.	18
Total ..	33

The Government of India have intimated that a sum of Rs. 9 crores has been allocated for Tamil Nadu for implementation of the above scheme. The Collectors may be requested to take necessary action for the speedy implementation of the scheme. The views of the Collectors in this matter may be elicited.

Thiru Anbil. P. Dharmalingam, Minister for Local Administration receiving the Report on Panchayat Development Administration from Thiru T. A. Varghese, I.C.S. (Retired), Chairman of the Administrative Reforms Commission. A separate article on the contents of the Report on Panchayat Development Administration is published in this issue at page 19.



Retiring Police Personnel Spared From The Agony Of Retire- ment



Thiru Arul, I.G., handing over the gratuity, G.P.F. and Conduct Certificate to the retired Police Officials.

When 50 Police personnel of the subordinate ranks retired recently, the office of the Commissioner of Police was agog months ahead, to see that all of them got their gratuity, Pension-papers and Provident Fund amounts on the day of retirement. They roped in the offices of Accountant-General and Pay and Accounts Officer and saw to it that all that was due to these men were paid on the spot. The retiring personnel were given a ceremonial send off. The speeches delivered by C.O.P. and I.G. are given below to give some idea of the labours put in by the serving personnel on behalf of retiring personnel.

Speech delivered by the Inspector-General of Police on the occasion of the passing out parade held on Friday, 6th July 1973 in connection with the send off to retiring City Police Personnel.

I am greatly gratified to be heard this morning, for, nothing gives me greater pleasure or satisfaction than the promotion of the welfare of the constabulary, and today's administrative action by the Commissioner of Police, the Accountant-General and the Pay and Accounts Officer is calculated to advance the welfare of the lower ranks of the force who constitute the bulk of it. What you are doing today will permeate to the lower ranks of the force not only

in the City, but in the whole State and help to raise their morale, and to cement the bonds of understanding and mutual respect between leaders and the rank and file. What we have attempted to do this morning has sprung from a situation in which the retired constable was placed in a position of misery, by his pension, his gratuity and his Provident Fund not being sanctioned for months on end, and sometimes the delay has extended to periods of more than a year. During this long agonising period, the retired Constable is obliged to undertake several journeys from his village to the city with whatever slender resources he has and walk the corridors in the offices of the Commissioner of Police and the Accountant-General, in vain attempts to get his pension and other dues settled. During this agonising period his family in the village is facing near starvation. I am not trying to be melo-dramatic. I am merely stating the stark realities of the situation, and therefore, a duty is cast on us — administrative officers — to set things right and to streamline anarchic and antiquated system which causes unnecessary suffering.

These 52 Sub-Inspectors and men have laboured night and day for over three decades rendering useful service to the people in an inconspicuous and unobtrusive manner and by their unremitting toil they have upheld the department

as a whole and have ensured safety to the people.

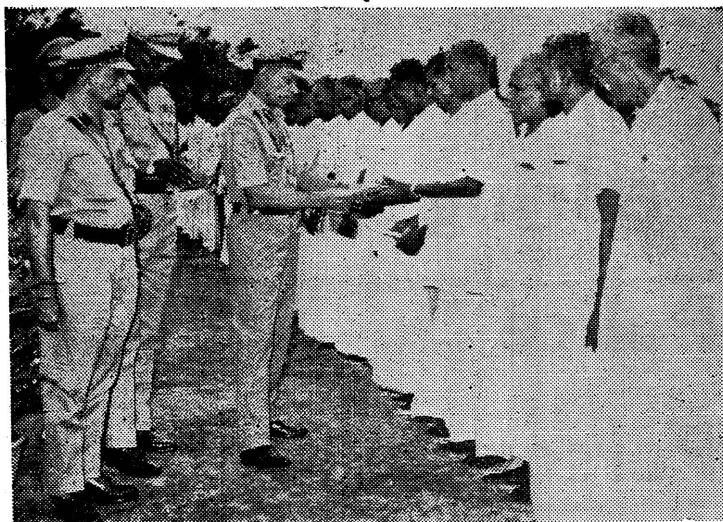
Uncomplaining they endured stress and strain and at the worst even wounds and death. These fifty officers and men have likewise laboured in sun and rain, by night and by day and having laboured thus they have now reached the last phase of superannuation and retirement. I am happy for you and for your families that we have been in a position today to give you the pension orders and other monetary benefits within 6 days of your retirement.

I would like to take this opportunity of wishing you and your families peace and contentment for the rest of your days. What we have done to-day is the ultimate in the process of man-management and the credit for all this goes to Thiru Shenai, our ever industrious Commissioner of Police. I applaud him for the imagination with which he conceived this idea and the energy and zeal with which he translated this idea into action. What Thiru Shenai has done today is without precedent in Tamil Nadu, or in any State in India.

My thanks are also due to the Accountant-General and the Staff, particularly, Thiru Edwin, to the Pay and Accounts Officer, to the Deputy Commissioner (Headquarters) and all the ministerial staff in the Office of the Commissioner of Police. What we have achieved to-day by co-operative effort between three Departments is a good augury; for further co-operation which is bound to enhance the well-being and the welfare of thousands of our Constabulary who form the backbone of the force. I once again take this opportunity of wishing these 50 Sub-Inspectors and men all joy and happiness and long life and prosperity in the days of their retirement.

Report presented by Thiru K. R. Shenai, Commissioner of Police, Madras, at a parade got up at Rajarathinam Stadium, at 7 a.m. on Friday, 6th July 1973 to bid farewell to 52 Police Personnel who superannuated on 1st July 1973.

Today's parade has been got up to record the appreciation of



A Farewell Parade was conducted to retiring Policemen at Rajarathinam Stadium on 6-7-1973 when I.G. handed over the Gratuity, G.P.F., etc., to them.

the department to 3 Sub-Inspectors, 3 Reserve Sub-Inspectors, 16 Head Constables, 27 Police Constables, 1 photographer and one Pharmacist of the so-called subordinate, none the less, vital part of the service on their superannuation.

Aware as my officers and I are of your dictum that Officers should look after their men from the time of enlistment to the time of superannuation, my officers and I have always been anxious to see what we can do for our men especially as we of Madras City Police are fortunate in having police personnel who in efficiency and devotion to duty compare favourably with police personnel that can be found anywhere in the country, even anywhere in the world.

For long, we have seen personnel after superannuation from the force having to go to the City Police Office, having to go to the Pay and Accounts Office, having to go to the Accountant-General's Office and at times to the Chief Office and even to the Secretariat for weeks and months to straighten their papers and collect their pension, their gratuity, their General Provident Fund accumulation and their discharge certificate. As the weeks and months pass by the superannuated personnel visibly appear more and more dejected and downcast. I am sure the thoughts in their minds

were "Is this our reward, is this our recompense for 30 years service in the department". Although every officer and I would also say every member of the Ministerial staff has a soft corner for superannuated personnel, yet, in the mounting pressure of day-to-day work due attention cannot always be paid to the superannuated personnel and at times they would have to wait for hours and even after such waiting not be able to see the officer or ministerial staff even for regularising small matters. Hence, my officers and I felt that if we could hand over the Provisional Pension Payment Order, the Provisional Gratuity, the General Provident Fund accumulation and the Discharge Certificate immediately after superannuation, we would be doing something really useful to the superannuating personnel.

Another problem which non-clearance of pension, gratuity and General Provident Fund accumulations is that the retired person is unable to vacate the Government quarters in which he has been living for lack of funds to purchase a house or even pay as advance rent. This in turn used to bring in lots of requests for continuing for months in the quarters, occasioning difficulties to serving personnel, etc. At times, this results in painful situations of having to order coercive methods for vacating the quarters.

Two months back I gave this task to my Deputy Commissioner (Headquarters) and my Personal Assistant today has the target date. It meant a lot of additional work but they and their staff got into the spirit of the matter and took it up cheerfully and assured me that the Provisional Pension Order and the Provisional Gratuity could be got ready in time. However, when I mentioned the General Provident Fund accumulation, the answer was 'Impossible' as accounts will have to be cleared by the Accountant-General. Here, I must admit that it has become customary for some of us to pass on blame to the Accountant-General's Office or the Pay and Accounts Office. I did not wish to perpetuate this practice and told my Officers that if only our case is placed before the Accountant-General and the Pay and Accounts Officer in a proper way they and their staff would also co-operate with us and this has proved to be correct. I am deeply grateful to the Accountant-General and the Pay and Accounts Officer and their staff for their whole-hearted co-operation but for which this impressive parade would not have been possible. I am sorry that both the Accountant-General and the Pay and Accounts Officer are away on tour. However, we are happy that Thiru Edwin, Senior Deputy Accountant-General and Thiru Panduranga Rao, Assistant Pay and Accounts Officer are here to acknowledge our gratitude and to see for themselves the gratitude of the men whose cases they have helped to finalise.

Special Efforts Taken

I must here acknowledge the special efforts put in firstly by the City Police, secondly, the Accountant General's Office, thirdly, the Pay and Accounts Office and Chief Office in clearing papers in a very very short period. Thanks to the excellent work, thanks to their excellent co-operation, each person who superannuated on 1st July 1973 will receive from you, Sir,

in a few minutes his Provisional Pension Order which has sanctioned him 90 per cent of the pension he is eligible; the individual has nothing else to do than to present it for pension on the first of next month. He will also get 75 per cent of the gratuity due to him. This gratuity is being paid in cash—amounting in all, to Rs. 1,27,118; thirdly, he will get all that he has contributed to the General Provident Fund, with interest thereon, less of course the amounts he had drawn earlier—amounting to Rs. 1,15,183, fourthly, the Discharge Certificate together with the character assessment.

Be Careful about the Cash

As these superannuated personnel will be carrying large sums of cash, it is my duty to advise them to be careful about the cash, both while carrying it home today and while spending it in the next days to come. At my request, the State Bank of India has kindly opened a Savings Bank Deposit Acceptance Counter right here in this Stadium. You would do well to deposit your cash with the State Bank and then draw it after careful thought. Remember there are sharks round the corner who will project before you all kinds of tantalising schemes most of which will have only one object in view, i.e., to deprive you of your hard-earned savings. Therefore, I would once again advise you to bank your cash, and spend it only after thought and deliberation. Any expenditure you wish to incur, you should incur only after careful examination in a cool frame of mind.

You have all put in 30 to 35 years of service in the department. You have stood by us in days of stress and strain. You have set up a fine example of hard work and devotion to duty. Some of you have earned over a hundred rewards and have also maintained clean defaulter sheets.

I acknowledge your good work and I wish you all long life and happiness with your families.

Subsidy for Industrial Units in Backward Taluks—Last date for Registration—Extended.

The Government of India have now extended the last date for registration of applications for subsidy, by "existing industrial units" from 31st May 1973 to 31st December 1973. The "existing industrial units" are those unit which have taken effective steps after 26th August 1971 but before 17th February 1973 in the seventeen taluks notified as eligible area on 17th February 1973.

Entrepreneurs who have taken effective steps after 26th August 1971 but before 17th February 1973 for the establishment of any industrial unit in the following 17 taluks are therefore, requested to apply to the State Industries Promotion Corporation of Tamil Nadu Limited (SIPCOT), Madras-2 for registration of their applications for subsidy immediately and in any case before 31st December 1973.

<i>Districts.</i>	<i>Taluks.</i>
1 Dharmapuri ..	1 Dharmapuri 2 Harur 3 Hosur 4 Krishnagiri 5 Uthangarai
2 Madurai ..	6 Dindigul 7 Nilakottai 8 Tirumangalam 9 Usilampatti 10 Vedasandur
3 North Arcot..	11 Tiruppattur 12 Vaniyambadi 13 Vellore 14 Walajapet
4 Ramanathapuram.	15 Aruppukkottai 16 Sattur 17 Srivilliputtur

However, entrepreneurs, who want to set up industries hereafter in the above taluks, have to register their applications with SIPCOT before taking effective steps.

ISSUING RICE ON SUGAR CARDS HAS LED TO POOR MISSING RICE

Family cards have been issued in the whole of Tamil Nadu including Kanyakumari district for supply of sugar. The intention was that these cards should be made use of for distribution of any other essential commodity in short supply, whenever the need arises. The cards have been made use of in this manner for distribution of wheat-products in urban areas and distribution of kerosene in urban and rural areas. However, when rice was sought to be distributed in the non-belt areas of Kanyakumari district, complaints were received from several areas that the cards were not available with the people. This situation has arisen because many from the poor income groups, who did not require sugar, did not take the cards at the time of issue or gave them away with the result that these cards had accumulated with dealers and others who collected the quotas for resale.

In order to ensure that the stocks moved into the district were properly distributed to the consumers, as an interim measure, the Collector authorised issue of identity slips by village officers to enable the people who had not received the cards to draw their supplies. However, it is found that in the district as a whole, the card population covers nearly 13.75 lakhs of people as against the census figure of about 12½ lakhs. In such a situation, issue of identity slips would further add to the figure. The obvious inference is that there is considerable duplication of cards or inflation of the number of members.

The number of persons as noted in the cards appears to have been corrected in some cases to get a larger quota. In these circumstances it has become necessary to make a complete verification to ensure that excess quotas are not drawn by dishonest individuals either by correcting the cards to increase the quota or by bogus cards. The Collector was

NEW ENUMERATION IN KANYAKUMARI DISTRICT TO ENSURE FAIR DISTRIBUTION

asked in March 1973 to take up such verification in Kalkulam taluk in the first instance with priority for the coastal villages; land-owners and lessees having their own sources of supply were also to be excluded from the purview of the distribution and a verification was necessary for this purpose.

In Vilavancode taluk rice was being distributed against cards from an earlier period and there is a 10 per cent excess in the population covered. There have been no large-scale complaints of non-possession of cards. The verification in Kalkulam taluk was ordered because it was felt that as in the other areas the sugar cards may have been given away by the poorer sections and exclusion of land-owners was necessary; the local production is substantial and even exclusion of land-owners will not completely account for local surplus. This work is in progress.

In Nagercoil also when distribution of rice had to be taken up at short notice, the existing cards were made use of subject to further verification. Accordingly, this work has been taken up and staff, who have experience in such verification in Madras City, have been deputed to Kanyakumari district to complete the work quickly. In terms of the present cards, the commitments to the Government for distribution in the district will be nearly 1,500 tonnes per month more than is justified by the population statistics. In the current situation the Government could hardly afford to spare this quantity which in all probability would go into the hands of the unscrupulous traders and smugglers. The co-operation of the public in ensuring proper enumeration and issue of cards will therefore be most welcome.

This work in Nagercoil Town is expected to be completed by the end of this month.

"From the origin of the temples, we understand that they were not only places of public worship but were functioning as organisations to fulfil social needs and were also cultural institutions to protect and to promote sculpture, art, education, medicine, painting, dancing and the like. Based on these salient and sound principles followed in the past, the Hindu Religious and Charitable Endowments Department in Tamil Nadu is of late implementing Social Welfare Schemes through the temples".

TEMPLES IN THE SERVICE OF MAN

If we understand the origin of the temples in Tamil Nadu it will be clear that they were not only places of public worship but were functioning as organisations to fulfil social needs and were also Cultural Institutions to protect and to promote sculpture, art, education, medicine, painting, dancing and the like. Hence based on this, the H. R. & C. E. Department is implementing the following Social Welfare Schemes through the temples. In order to provide education, the following six colleges are being maintained by the more affluent temples in Tamil Nadu.

1. Arulmigu Palani Andavar Arts College, Palani.

2. Arulmigu Palani Andavar Senthamil Kalloori for Women, Palani.

3. Arulmigu Palani Andavar College of Arts for Women, Palani.

4. Arulmigu Devi Kumari College for Women at Kuzhithurai, Kanyakumari district run by Kanyakumari Devaswom Board.

5. Arulmigu Parasakthi College for Women, Courtallam.

6. Arulmigu Ramanathaswami Devasthanam College, Rameswaram.

The total number of Kalyana Mandapams constructed by the religious institutions in Tamil Nadu up to the end of the year 1967 was only 14. But after 1967 and till the end of December 1972, the number of Kalyana Mandapams started was 169. Out of these, 41 Kalyana Mandapams have been completed fully. Expeditious steps have been taken to complete the remaining Kalyana Mandapams. The grievances of the public who have suffered in the past for want of place for performing marriages have been to a large extent, redressed by this scheme.

The proposal for starting two Women's Colleges one under the auspices of Arulmigu Kandhimathi Ambal Temple in Tirunelveli and the other under the auspices of Arulmigu Subramaniaswami Temple, Tiruchendur, are under the consideration of the Government. Arulmigu Subramaniaswami Temple, Tiruttani has undertaken to donate Rs. 5 lakhs to Arulmigu Subramaniaswami Arts College at Tiruttani, Chingleput district.

Apart from these, Arulmigu Palani Andavar College of Indian Culture under the auspices of Arulmigu Dhandayuthapaniswami Devasthanam, Palani, Madurai district and Poempuhar Peravai College at Melaiyur near Thiruvengadu, Thanjavur district, are also functioning.

In this connection it is worth recollecting that a Post-Graduate Course in Indian Philosophy and Indian Religion and Culture has been introduced at Poempuhar College in 1972.

High Schools and Elementary Schools

Thirteen High Schools for Boys and Girls are maintained under the auspices of the temples. Out of these, three schools were started during the year 1972-73. It is proposed to start in 1973-74 a High School under the auspices of Pichai Kattalai Estate, Thirukadaiyur, Thanjavur district and another High School in Pallathur, Ramanathapuram district under the auspices of a Specific Endowment.

Nathaswaram Schools

With a view to promote the art of Nathaswaram, two Nathaswaram Schools have been started at the

following places from the funds of the following religious institutions and the students are trained properly by suitable experts in the art :—

1. Arulmigu Dhandayuthapaniswami Thirukoil Nathaswaram School, Palani.

2. Nathaswaram School at Valivalam, Thanjavur district, maintained by Arulmigu Iruthayakamalanathaswami Temple.

Twenty students are undergoing training in Nathaswaram and 10 students in Thavil in the school at Palani and 15 students are undergoing training in the school at Valivalam, Thanjavur district.

Schools for the Deaf and the Dumb.

In order to impart training to persons born deaf and dumb to speak and write, two training schools are being maintained efficiently under the auspices of Arulmigu Ranganathaswamy Temple, Sri-rangam (Arulmigu Mariamman Temple, Samayapuram) and Arulmigu Dhandayuthapaniswami Temple, Palani.

Orphanages.

Orphanages are being maintained under the auspices of the following ten temples with a view to maintain persons who have none to take care of them and have been forced to live begging for a morsel of food undergoing untold sufferings:—

1. Arulmigu Subramaniaswamy Temple, Tiruttani town and taluk, Chingleput district.

2. Arulmigu Navaneetheswarar Temple, Sikkil, Nagapattinam taluk, Thanjavur district.

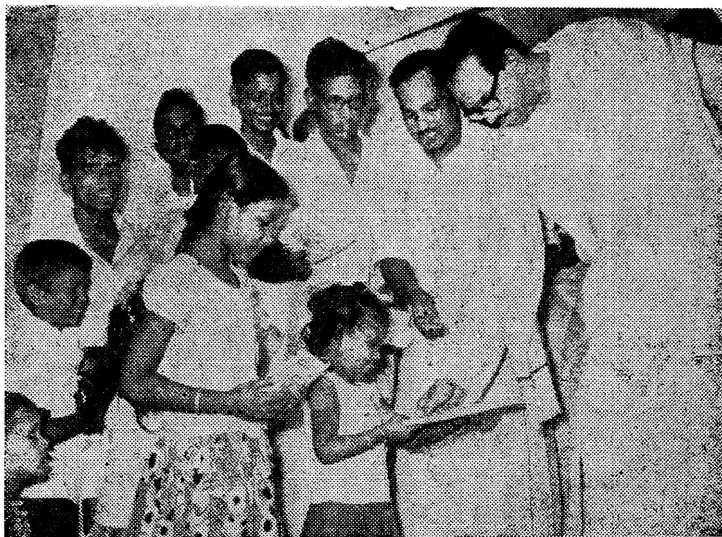
3. Arulmigu Vaidhianathaswamy Temple, Vaitheeswarankoil, Sirkali taluk, Thanjavur district.

4. Arulmigu Srinivasaperumal Temple, Nachiarkoil, Kumbakonam taluk.

5. Arulmigu Meenakshisundaeswarar Temple, Madurai.

6. Arulmigu Dhandayuthapaniswami Devasthanam, Palani.

The Birth Day Gift



Dr. V. R. Nedunchezhiyan, Minister for Education and Tourism distributing slates and books to school children on the occasion of his Birth day 11—7—73.

	Number of institutions.	Extent of lands belonging to the institutions (wet and dry). ACRES.
1 Number of institutions found not under the control of the department as a result of investigation.	40,247	198,920.53
2 Number of cases out of item (1) above for which preliminary reports were received from Inspectors (out of this 2,162 institutions have been brought under the control of the Hindu Religious and Charitable Endowments Department).	6,000	41,664.08
3 Number of institutions in which temple lands were not in actual possession and enjoyment of the temple but found to be under the enjoyment of private persons.	15,944	26,065.88 cultivable lands + 656.62 urban lands.
4 Number of cases in which action has been taken to recover possession of lands (S.No. 3).	880	2,250.41
5 Number of institutions where possession has since been recovered.	186	717.43

7. Arulmigu Nelliappar Devasthanam, Tirunelveli.

8. Arulmigu Subramaniaswami Devasthanam, Tiruchendur.

9. Arulmigu Vazhathottathuayyan temple, Ayyanapalayam, Palladam taluk, Coimbatore district.

10. Arulmigu Thirumalaikumaraswamy temple, Panphozhil, Tenkasi taluk, Tirunelveli district.

CRECHES.

For pre-school children who have lost their parents and for those who cannot be cared for by their parents who leave them in the early morning itself to earn their bread, creches are being maintained at the following five places. In all these places, the children are brought up in the Hindu way of life :

1. Arulmigu Vedanarayana-perumal Temple, Thirunarayanapuram, Musiri taluk, Tiruchirappalli district.

2. Arulmigu Subramaniaswamy temple, Kumaravayalur, Tiruchirappalli district.

3. Arulmigu Ranganathaswamy Devasthanam, Karamadai, Avanashi taluk, Coimbatore district.

4. Arulmigu Mariamman temple, Elampillai, Salem district.

5. Arulmigu Dhandayuthapaniswami Devasthanam, Palani, Madurai district.

HOME FOR THE OLD.

Last year a scheme was formulated for starting homes for the old from out of the surplus funds of the temples. Based on this scheme, a home with provision to admit 30 persons in it, has been started under the auspices of Arulmigu Dhandayuthapaniswami Devasthanam, Palani and is functioning from 15th February 1973 onwards. Further under the auspices of Arulmigu Meenakshi Sundareswarar temple, Madurai and Arulmigu Subramaniaswami

temple, Tiruchendur two homes for maintaining 20 persons started functioning from 15th March 1973.

HOSPITALS.

Realising the necessity to establish hospitals and dispensaries for the benefit of the public including the worshipping public and the pilgrims, 23 Siddha Vaidyasalas and one Allopathy Dispensary are being maintained under the auspices of the temples. Instructions have been issued to the trustees and the Executive Officers of the temples to start more Siddha Vaidyasalas in view of their importance.

LIBRARIES.

Libraries are functioning effectively in 204 temples with a view to promote general knowledge besides impressing upon the readers the tenets of Hindu religion. Further suitable instructions have been issued to the affluent temples to start libraries.

TEMPLE LANDS.

Besides several useful activities undertaken under the auspices of the temple, action has also been taken at the same time to increase the revenue of the temples by taking possession of their lands and other immovable properties under unauthorised occupation and bringing them into accounts of the temples. The following details will clearly indicate the steps taken by the department in this regard.

The Government have sanctioned the employment of special staff consisting of a Special Officer in the cadre of District Revenue Officer and four Special Deputy Collectors with the necessary ministerial staff to attend the work of gathering particulars regarding the lands owned by the temples in Tamil Nadu and to take suitable action to vest the entire lands in the temples themselves. Additional staff was sanctioned in 1971 to expedite the inspection work to see that all immovable properties belonging to the religious institutions are in their

actual possession and are registered in their names and properly entered in the Property Register and that those properties which are not in the possession of the temples are also brought into account and the income from the property is properly accounted for. Details of the lands, buildings, sites, etc., owned by each temple, are being gathered to see whether they are under proper lease, whether there are encroachments, unauthorised occupation or possession, etc.

As a result of preliminary investigation, the special staff have detected the following :—

The special staff have submitted reports relating to 33,703.86 acres of agricultural lands ; 772.89 acres of urban land and 2,218 buildings belonging to religious institutions which are in receipt of a low rental income.

They have also reported on the profitable utilisation of 6,694.87 acres of temple lands which are lying waste. Action is being taken in this regard by the Departmental Officers.

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THE COIMBATORE FARM SETS A MODEL FOR THE WORLD

"A well organised farm. A model for many parts of the world", remarked Dr. A. A. Johnson, an expert of the Ford Foundation, New Delhi, who recently visited the P.S.G. Farm near Coimbatore.

Popularly called the Vedapatti Farm the P.S.G. Estate is situated about eight kilo metres west of Coimbatore town behind the Sugarcane Breeding Institute.

The Farm has an area of about 200 acres growing new crop varieties plantation crops, fruit trees and vegetables. All high yielding varieties of rice, sorghum (jowar) bajra are first tested at the Farm. With the co-operation of the Farm operators the experts of the Agriculture University and the Agriculture officers of the State Agriculture Department use the Farm as a Demonstration Farm.

Not a single scientist, expert, administrator, Minister or Governor has failed to visit this Farm. In fact every specialist of the Ford and Rockefeller Foundations and any foreign visitor who counts make it a point to see this farm. It is no wonder that it has come to stay as a model farm not only for India but for the whole world. The visitors' book containing the appreciations

of a galaxy of visitors testifies the Farm was an attraction to top scientists and experts of more than 24 countries in the world.

Thiru G.R. Govindarajulu, the gentleman farmer, who is the architect of the P.S.G. group of Industries, is managing the Vedapatti Farm. The Farm was developed to its present fine state by the American educated Thiru G.R. Varatharajan who died very recently in his prime of life.

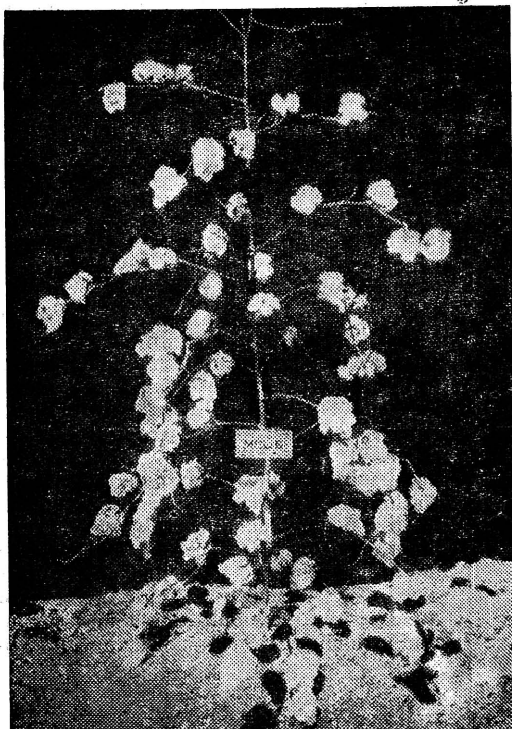
The Farm operators were the first to introduce the Blue dawn rice from America over a small area. Today the rice variety has become one of the popular rice varieties propagated by the Agriculture Department.

The Farm has many firsts to its credit. It was here that chicory was grown for the first time. The farm was the first in the state to have grown maize on a commercial scale. The farm owners were again the first to grow potato varieties in the plains and cocoa. They were the first farm family to grow Anabie-Shahi and other grape varieties. Mulberry plants are the latest new crop introduced in the Farm.

As for cotton, the latest long-staple varieties of Sujata and Suvin have found a place in the crop pattern

M.C.U. 5 Cotton bred in Tamil Nadu has brought a cotton revolution in the State.

The Vedappatti Farm near Coimbatore is a well-organised one and a model for many parts of the world. It was here that chicory was grown for the first time. The farm was the first in the State to have grown maize on a commercial scale. Thus the farm has many firsts to its credit.



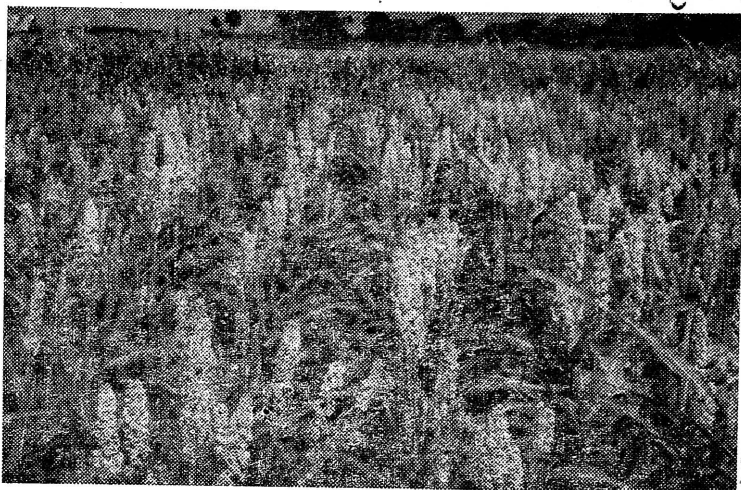
of this model farm. These varieties are of equal quality with imported Egyptian cotton varieties. Another cotton variety M.C.U. 5, which is equal to a Sudan cotton variety, is grown over a large area of the Farm. It is a favourite variety with cotton (textile) mills as it blends with all types of cotton. The farm operators have also succeeded in growing it as a rain-fed crop although it is an irrigated variety.

A unique irrigation system followed.

Above all, P.S.G. Farm has a unique irrigation system with underground pipe lines connected to an irrigation wells grid and an overhead tank system. Called the syphon system, the irrigation method has attracted and won the commendation of experts and scientists, the press and the public.

Several American Farm Leaders and their wives have stayed at the Farm when Sri G. R. Govindarajulu and his brother played host to the farm programme participants. They were all fascinated by the loveliness of the farm and its salubrious climate. They also made the farm a place for study and education.

Thiru Norris E. Dodd, the Director-General of F.A.O. who visited the farm, wrote that the P.S.G. Farm was



A luxuriant crop of C.S.H-2 Jowar ready for harvest at the farm.

“a well planned and laid-out farm in such a high state of cultivation with water, good seed and good management”. No wished “every farmer could spend some time in this farm”.

A model farm for the world.

The Farm which is a model for farmers can be better understood and appreciated through the words

of Mr. Earle K. Rambo of the U.S. Agriculture Department, who was a former Irrigation Adviser to the Indian Government, “I saw enough evidence of sound judgment and good planning to convince me that the fields were not green by accident. That those green fields were made possible inspite of the dry surrounding country-side, is evidence enough that much could be learned from the operators of this Farm”.

Source: S. Sundaram

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Tamil Nadu Government has streamlined the system of distribution of fertilisers through Co-operatives to enable farmers to get the vital agricultural input in time and to eliminate malpractices. The new system has come into force from the commencement of the current agricultural season. According to the new system, the Tamil Nadu Co-operative Marketing Federation is the wholesaler for the entire State except Thanjavur district where the District Marketing Federation is to act as the stockist.

AGRICULTURAL CREDIT SOCIETIES— EXCLUSIVE FERTILISER RETAILERS

About 3,200 Agricultural Co-operative Societies in Tamil Nadu have become the exclusive retailers for pool fertilisers, while in the case of non-pool fertilisers, private trade also will be in the field. In the course of a year, all the 5,000 societies will start retail sales, thereby bringing fertilisers nearer to the farmers in the villages covered by them. A strong directive have been issued to ensure that there is an agricultural credit society functioning as fertiliser retailer in a radius of not more than 3 to 5 miles. It is hoped that the combined sales of these societies will be of the order of Rs. 25 crores this year (1973-74) as against Rs. 9 crores in 1972-73.

In the light of complaints received from farmers about delay in receipt of fertilisers and other irregularities in the distribution of fertilisers, the Tamil Nadu Government has streamlined the system of distribution of fertilisers through co-operatives to enable farmers to get the vital agricultural input in time and to eliminate malpractices. Under the new system, which has come into force from the commencement of the current agricultural season, the entire distribution of pool (imported) fertilisers is entrusted to the Tamil Nadu Co-operative Marketing Federation and the Thanjavur Co-operative Marketing Federation.

A
DEPOT
IN
EVERY
THREE
MILES
RADIUS

The former federation will act as wholesalers for the entire State except Thanjavur District where the district Marketing Federation will act as the stockists.

The supply will be effected by the two organisation direct to village credit societies which will function as retailers. The two federations will also continue to distribute non-pool (indigenous) fertilisers. Private traders and panchayat unions were also engaged in the distribution of pool fertilisers hitherto and this is being eliminated.

Proper Check.

The Government has asked the two federations to keep track of the fertilisers (both pool and non-pool) till they reach the retail point. Officers deputed by District Collectors and the Agricultural Department will check the distribution at the village society level. A Co-operative fertiliser committee will be formed in each district with the Collector as Chairman to regulate the supplies on the one hand and on the other, to ensure timely settlement of accounts by the societies.

The State's requirement of imported fertiliser for 1973-74 is 3.17 lakhs tonnes of nitrogen, 1.03 lakhs tonnes phosphorus and one lakh tonne of potash.

Regional Offices Opened.

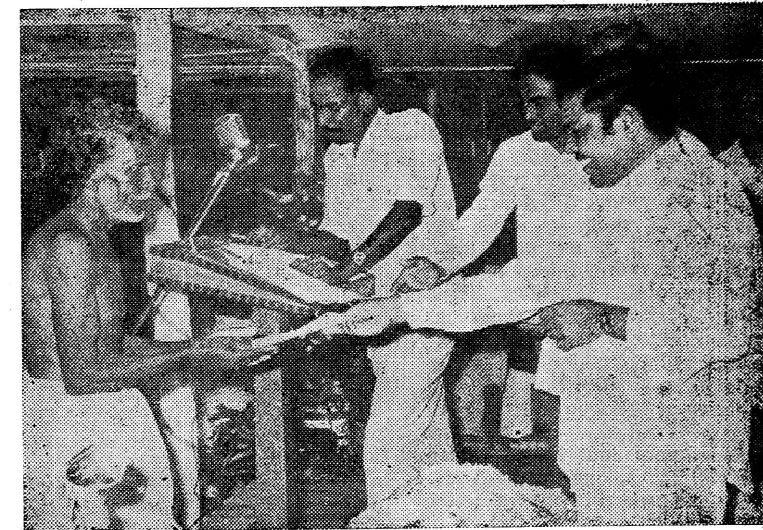
Thus, the Tamil Nadu Co-operative Marketing Federation and Thanjavur Co-operative Marketing Federation will handle nearly 60 per cent of the fertilizers made available for the farmers in the State as against 25 per cent last year. This is due to the allotment of the pool fertilizers entirely to the Co-operatives this year. The Tamil Nadu Co-operative Marketing Federation, whose main business is fertilizer distribution, has opened 10 regional offices for this purpose in all the districts except the Nilgiris, Kanyakumari and Thanjavur.

Assessment of Requirements.

The following instructions have been issued in this behalf: The agricultural credit societies, which will be the retailers for both pool and non-pool fertilizers, will assess the total requirements of fertilisers variety-wise for a year and send before the end of April a statement to the Regional Officer of the Federation under copy to the Central Bank and Marketing Society concerned. The statement is to indicate also the quantity required in respect of each variety of fertilisers every month and the total for the whole year. The assessment will generally be based on the actual sales in the previous year with the addition of anticipated increase in the coming year. The Central Bank and the marketing society will send their recommendations to the Regional Officer of the Federation before 15th of May. The Regional Officer will place the statements of requirements of all the retail societies before the District Co-operative Fertiliser Committee (consisting of the District Collector as Chairman, the Chairman and the Executive Officer of the Central Bank, the Regional Joint Registrar, the Deputy Director of Agriculture and the Regional Officer as members) and submit the same to the Federation with the views of the Committee.

Retailers.

While offering its recommendations of the statements of annual requirements of each agricultural credit society functioning as retailer, the Central Bank will specify the maximum limit up to which the



Thiru S. Ramachandran, Minister for Transport, distributing the land assignment deeds to the landless at Cuddalore on 6th July, 1973.

society can be permitted to keep stocks at a time. The limit may be fixed with reference to the seasonality in the area of the society and other factors.

Within Easy Reach.

Steps are being taken to ensure that there is an agricultural credit society functioning as retailers for a radius of not more than 3 to 5 miles. Wherever necessary, additional agricultural credit societies will be got appointed as retailers. All the viable and potentially viable agricultural credit societies should function as retailers. Where a society is dormant or mismanaged, the neighbouring society will be asked to serve the area of the former society till it is revived or its affairs are set right. If warranted, the opening of a depot by the neighbouring society may also be considered.

The marketing societies are not expected to undertake retail sale of fertilisers nor should they physically handle fertiliser in any respect, pool or non-pool. The agricultural credit society in the headquarters of the marketing society will be meeting the fertiliser needs of the farmers as the retailer. If there is no agricultural credit society at the headquarters of the marketing society, the neighbouring agricultural

credit society may be asked to open a depot.

Indents

Apart from the monthly indents, ad hoc indents may also be sent when there is an unforeseen and urgent demand for fertilisers. The marketing society will forward the copy received by it to the Regional Officer of the Federation with its recommendations within three days from the date of receipt, failing which the Regional Officer will act on the copy received direct. The marketing society will maintain a Society-wise Register for entering the details of the indents and its recommendations, before forwarding its copies of the indents to the Regional Officer of the Federation.

Purchase of Fertilisers.

So far as non-pool fertilisers are concerned, the private trade is also in the field. With a view to securing the advantages of large scale purchase and avoiding competition among the co-operatives, it has been decided that only the two Federations should purchase non-pool fertilisers and distribute them through the marketing societies and agricultural credit societies. The question of independent wholesale business by the

marketing societies does not arise even in respect of non-pool fertilisers, as all the retail societies will be distributing only the fertilisers supplied by the Federations. The marketing societies will continue to function as sub-wholesalers under the Federation for the distribution of non-pool fertilisers also.

As regards pool fertilisers, the Federation will, on receipt of allotment orders from the Collector, remit the initial payment, open the letter of credit and lift the stocks for distribution. The marketing societies will function as sub-wholesalers in the case of pool fertilisers as also in the case of non-pool fertilisers. The entire stocks of pool and non-pool fertilisers will thus belong to the Federations and be held by the marketing societies and the agricultural credit societies on consignment basis.

Sales Against Loan

The agricultural credit societies will distribute fertilisers towards the kind portion of the cultivation loans sanctioned by them as well as for cash. The cash sales may be both to members and to non-members. The societies should

endeavour to enroll non-members intending to purchase on payment of cash as 'A' class or 'B' class members. The quantity to be distributed per farmer (member or non-member) will be with reference to the instructions, if any, that may be issued by the District Collector, as far as pool fertilisers are concerned. While the non-pool fertilisers may be completely reserved for sale to the members only against kind portion of the loans or for cash the distribution of pool fertilisers to the members and non-members may be regulated with reference to the instructions of the District Collector.

Role of the Central Banks :

The Central Banks have been requested to ensure that the societies receive and distribute the fertilisers properly, remit the cash sale proceeds atleast once a week, send the weekly sales statement promptly to enable to Central Banks to adjust promptly to the account of the Federation the sales made against kind portion of cultivation loans, keep the accounts up-to-date and send the fortnightly stock statement in time.

Supervisors have been appointed by the Federations to inspect once a fortnight the fertiliser accounts of the societies and verify the stocks, the remittance of cash sale proceed and submission of the returns. They will particularly check the sale bills with reference to the quantity sold as against the extent and crops cultivated to ensure that all the sales are genuine.

Wherever necessary, the Central Banks may also open additional branches. About 80 per cent of the fertiliser sales represents sales towards kind portion of the cultivation loans issued by the Central Banks. The Central Banks have launched upon a larger credit programme. The allocation of pool fertilisers for sale only by the Co-operatives will help this programme, as also enlargement of the membership of societies. The Central Banks have been requested to pay their special attention and ensure that the agricultural credit societies play their role effectively in the revised fertiliser distribution system. In fact, the Central Banks have to play a very important role in the revised system of fertilisers distribution. *

the living past

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பிணியின்மை, செல்வம், விளைவு, இன்பம், ஏழம்
அணியென்ப நாட்டிற்கு இவ்வைந்து.—குறள்.

The essential features of a good State are: (i) the people should be protected from diseases; (ii) there should be wealth from natural sources; (iii) there should be production of agricultural and other wealth; (iv) people should enjoy life from artistic and cultural activities; and (v) defence against enemies. These five essential features are the ornaments of a State according to the Tamil sage, Thiruvalluvar.

In order to ensure all these five essentials to its people, the State should have to undertake different kinds of surveys. Most of the surveys are inter-twined, the chiefest being Land Surveys.

Geodesy, a branch of mathematics dealing with the figure and area of the earth or large portions of the earth, is one of the most important such surveys that are needed for planning for the welfare of the State. Geodesy is not only essential to ensure the defence of the State against outside intrusion but helps in having a graphic picture of our terrain and the manner in which the topography of the terrain affects the weather, etc., conditions.

System of triangle

The basic geo-metric figure from which the geo-detic map of a terrain can be built up is a triangle. It is why when we survey a terrain we also say it has been "triangulated".

The Survey of India covers the terrain with very large triangles whereas the Tamil Nadu State Survey adopts much smaller triangles as the purpose of the latter is to arrive at the extent of each individual holding which is the unit for Revenue Administration and compile a cadastre (Land Register). The triangles in the detailed field surveys undertaken by States are mainly formed by measuring the lengths, breadths and fixing the correct positions of the other required points by taking the offsets on the nearest base of a triangle by using a simple instrument called the cross-staff. The accuracy of the measurement of these small "Cadastral survey triangles" is ensured by

A Brief Note On The Importance Of Nungam- bakkam Observatory

By

S. GANESAN,

*Jt. Director of
Survey and Land Records.*

comparing the measurements with those obtained by the State Surveyors triangulating the bigger blocks like the Main Circuits (two or three numbers in a Taluk) and the Village Circuits with the help of the theodolite, which consists of circular discs, both horizontal and vertical, on which the 360° of a circle are divided into degrees, minutes and seconds and are provided with verniers to have the required minimum readings. There is a telescope hinged to the discs which can rotate horizontally a full circle, and vertically for about half the circle. The State Survey Village Circuits are compared to the Survey of India data to ensure accuracy.

It was the Britishers who first conceived the idea of triangulating the terrain adopting trigonometry for calculations and they attempted their first triangulation in Madras State and it was in the City of Madras that the first base line was measured on 10th April 1802. The Standard Meridian of Madras was taken as the basis for the national survey mapping.

Madras - Cradle of the Survey

Thus, Madras has been the Cradle of the Survey of India which, in turn, was the basis of the trigonometrical surveys of the Britishers who were the pioneers in trigonometrical survey.

Why has this mantle fallen on the neck of Madras ?

In his learned article "Astronomical Survey Key to all Surveys", in Land Surveys, Tamil Nadu, published a Souvenir on the occasion of the opening of Madras Regional Centre of the Institution of Surveyors (India) in 1969, Thiru S. Singarajani, M.A., M.Litt., Director of Tamil Nadu Archives, observes:

"The geographical position of Madras observatory is such as to render it a most important link as regards other observatories in opposite hemispheres of the globe. It is precisely midway in latitude between St. Petersburg (Leningrad) and the Cape of Good Hope, the extreme limits on either side of the equator. It is also nearly a quarter of the earth's

circumference eastward of Greenwich while the National observatory at Washington is about the same distance to the west of the Royal Observatory. Hence many of the important occasional phenomena invisible elsewhere may be recorded at Madras, when otherwise they must be altogether lost. Further, its situation within the tropics renders it especially adapted for observations of planets and comets in either hemisphere, whether with meridian or equatorial telescopes. The work of the observatory has not been limited exclusively to scientific objects, but it has, through its connection with the Great Trigonometrical survey and by its notification of the local time by time ball or gun firing, proved of direct practical benefit while it has indirectly afforded important assistance in the prosecution of the hydrographic survey of the coasts of the Indian Peninsula. It has also been found greatly useful in carrying out the Wind Power Survey for growing crops by harnessing Wind Power for irrigational purposes".

Thus, the Nungambakkam Observatory is internationally important due to its ideal geographical position with several historic survey monuments. Theodolite was first set within the campus of this observatory to commence the Great Trigonometrical Survey (G.T.S.) in India. The first base line was measured here and it forms the backbone for the General Mapping of the World (Atlas-Making).

It is indeed with great pleasure that we, therefore, expect the arrival of Col. K. L. Khosla and Col. N.K. Sen, Geodetic Survey Experts in the Survey of India on the 23rd of this month in Madras and we look forward to their paying a visit to the observatory at Nungambakkam. They will, of course, be delighted to answer our queries regarding this great and practically important science of Geodesy.

It may not be out of place to mention here that the Initial Cadastral Survey in India was initiated in 1002 A.D. by Raja Raja the Great, the founder and Emperor of the Chola, Dynasty in Thanjavur of Tamil Nadu State

and that Survey is still called the Celebrated Survey of 1002 A.D. as is seen from the epigraphical evidence available at the Big Temple in Thanjavur town. The accuracy of this Raja's survey is borne out by the fact that the land as small in extent as 1/5242880000 of a veli was measured and assessed to land revenue.

The Co-operative Autorickshaw in Coimbatore.

None of the 950 autorickshaws in Coimbatore City go without grumbling if the passenger paid the metered fare rate. But the 24 co-operative sector autorickshaws smilingly accept the fare. In automobile passenger transport also the co-operative sector in Coimbatore made a mark as it has in agricultural and consumer commodities.

The Autorickshaw Co-operative Society in Coimbatore was formed in the second week of January 1972, with Thiru Manickavasagam as its President. About 50 members joined and paid each a share of Rs. 10. The finance for the purchase of 24 autorickshaws to the members was got from a nationalised Bank at the rate of Rs. 11,750 per autorickshaw. The Chief Minister of Tamil Nadu gave away to the 24 drivers as May Day gift. Now it has 150 members in its fold.

In the course of their earnings, each driver paid Rs. 8-95 per day towards the repayment of Rs. 11,750 spreading for four years. Almost all regularly repaid their daily instalments.

These 24 co-operative autorickshaws became the hope for the travelling public to go on a metered fare without any unexpected quarrel. Others are also slowly falling into this mode of operation.

Source : F.P.O., Coimbatore.

Free Medical Aid To Dissuade Drinking Habit.

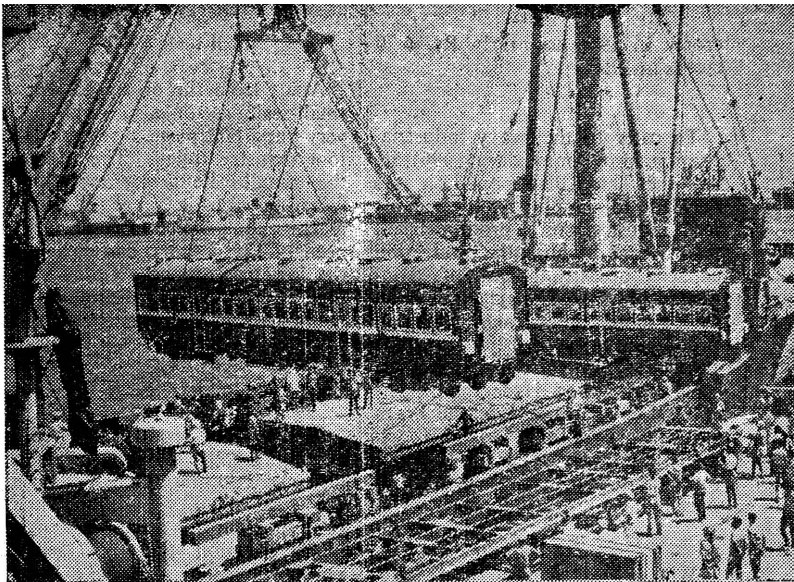
Effective enforcement of extending free medical facilities to all the poor and needy citizens of India is being carried out by the Government. Voluntary efforts also join hands with this task to cover the vast area. The prohibition council of Coimbatore Gandhi Peace Foundation Centre is one such to provide free medical aid to the poor harijans and muslims of Kempatty colony.

The prohibition council under the leadership of Dr. P. R. Subbaiyan, with the help of two other doctors gave free medical aid to 7,500 poor people of the slum area in the 30th and 6th wards. With the preparation made by the Secretary of Gandhi Peace Foundation Centre, Thiru C. B. Sadagopal, the doctors visit the municipal colony and the slum thrice a week. They attend to the patients and supply free medicines in addition to the free consultation. Though initially few harijans benefitted in it, slowly muslims, Christians and others visited and accepted the benefit.

The idea of extending such a voluntary help struck to the President in one of their meetings to combat the drinking habit. As an incentive to those poor who abstain from drinking, this free medical aid was introduced. Later the council also included the alcohol addicts so as to enlighten them on the evils of drinking. Because of this, 50 persons voluntarily confessed in the various meetings and promised to give up the drinking habit. So far Rs. 400 worth of medicine were given to 7,500 people. So much encouraged by the result, the prohibition council has extended its scheme to two more slums in Coimbatore.

F.P.O., Coimbatore.

MACHINE TOOL INDUSTRY IN INDIA



Loading of Passenger Cars at the Madras Harbour for export to Taiwan Railways.

The Machine Tool Industry in India has achieved spectacular progress, both horizontally as well as vertically over the past twenty years. Not only the production has gone up, the range of products too has widened considerably. The industry, which was confined to only a few places twenty years ago, has now spread to many centres in the country.

The value of production of machine tools spurted from less than Rs. 1 crore in 1955 to over Rs. 50 crores in 1972.

The Machine Tool Industry provides the necessary tools for the rapid development of engineering and machine building industries. The importance of the industry in the industrial development programme of the country is recognised by the Government and high priority has been accorded to this industry in the various five year plans.

HISTORICAL BACKGROUND

History of manufacture of machine tools in India can be traced back to the earlier years of the twentieth century when one or two small manufacturers of common engineering items like agricultural implements felt the necessity of manufacturing simple types of machine tools like cone pulley lathes and drilling machines pri-

marily for their own use. During the first world war, a number of small workshops undertook the production of machine tools suitable for making shells and their manufacture continued throughout the war. It was only in 1935 that an organised manufacture of machine tools like cone pulley lathes was undertaken on commercial basis. Thereafter, manufacture of machine tools received considerable impetus specially during second world war when supply of foreign machines was stopped. During the six years of war, nearly 20,000 machine tools valued at Rs. 6 crores were manufactured by 215 manufacturers.

DEVELOPMENT OF MACHINE TOOL INDUSTRY

Planned progress of development for the industry started during the first plan period, i.e., 1951-56. The machine tool industry being capital intensive and the gestation period being long, Government felt the necessity to undertake the manufacture of machine tools in the public sector also. To cater to the developing demand for machine tools comparable in design and accuracy to those available from other industrialised countries, Government decided to supplement the efforts of the private sector and established during this period two State-owned machine tool factories, one at Ambarnath and the other

at Bangalore. Ambarnath factory, known as Machine Tools Prototype Factory, was essentially meant to manufacture special types of machine tools to meet the requirements of defence. The Hindustan Machine Tools, Bangalore, popularly known as H.M.T., was planned for a capacity of 1,200 general purpose machine tools per year and went into production at the end of 1954. At the end of 1956, the level of production stood at Rs. 1.20 crores.

The Second Plan period, i.e., 1956-61, being oriented towards industrial development, gave a special impetus to the machine tool industry. In 1956, a Machine Tool Committee was appointed to recommend the programme of development of machine tool industry. A programme of manufacture was also indicated to the major units then in production. In the context of the plan framework, several units in the private sector entered into foreign collaboration for the production of various categories of machine tools and this was a development with far-reaching consequences to the country. During this period, Government took over Praga Tool Corporation at Hyderabad so that the facilities available in that factory for the manufacture of machine tools could be expanded substantially to meet the increased requirements. During the Second Plan, production rose from Rs. 1.20

crores in 1956 to nearly Rs. 6.70 crores in 1960.

To cater to the heavy industrialisation programme during 1961-66, i.e., the Third Plan period, it was decided to develop the machine tool industry on a priority basis. Apart from doubling the production capacity of existing unit of Hindustan Machine Tools at Bangalore, three more units each with a production capacity of 1,000 machine tools a year, were set up at Pinjore, Kalamassery and Hyderabad. The expansion programme of the Praga Tools Corporation was also completed and new types of machine tools and accessories were introduced.

With a view to meet the requirements of heavier types of machine tools, steps were taken to set up a Heavy Machine Tool Plant along with the Heavy Machine Building Plant at Ranchi. This factory has already gone into production. Necessary encouragement was also forthcoming from the Government to the private sector to take up the challenge. This brought about a rapid growth of the industry in private sector also. Almost all the existing units expanded and many new units were set up. At the end of the Third Plan period, i.e., in 1966, the industry achieved a production level of Rs. 28.5 crores.

Since 1966, the industry has been going through an intense phase of diversification. To cover the gaps in product range, almost all the major units have already taken up the manufacture of new products. Government also took steps in this connection and a public sector unit, namely, Machine Tool Corporation, was set up at Ajmer, primarily to manufacture different types of grinding machines with assistance from Czechoslovakia. This unit has already gone into production.

The present installed capacity in the machine tool industry is nearly Rs. 70 crores a year. The production target of Rs. 65 crores is likely to be achieved by 1973-74 and the installed capacity would then go up to Rs. 80 crores.

Small-scale Sector

Apart from the organised sector, small-scale sector also occupies a very important place in the machine tool industry today. The units in the small-scale sector are manufacturing a wide range of simple machine tools thereby meeting a vital need of the country particularly in the low price range. Today more than 1,000 small-scale units are manufacturing machine tools.

Product Range

The range of products covered by the indigenous manufacturers has also increased substantially. During the First Plan period, the main concentration was on manufacturing more common types of general purpose machine tools like lathes, shaping machines, drilling machines and hacksaws. The indigenous industry today is in a position to supply even very high capacity presses and sheet metal working machinery of almost any kind, size and capacity. The industry can also produce highly sophisticated machines like thread rolling machines, internal grinders, centreless grinders, crankshaft grinders, vertical spindle grinders, tapping machines and hydraulic equipment.

The industry is today capable of offering turn-key projects for the manufacture of general purpose machine tools like lathes, drilling machines, milling machines and shaping machines. It can cover market survey, project report, erection of machinery, supply of major part of the capital equipment, product design, training of personnel and establishment of production. In the field of more sophisticated machines, licence has been granted for a mini-chucker to a famous British manufacturing group.

Research and Development

Machine tool units, both in public and private sectors, have regular research and development activity. Major inplant research and developmental activity is done by Hindustan Machine Tools. Starting with the turret lathe seven years ago, they have developed the designs of quite a few machines like heavy duty lathe, low-cost simple lathe, ram turret milling machine, models of general purpose milling machines,

a small cylindrical grinder and a mini-chucker. In addition, they have also developed a series of lathes and radial drills for the export market.

The Central Machine Tools Institute, Bangalore, is also engaged in basic research and development of new designs. The activities of the Institute include: Design and development of machine tools, standardisation and rationalisation, machine tools testing and training of Design and Development Engineers.

The National Committee on Science and Technology is also engaged in Research and Development in the machine tool industry.

Export

India, as a comparatively newcomer in the field of machine tools, has to face an uphill task in the highly competitive international market for machine tools but there are very favourable factors such as availability of raw material and low-cost labour which should make India one of the leading nations exporting machine tools.

The export of machine tools which was barely Rs. 15 lakhs a decade ago, stood at nearly Rs. 3 crores last year. Australia and New Zealand have emerged as major buyers of Indian machine tools. Recently in some of the trade agreements concluded with East European countries, machine tools have been included.

Future Trends

The machine tool industry is in an intense phase of diversification and will be going for the manufacture of more sophisticated and special purpose machines. With the rapid development of electronic industry, machine tool industry will be adopting more and more electronic controls on machine tools. A beginning in this direction has already been made. Digital Read-outs have been developed which can be fitted to any machine. Provision of numerical control system of controls in machine tools will certainly help in getting consistent repeatable accuracy, higher machine utilisation and saving of jigs and fixtures.

Soviet-Indian Collaboration in Ferrous Metallurgy

The author of this article is Oleg Grigoriev, Gipromez executive (Gipromez is the leading Soviet institute for steel plant designing), who took part in designing the Bhilai and Bokaro works and many times came to India as an adviser. For a long time Grigoriev worked in the Central Engineering and Design Bureau in Ranchi where the bulk of Indian steel designers are engaged.

Not long before his tragic death, which deeply grieved all of India's friends in the Soviet Union, Minister of Steel and Mines, Mohan Kumaramangalam, said in an interview that by the end of the 1974-1979 Five-Year Plan the manufacturing capacities of all Indian steel mills would reach 18,500,000 tons of steel a year. The projects of Soviet-Indian co-operation—Bhilai and Bokaro—would account for nearly 10,000,000 tons, he emphasised.

Fully Appreciated.

As a specialist in ferrous metallurgy I fully appreciate the difficulty of reaching this target. At the same time, knowing the iron and steel production growth rates in the country, I am sure that this task will be carried out. In 1947 India made only 1,000,000 tons of steel, whereas in 1971 its production topped 7 mln. tons. My confidence that India will successfully accomplish her tasks is strengthened by the fact that the country already has the necessary industrial base. Thus, for example, the Ranchi Heavy Machine-Building Plant put up with Soviet participation along with the related foundry and mechanical works erected with Czechoslovakia technical assistance, is the biggest engineering complex in Asia.

India also has her own designing base. Working in the Central Engineering and Design Bureau in Ranchi, I could see for myself the high skills of its personnel capable of solving complex engineering problems.

To day the Ranchi office is the main design organisation in its field. It decides, on a nation-wide scale, questions related to the construction of new and the expansion of old steel plants and prognosticates the development of ferrous metallurgy in India.

Establishment of such an office came as a natural result of Soviet-Indian collaboration. In his speech at the December 16, 1957 meeting at the Bhilai works, Jawaharlal Nehru said that India had invited Soviet specialists to learn from them. After the completion of the construction period, he added, if we wanted to build another plant, we would not need the same degree of assistance from the outside.

Successful Achievement.

The aim of Soviet co-operation with India is to help the country in its industrial advance. And this aim is being successfully achieved. In the summer of 1971, the sixth blast furnace went into operation at the Bhilai works. Significantly, for the first time in the history of Indian ferrous metallurgy the designing of a blast furnace was done by Indian specialists. Nehru's prediction came true. The Soviet experts, who used to carry out the bulk of the work, this time played the modest role of advisers.

Currently, the Ranchi office is doing extensive work to expand the enterprises in Bhilai, Bokaro, Rourkela and Durgapur. The Bhilai works, for instance, is operating at a stable level of annual output of more than 2,000,000 tons of steel. Last year it was decided to expand its production to 4,000,000 tons, but now Indian and Soviet experts have arrived at the conclusion that its capacity should be brought to something like 7,000,000 tons. As regards Bokaro, a decision has been taken to bring the capacity of this biggest plant in Asia to 10,000,000 tons.

These are bold decisions. Bold also because they will be increasingly implemented indigenously. The Ranchi office has already begun detailed designing for the second stage of the Bokaro plant with necessary technical aid from Soviet organisations. The same provision has been made for the expansion of the Bhilai plant.

With the change in conditions, there has come a change in relations between the Ranchi Design Office and Gipromez. These design organisations have long established close contacts. But if previously Gipromez did the greater part of the work, now it is being done by the Ranchi office. During the construction of the first stage of the Bokaro plant the Indian side did one-fourth of the designing work, whereas at the second stage the Indian designers are doing the whole job with Soviet specialists providing consultations when necessary. A contributing factor here is that the Soviet side handed over to the Indian side standard and methodological materials on the organisation and technique of designing ferrous metallurgy enterprises. These materials are widely used by the Ranchi office.

Bridging Gap.

In some respects, Soviet designers still have greater experience than their Indian colleagues, and Gipromez consultants working in the Ranchi office greatly help to bridge this gap. Besides, Indian specialists take regular training in the Soviet Union. They familiarise themselves with the newest practices, doing fruitful independent work. A group of probationers has worked out an original design of a converter shop for the second stage of the Bokaro plant, with provision made for the installation of highly efficient 300-ton converters.

PERS- PECTIVE PLAN FOR THE DEVELOP- MENT OF FISHERIES IN TAMIL NADU

Fish production in Tamil Nadu, which stood at 119,900 tonnes in 1950, has increased to 278,500 tonnes in 1970. In spite of this phenomenal growth in fish production, the State has to go a long way to reach the point of full exploitation of all the available resources in the line which is estimated at over 9 lakh tonnes.

Tamil Nadu has vast resources of both marine and inland fisheries, because she has a long coast line of 1,000 Kms. and a large extent of inland water-spreads consisting of river systems, reservoirs, tanks and large irrigation wells. The average annual rainfall in normal years is 400 mm. Only the inshore belt of the extensive coast line is exploited at present by indigenous crafts and small mechanised fishing boats. The potential catch from the inshore and offshore of Tamil Nadu base is estimated at over 9 lakh tonnes, of these less than 2 lakh tonnes are exploited now, mostly from the inshore region.

Fish production in Tamil Nadu, which stood at 119,900 tonnes in the year 1950, reached 150,900 tonnes by 1960 and further rose to 278,500 tonnes by 1970. The production has increased at 2.6 per cent per annum over the period 1950 to 1960 and at 8.5 per cent per annum over the period 1960 to 1970. The above production is made up of marine and inland fish catches. The marine catch which was 85,900 tonnes in 1950 increased to 107,800 tonnes in 1960 and to 158,500 tonnes in 1970, representing an average annual rate of growth of 2.5 per cent and 4.7 per cent respectively. The inland catch was 34,000 tonnes in 1950, 43,100 tonnes in 1960 and 120,000 tonnes in 1970. This gives an average annual rate of growth of 2.7 per cent and 17.8 per cent respectively.

Marine Fisheries.

On the marine side, the rate of growth has not been much being 2.5 per cent over the first decade and 4.7 per cent over the second decade. The growth can be regarded as more or less steady. This is the result of the introduction of mechanised fishing boats and the use of nets made of fishing grounds for prawns and lobsters

and silver bellies as a result of survey conducted by the Inshore Fisheries Survey Stations which has contributed to increased catches. The use of trawl nets and bottom-set gill nets has become popular from the demonstrations of the Inshore Fisheries Survey Stations and the training imparted in the training centres for the fishermen. There has been an improvement in the handling, preservation and transport of fish for internal marketing and processing for export. In the second half of the decade 1960-70, Tamil Nadu has entered into the export trade for frozen shrimps, lobsters and frog legs. There is also a conscious effort to revive the dried fish export trade with Ceylon.

Inland Fisheries.

The rate of growth in fish production in inland fisheries is very significant during the decade 1960-70. This is primarily the result of the production of fish seed by the method of induced breeding of carps by pituitary hormone injections (Hypophysation) and intensive and extensive stocking of inland water areas. The development of reservoir fisheries adopting a clear management policy has contributed to sustained yields of fish from the reservoirs. The connected river systems have also been benefitted by the improvement in the fishery of the perennial reservoirs.

The State Domestic Product from the Fisheries Sector at 1960-61 prices has been estimated at Rs. 20.35 crores for 1970-71. The average growth rate in fish production over the Perspective Plan period worked out as follows :

	Per cent.
1971-1974 ..	26.5
1974-1979 ..	9.2
1979-1984 ..	14.0

The estimated income from the Fisheries Sector towards the end

of 1974 is Rs. 36.54 crores, the growth rate being 5.4 per cent over 1971, Rs. 53.54 crores by 1979, the growth rate being 3.4 per cent over 1974 and Rs. 90.75 crores by 1984, the growth rate being 7.5 per cent over 1979.

Assistance for non-mechanised traditional fishing will be extended to the fishermen in all possible ways by substantial financial outlays in the Plan. The socio-economic betterment of the fishermen will also receive greater attention.

In order to exploit the offshore and deep sea fishing grounds, we must have medium and large fishing vessels. The operation of bigger vessels requires certain infrastructure facilities such as fisheries harbours.

The available capacity of the existing fisheries harbour wharves and landing jetties has been assessed and the capacity of the proposed harbours, jetties, etc., have been worked out. Taking into account the capacity of the different fisheries harbours and jetties, the number of small mechanised boats and bigger trawlers, which will be put into operation during the perspective plan, has been worked out. These boats have been allocated among the State sector and private and the co-operative sector for indicating the necessary financial outlays. Vessels over 13.8 metres will be entirely for offshore and deep sea fishing. The Central Government will be responsible for providing the subsidy for construction of these bigger vessels. The private and co-operative sectors ought to contribute a maximum of 20 per cent of the cost of the small and bigger vessels and the balance of capital has to come from banks and other financing institutions. The construction and commissioning of small mechanised boats which are less than 9.8 metres should be progressively discouraged.

In view of the expansion of the mechanisation programme and the commissioning of larger vessels, it is essential to augment servicing and repair facilities. The small mechanised boats also catch fish and shrimps suitable for processing and export and thereby earn foreign exchange. There is, therefore, adequate justification to extend subsidy for the small mechanised boats in order to encourage the small operators interested in offshore fishing.

Diesel oil contributes to a major share of the cost of operation of fishing boats. The cost of diesel oil in India is very high because of the high percentage of excise duty. In order to make fishing operations a viable proposition, the cost of fuel must be subsidised to the extent of the excise duty payable.

The establishment of fish-net making plants will be encouraged. Besides encouraging the establishment of fish-net making Plants in the State, the construction of the sanctioned fishing harbours should be taken up on a priority basis. Investigations for the new harbours should be expedited and preliminaries for their sanction and execution should be undertaken according to a definite time schedule. The necessary shore facilities at the Fisheries Harbours for the handling, processing and marketing of fish should be created.

Fish transport facilities including refrigerated road and rail vans should be expanded significantly to achieve better marketing including containerisation.

Training programmes to meet man power requirements of fishing vessels, processing plants, fisheries administration and research have to be given high priority. Our knowledge of the offshore and deep sea fishing grounds is very scanty.

The programme of deep sea fishing wherein enterprising entrepreneurs are expected to participate, will be attractive and successful only if there is adequate information of the fishing grounds for dissemination to the industry. Therefore a comprehensive plan of survey is necessary. The Government of India who will be primarily responsible for undertaking these surveys will work in close association with the State Fisheries Department so that the fishing grounds charted by the Government of India vessels will be covered in the programme of experimental fishing by the State and it will also fill up lacunae in the survey made by the Government of India. With reference to the offshore and deep sea regions to be covered 9 medium and bigger trawlers have been provided for in the V Plan and 15 vessels in the VI Plan. The main idea will be to complete the exploratory survey during the V and VI Plan periods.

Provision has been made for commissioning 7 ships on a phased programme during the Perspective Plan.

Fish for Export.

The increase in the catch of our marine fisheries will be export-oriented, even though there is considerable demand for fish in the internal markets. The world trend is in the export of frozen shrimps, *lopsters* and *tuna* and other fish of high unit value. *Canned shrimps* and *Sardines*, *tuna*, *crustaceans* and *molluscs* have also an increasing export demand. Tamil Nadu have already made a beginning in the export of marine products earning a foreign exchange of Rs. 1.7 crores (1968) and the trend is on the increase. It is envisaged that the existing export of about 6,000 (product weight) tonnes will be stepped up to 15,000 tonnes by 1974, 39,000 tonnes by 1979 to fetch a foreign exchange of Rs. 32 crores; and to 77,900 tonnes by 1984 realising a foreign exchange of about Rs. 77 crores. Simultaneously, our domestic markets will also be developed. Frozen fish will be popularised and made available for people in the interior areas of the State.

On the side of inland fisheries, the crucial factor is production of large quantities of fish seed in order to stock all culturable water sources. The breeding of *grass carp* and *silver carp* will have to be done on a large scale. Seasonal tanks and irrigation wells can be stocked with *Tilapia*.

The research set-up of the department is to be strengthened and given the status of an institution. Research programmes will be given greater information and co-ordinated research projects with the Indian Council of Agricultural Refinance and the centre on practical problems and pilot schemes will be formulated wherever feasible.

Marine fish is landed in more than 300 centres along the coast. The position regarding inland fisheries is worse, because fish landings are made on the banks of rivers, tanks and other water sources. The department is collecting catch statistics of marine landings at a few centres where staff are sanctioned.

PILOT SCHEMES FOR INLAND FISHERIES

Recently, the National Sample Survey Organisation has suggested pilot scheme for inland fisheries statistics collection to be taken up in one district. If this proves successful, the methodology can be extended to the other districts. Apart from catch statistics, we also need reliable data on the census of fishermen, indigenous craft and gear, mechanised boats in operation and quantities of fish, marketed fresh, processed and consumed in the internal markets, as well as the quantities exported and their value. All these data are essential for future planning of the industry as well as in the supervision and the evaluation of the projects implemented. This calls for strengthening of the departmental statistics organisation.

Assuming that the IV Plan targets will be achieved, the investment for the V Plan and VI Plan has been worked as follows :—

State sector ..	71,21-60	46-50
Centrally sponsored.	3,17-50	2-08
Central sector	11,65-38	7-60
Private sector	19,85-60	12-96
Co-operative sector.	3,30-75	2-16
Institutional Finance.	43,94-67	71-31
Total ..	153,15-50	142-61

MAN-POWER REQUIREMENT

The man-power requirements for the period of the perspective plan have been estimated both for marine and inland fisheries. By the end of the IV Plan, additional employment for 12,500 persons will be generated for operating the boats and trawlers, processing of fish marketing and fish based industries. By the end of the V Plan, another 57,500 persons will find employment. Additional 55,000 persons will be employed by the end of the VI Plan. As regards inland fisheries, additional employment for about 22,000 persons will be generated by the end of the IV Plan, 12,000 persons by the end of the V Plan and 28,000 persons by the end of the VI Plan.

FISHERY DEVELOPMENT CORPORATION

In order to execute massive programmes during the period of the perspective plan and to organise the activities on commercial lines, there is urgent need to organise a fisheries development corporation. This corporation will have two wings, the Banking wing and the Development and Operation wing. The Banking wing will look after the obtaining of the resources and generating the investment. The development and operation wing will look after the commercial and promotional tasks like operations of boats, processing plants, etc. ●

Neyveli Lignite Corporation Addressed To supply Its entire Production

It may be stated in this connection that the total requirement of chemical fertilisers in this State is 2.5 lakhs tonnes per year, against which the allotment expected is 2 lakhs tonnes, leaving a consumption deficiency of 0.5 lakh tonnes.

The Neyveli Lignite Corporation have not been able to supply adequate quantity to the Co-operative Federations in the State this year due to their commitment to supply 40 per cent of their production or 40,000 tonnes to Messrs. Rallis, and their production was inadequate even to meet this commitment. Since the agreement of the Neyveli Lignite Corporation with Messrs. Rallis comes to an end in July 1973, the Corporation has been addressed separately to supply their entire production of Urea to the Tamil Nadu and Thanjavur Co-operative Marketing Federations, when the contract of the Neyveli Lignite Corporation with Messrs. Rallis comes to an end. ●

	<i>Rupees in lakhs.</i>	<i>Per- cent- tage.</i>
<i>V Plan.—</i>		
1 State sector	36,68-04	42-65
2 Centrally sponsored.	6,75-00	7-84
3 Central sector	12,27-58	14-27
4 Private sector	6,66-04	7-74
5 Co-operative sector.	1,00-00	1-16
6 Institutional Finance.	22,68-54	26-34
Total..	86,05-20	100-00

FOOD FROM THE SEA

The seas cover approximately 360 million kilometres of the global surface but by and large the exploitation of the marine living resources is still restricted to the vicinity of coasts in the so-called continental shelf areas which are only about 7 per cent of the total ocean surface. It is estimated that nearly 200 million metric tonnes of fish could be harvested from the world oceans, out of which only 62.4 million metric tonnes are caught now.

The use of mechanised fishing units has substantially enhanced the area of operation and sophisticated technology has increased the catching efficiency. However, the deep sea and the open ocean are biologically less productive than the shallow areas except where there is constant replenishment of nutrient salts. To a large extent economical and technological factors as well as the natural abundance of resources form the basis for the development pattern.

To-day perhaps the greatest importance of sea to man lies because its biological life can provide to a great extent the protein needs of the increasing human population. There is hardly any marine living resource that cannot be utilised for human consumption directly or indirectly and in some form or the other.

HIGHER YIELD POSSIBLE

Yet we make use of only a relatively small number out of the 25,000 or more of the existing species of fish. Those that are captured consistently for food are only about 200 species. Among the many crustaceans and molluscs, which include shrimps, crabs, lobsters, oysters, mussels, squids, cuttle-fish and clams, the proportion that we fish is perhaps even less.

It is estimated that more than 10 million metric tonnes of fish could be caught from the Indian Ocean. Our shelf area alone can yield nearly 2.5 million metric tonnes as against the 1.15 million metric tonnes caught now. Such targets of attainment are well within achievable limits and the technical know-how available.

The fact that India's estimated marine fish landings have doubled during the last two decades or so

indicates the development that has taken place in recent times. Yet our needs are much more. It should be realised that despite an apparently impressive increase in our catch during the past two decades, our exploitation is still largely confined within a distance of about 25 km. from the shore.

UNPREDICTABLE FLUCTUATIONS

When one talks of food from the sea, the natural priority is for fish, then the prawns or the shrimps followed by a few other less important items. The items exploited within the narrow coastal belt could be broadly classified as the pelagic complex or surface community and the demersal or the bottom stock.

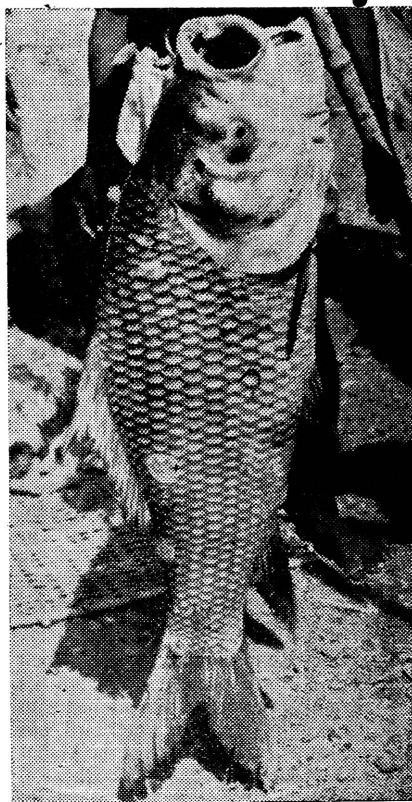
There is no doubt considerable variation in the proportion of the pelagic and demersal components in the fisheries from coast to coast and from zone to zone. Nevertheless, in the Indian marine fisheries as

by
DR. R. RAGHU PRASAD.

a whole, the quantitative predominance of the pelagic varieties is evident. This is primarily due to the two groups, viz., the sardines and the mackerel. Their abundance or otherwise usually determines the success or failure of the total marine landings for any year. Both these are dominant components mostly of the south-west coast.

The well-known oil sardine which is almost restricted to Kerala-Konkan coast provides sustenance to the entire coastal population of that region. But the capricious nature of the fishery resulting in near-total failure in certain years has also brought unexpected misery to the fishermen. The magnitude of fluctuations in annual landings would be obvious from the fact that the catch varied from a mere 7,000 to over 3 lakh metric tonnes during the last 20 years.

Compared to the sardines, the mackerel fishery shows less intense annual fluctuations. Its annual catch had varied from 16,000 to over 1,80,000 metric tonnes. Their



When one talks of food from the sea, the natural priority is for fish. To-day perhaps the greatest importance of sea to man lies in the fact that its biological life can provide to a great extent the protein needs of the increasing human population. Further there is vast scope for increasing fish output in India.

distribution' is also more widespread and they form a fishery both in the west as well as in selected areas on the east coast. The fish on an average constitutes 10 per cent of the total marine fish production and is a highly esteemed food fish.

Recent investigations have revealed the abundant occurrence of mackerel and less frequently sardines beyond the traditional fishing grounds. Similarly large shoals of anchovies also were recorded in these regions. These could be readily caught with suitable techniques.

As an item of food and from the point of view of commercial significance, the prawns occupy a very notable place in the present days' marine economics, with an estimated annual catch varying between 62,000 and 1,58,000 metric tonnes. The penaeid prawns have emerged as the largest single export item in our marine products bringing an annual foreign exchange of nearly forty-two crores of rupees. Twenty years ago, prawns had hardly figured in our total marine fish landings. Along with prawns, lobsters also constitute an important marine food resource.

The Bombay duck, a fish which derives its popular name from its region of importance combined with its resemblance to the water bird, has the same regional status in the Maharashtra-Gujarat coast as the oil sardine has in Kerala-Mysore region. Another notable feature is that most of this fish is available for local consumption either in the fresh or dried form.

Among the major food fishes of the seas mention should be made of the tunas and billfishes. At present the quantity that we are able to exploit is only a fraction of what is actually available in our seas. I specially underline we because it is now well-known that other nations are able to make a far better utilisation of this rich resource from the Indian Ocean than what we could because of our lack of adequate facilities. Nearly 1,75,000 metric tonnes of these varieties are caught from the Indian Ocean of which we catch only 5,000 tonnes.

Thus these tunas, billfishes and sword fishes together constitute one of the best potential resources and offer immense scope for further intensive exploitation by us especially since the waters around the islands in the Arabian Sea and the Bay of

Bengal are known to be rich in these varieties.

Apart from the major category, there are many other less important items that are now being caught and utilised, each of which may account to anything between 10 and 35 metric tonnes per year. We can ill afford to ignore the significant contributions made by nearly a dozen groups of fishes such as ribbon fishes, soles, pomfrets, hilsa and threadfins. Each of these by itself and in a collective scale helps considerably in maintaining the economy. It also provides cheap nutritious dietetic requirements for the economically weaker section of our population.

Hitherto I have been dealing with the more conventional food items from the sea. But what we have been deriving has become quite inadequate to meet our increasing demands. This situation has given us an opportunity to search all over the accessible regions of the seas for other varieties and for better utilisation of all resources. Thus, along with intensification of fishing operations further exploration of the seas as well as diversification of fishing activities which will tap latent resources and at the same time relieve pressure from some of the over exploited stocks, are currently going on. Exploratory fishing has brought to light the existence of commercially exploitable stocks of breams, perches, butter-fish lizard-fishes, file fishes, a number of deep water prawns and lobsters. All these together with a variety of items such as crabs, squids and cuttlefishes offer considerable scope for more intensive exploitation.

SEAWEEDS AS FOOD

In this context a special mention may be made of seaweeds as food. Several species of these are used as food in Japan and attempts to popularise this in our country are likely to be advantageous. Among the varied food items mention must also be made of the possible use of marine plankton as human food. Man in his search for newer resources for his sustenance has even begun to experiment on this. In this process it is only to be hoped that the poor small fish in the sea will not be deprived of their natural food.

Having dealt with the various food items constituting the wild stock which are only to be exploited judiciously to obtain a sustained yield, I will now pass

on to the question of farming the sea. To-day there is an increasing demand for high quality yet cheap protein food, and marine fishing is becoming more and more capital intensive.

It is now well recognised that it would be difficult to meet the increased need from the wild stock alone. Consequently one of the recent developments is the interest shown in culturing marine food organisms. Besides several species of fish, a number of shellfish, mussels clams, oysters and algae lend themselves to marine aquaculture or mariculture as the technique is now popularly used.

The methods employed vary considerably according to the species, their requirements and the area where they are to be practised. The successful shrimp culture operators in Japan or the mollusc culture of Spain and the Mediterranean and the eel culture of France and the Adriatic are all examples which deserve emulation and practice in our country.

Yields as high as 300 metric tonnes per hectare of mussels as against 4 to 5 tonnes from natural beds are considered possible. Limited success has already been achieved in some of our experiments in this direction. It is hoped that this work will gain a foothold in future so that we may obtain a variety of marine delicacies at our will.

The seas and oceans, which cover over 70 per cent of the earth's surface, offer one of man's great hopes for future food supplies. However, with the growing use of the seas for a variety of purposes and as populations and industries move to the coasts the menace of pollution of the marine environment comes into sharp focus. Pollution presents potential harm to living marine resources and dangerous materials can be transmitted to man through the marine food chain.

We should therefore remember that increase in catch alone is not adequate as the acceptability of the catch would depend on a healthy marine environment. Higher production is possible through intensive exploitation of traditional fisheries and mariculture. The future outlook in the production of food from the sea is bright, thanks to the development of necessary infrastructure and application of new scientific and technological tools. ●

(Based on A.I.R. Talk.)

RECLAMATION OF WATER FROM WASTES FOR IRRIGATION USE

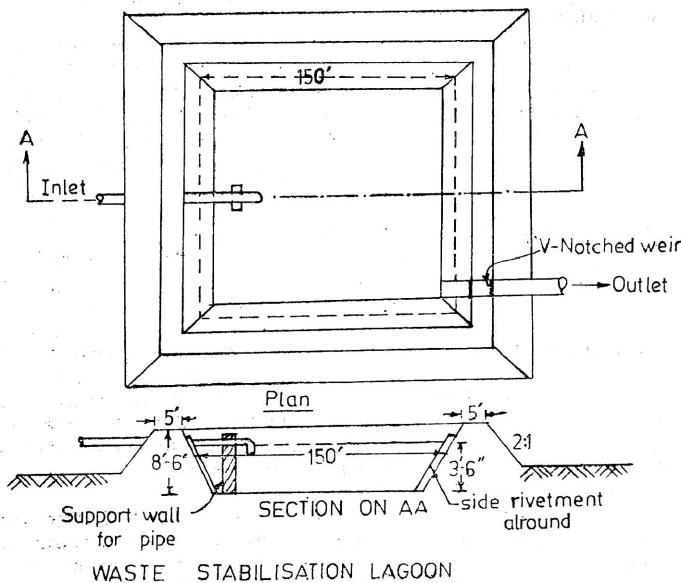
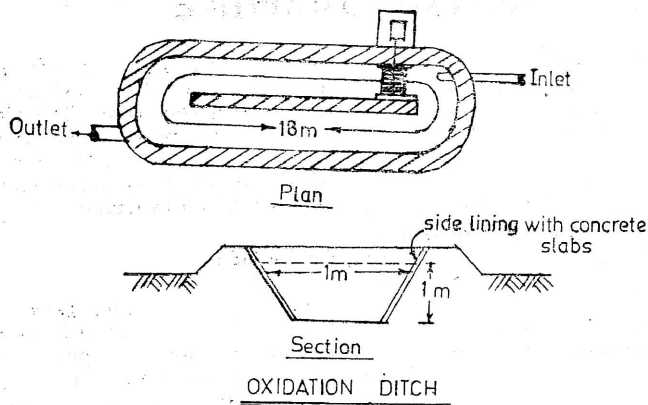


Fig.1

In Tamil Nadu, 95 per cent of the surface water and more than 60 per cent of the ground water have been harnessed to irrigate 3.2 m. hectare of land and for industrial and municipal uses. The irrigated area is only about 43 per cent of the total sown area. The demand for more water has arisen from the ever increasing population for their food and other needs. As local sources of water have been almost fully developed, it has become necessary to meet the ever increasing demand with imported water from the neighbouring States. But this seems to be very bleak to this State and hence the use of reclaimed water from wastes should be considered as a means of supplementing the existing water-supply.

The water used for irrigation is mostly used by the plants as consumptive use and even the unutilised water is reclaimed as underground water. But only 10 per cent of the water taken by the industries are consumed and the balance are left as waste. Similarly

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appreciable percentage of water is drained from the houses. It is estimated that about 80 per cent of the total domestic and industrial water supply are going as waste water. If this amount of waste water is reclaimed, it is possible to irrigate thousands of acres in Tamil Nadu.

The total population of Tamil Nadu is 42 million. The population is scattered in towns, villages and hamlets. Hence it is difficult to collect all the waste water for reclamation and also there may not be sufficient waste to take up reclamation work. The population living in the municipalities and major panchayats may be 10 million and the average consumption can be taken as 20 gallon/day/person. This works out to about 200 mgd. of which about 80 per cent or 160 mgd. can be reclaimed for utilisation. It was estimated that about 40 mgd. was flowing as

waste water in Madras City in 1972 and is expected to reach about 100 mgd. in 1976. If one million gallon water is available, it is sufficient to irrigate one acre of paddy or two acres of other crops. Hence it is possible to irrigate about $40 \times 360 = 15,400$ acres of paddy or 30,000 acres of other crops from the waste water of Madras City alone if the same is properly reclaimed and used. The waste water available for the entire State, if reclaimed, can be used to irrigate more than one lakh acres of land.

The quality of water used for irrigation is determined by the type of substances which are dissolved in it. The characteristics of water that determine its quality are (1) total concentration of dissolved constituents, (2) sodium absorption ratio, (3) concentration of bicarbonate and (4) concentration of brown and other toxic substances.

The total concentration is usually measured in terms of electrical conductivity or total milli equivalents per litre of cation and this can be up to 5 millimhos/cm. The irrigation water should not have S.A.R. value much above 8 to 10.

Na.

$$SAR = \frac{\sqrt{Ca \times Mg.}}{2}$$

Bicarbonate in water can precipitate as normal calcium carbonate. When the irrigation water is concentrated in the soil the calcium is precipitated, but the sodium remains in solution. This results in an increase in the S.A.R. and related sodium hazard. As little as 1 ppm. boron in irrigation water is almost the upper limit for use on sensitive plants while 4 ppm. of boron is about the maximum for even the more tolerant plants.

The raw sewage water collected through the underground pipe system is pumped to a settling tank and then to oxidation pond. It is necessary that this water is allowed to stand for at least 7 to 12 days in the open tank for oxidation. In the quicker process oxidation is done by stirring the sewage in an oxidation ditch and it is sufficient if the sewage is allowed to stir for 8 to 24 hours. The schematic diagram for treatment of sewage is shown in Figure 1.

In Los Angeles (California) the sewage water is reclaimed and used

for drinking purposes after recharging it into ground through water spreading basins. In San Diego, U.S.A., the reclaimed water is used for irrigation. The reclaimed water is used for all types of fruit crops in that area. Hence, there is vast scope to utilise the waste water after properly reclaiming in our State.

At present the waste water from the municipality and industries are

not properly and profitably used. As this water is substantial in quality, it is necessary to reclaim it through inexpensive methods. The reclaimed water can be used for irrigating any crops in that area. The oxidation plant seems to be economical one and this method can be adopted wherever it is possible. This way we can bring more areas under irrigation and save large quantity of water, otherwise it will be a waste.

HERE COMES THE ROYAL JASMINE

JATHI MALLI, the aristocrat among jasmines, can earn you Rs. 7,500 to Rs. 10,000 per acre from the third year of planting.

One of the popular flowers of South India, Jathi Malli belongs to the family of Jasmines and is highly valued for the rich fragrance of its flowers. Its flowers fetch a much higher price (sometimes as much as Rs. 10 per kg.) in retail sales than other jasmines. The variety is grown in several parts of Tamil Nadu.

Two distinct types :

There are two distinct types, one producing white flowers and another with pink colouration on the outside. The pink variety is preferred because of its richer fragrance.

The essential oil of jasmine is extracted from this pink type in France, U.A.R., Morocco and a few other Mediterranean countries.

Improved selection :

In the pink Jathi Malli variety, an improved high-yielding selection has been recently made at the Tamil Nadu Agricultural University, Coimbatore. This gives nearly three times more yield than the local type. It is also superior in other respects as shown below.

Every 100 gm. of this variety will have 738 flower buds. The yield of flower buds per plant per year is 23,406 and their weight 48.88 gm. The improved selection gives not

less than 4,500 kg. of flowers per year per acre from well-grown bushes under good care. This yield is considerably more and the flowering season is also longer than in other countries where this is grown for essential oil extraction.

Cultivation :

Jathi Malli is propagated by layers. Plant well-rooted layers just before rains in pits spaced 1.75 metres either way. Irrigation, manuring and pruning are important for securing top yields. Irrigate at least once in four days.

Prune from one year after planting. The best time is from late December to second half of January in Tamil Nadu. Cut back all the shoots to a height of 75 to 90 cm. from ground level. Follow this by complete removal of all the remaining leaves and dead shoots.

Apply manures after pruning and again in July. Dosage per plant is : well-rotten compost or cattle manure 15 kg., ammonium sulphate 800 gm., superphosphate 750 gm. and muriate of potash 200 gm. You can reduce the above dose by half for plants less than one year and to one-fourth for plants less than six months.

A leaf spot disease sometimes causes serious damage usually during the cold and rainy months. Black spots appear on the leaves which later dry up. Control the disease by three or four sprays (at weekly intervals) of Dithane 278 (25 grams in 10 litres of water) or Bordeaux mixture.

TOWARDS DEAR MONEY POLICY

Thiru K. M. Mammen Mappillai, President, Hindustan Chamber of Commerce, rightly observed that the unprecedented rise in the Bank rate had come as a shock to the business circles. The immediate impact of the measure, he said, would raise the cost of borrowing to the trade and industry. More or less the same view was held by the F.I.C.C.I. when it observed "the decision of the Reserve Bank of India to raise the bank rate from six to seven per cent would increase the inflationary tendencies".

The announcement of the Reserve Bank of India, effecting an increase in the bank rate from 6 to 7 per cent, marking a new step in the direction of "Dear Money Policy", is not likely to produce any optimism in the minds of seasoned economists. This will be so for two reasons. In the first place ours is not an organised economy in the sense as it is understood in U.K. or U.S.A. A very large part of the credit still falls outside the organized monetary sector. Secondly, the interest rate will not always function as an anti-inflationary weapon. One per cent increase in the rate of interest may not seriously mean anything for those who invest from borrowed resources. There can still be profitability at higher rates of interest. A higher rate of interest need not necessarily reduce the availability of money. If there should be check on inflation what is required is either a reduced availability of money or an increased availability of goods. Increased production and proper distribution of what is produced can save the economy. Also, reduced public spending can be a more effective check than an escalated rate of interest.

Using the interest rate as an anti-inflationary device was suggested by the late Lord Keynes. He held that to curb inflation, the Central Bank of a country can increase its rediscount rates. An increase in rediscount rates increases the cost of borrowing funds for business and consumer spending and thus discourages excessive activity based on borrowed funds. The whole thing happens in this manner. An increase in re-discount rates leads to an increase in interest rates (i.e.

the interest rates charged by the commercial banks), because there is a definite relationship between the two. An increase in bank rates tends to discourage borrowings by business men and consumers from banks, resulting in a fall in the intensity of inflationary pressures in the economy.

But Keynes himself recognised the limitations of the re-discount rates as a weapon to check an inflationary boom. There are three situations where the interest policy may prove ineffective. They are:

1. If the bank rates (i.e. interest rates on loans charged by commercial banks) do not rise *pari passu* with the rise in re-discount rates, there will be no decline in business and consumer borrowing and hence the inflationary pressures will continue even though the re-discount rates have been raised.

2. The effectiveness of higher re-discount rates as an anti-inflationary weapon shall be considerably undermined if the commercial banks have an easy access to additional reserves. For example, the commercial banks which are in possession of large amounts of short-term Government securities can increase their reserves by selling some of those securities to the central bank or by converting the maturing securities into cash. Instead of borrowing from the Central Bank at higher re-discount rates, the commercial banks might prefer to sell their low-yield securities during inflation.

3. An increase of re-discount rates will fail to check inflation if non-bank holders (e.g. insurance companies, etc.) of Government securities were to convert their holdings into cash. This conversion of non-bank holdings into cash would have the effect of increasing the velocity of money consequent upon increased cash balances. At a time of rising prices and falling value of money, there is strong temptation on the part of holders of fixed-income yielding assets to convert them into cash.

V

BY

Pt 101 C. S. MAHADEVAN.

Better Household Equipments For Rural Women

From time immemorial, women have carried upon their shoulders the crushing burden of household work. It is only with the advent of technology-based modern civilisation that the members of the weaker sex heaved a sigh of relief, but mainly in the western countries.

Indian women, particularly three-fourth of them living in villages, have not yet benefited from scientific progress to a comparable extent. They still are in daylong toil in the kitchen. In this context, the question of application of simpler technology for the uplift of women is being examined here.

The household equipment industry in our country is being developed rather irrationally. Various defective equipments have flooded the market for being sold at exorbitant rates. Pressure stoves often burst instead of burning properly, electrical and mechanical appliances cost more in repair charges. This has a fleeing effect on the consumers. While such is the situation in urban areas modern equipments have not yet entered rural homes.

Millions of peasant women cook their meagre food and light their huts with primitive-type equipments. The age old mud chulhas spewing obnoxious smoke in abundance are largely responsible for the declining health of village housewives. The pattern of work distribution still indicates that the entire household work is treated as the exclusive burden of the woman.

An important requirement is the eradication of illiteracy. Our society is getting technically-based and to

cope up with this change, women in our homes will be called upon to apply technical skill for higher efficiency and economy in day-to-day household activities.

Although universal literacy among women must be the basic aim, it is possible to spread the uneducated women some elementary technical skill by means of giving them practical training. With dexterity attained by training, anyone can handle modern household equipments properly. Technical skill, creative ability, resourcefulness and alertness are infused in the normal course of school education but these can also be acquired through mass education by mass media, audiovisual aids, etc., at community development centres.

AVENUE OF IMPROVEMENT.

In order to survey the present level of efficiency in domestic work

BY

R. C. MISHRA.

among women and also to suggest avenues of improvement, an all-India seminar-cum-exhibition on household equipments was organised in last January at Ludhiana by the Home Management Department of the Punjab Agricultural University. It was an attempt to focus attention upon an obscure field of activity.

The seminar-cum-exhibition helped to direct the searchlight on the characteristics of available household equipments and the current practices, their price structure, etc.

It also helped to give guidelines to housewives for wise selection of equipments and to the manufactures for further improvements in design.

As a result of the seminar, it was realised that the household equipment market in India has not developed to an extent comparable with those of western countries. The production value of grinders, mixers, washing machines, irons, geysers, cooking ranges, ovens, room heaters, toasters, saucepan kettles and miscellaneous items, is only Rs. 4.3 crores per year. Use of equipments like coffee percolators, egg boilers, food warmers, dish washers, shavers and other personal-care devices are still to be made popular and there is plenty of scope for development here.

USE OF SIMPLER TECHNOLOGY.

The writer of this article who presented a paper and chaired a session at the seminar made a suggestion to implement a plan of socialism in household equipments with the objective of helping larger sections of the masses. Since the manufacture of household equipments involves simpler technology it was suggested that the Khadi and Village Industries Commission should enter this field in a big way.

The Khadi organisation has deeper penetration and popularity among the masses and so it will be easier to popularise its improvised makes, particularly in villages. The Government should also introduce a quality marking system for ensuring that defective products do not reach the market. It should be made compulsory on the part of manufacturers to offer service before sale, service during sale and service after sale to the consumers.

The Khadi organisation with its greater influence in rural parts should exert to transform the age-old laborious practices of work-disposal into need-based efficient and economic methods. The organisation should also exert its influence to change the unjust and obsolete attitude of men towards women in the matter of household work and to alleviate the drudgery of the weaker sex.

PROTEIN MAL- NUTRITION QUANDARY OF THE SECOND DEVELOP- MENT DECADE

By
W. AUSTIN SIMMONDS.

Tens of millions of children in the developing world are doomed to second and third class existence because they, or their mothers when expecting them, did not eat enough of the right types of protein. Recent research has confirmed what scientists long suspected that protein-starvation during critical periods of pre-natal infant development produces damage to the brain's structure and consequently to its functions. And this damage is permanent. No amount of extra protein in later life will make for this crippling deficiency.

In non-industrialized countries this means that the problem of actually providing enough to feed children is greatly complicated by the need to re-orient, re-educate, sometimes even to change completely traditional patterns and habits of eating. But it must somehow be done. Children with such brain damage are handicapped when they try to learn to read and write. Their ability to profit from the knowledge they acquire in school is also reduced. Should such damage become widespread, it will likely impede a country's development.

This is a real danger. About half of the population of the 'developing world' is at present under 20 years of age, about a quarter is below the age of eight. Population control is no answer for children who are already born and who are in vital stages of their growth. Only international public opinion and action can prevent the 'protein deficiency' problem from assuming disaster proportions. To a large measure, the United Nations and its specialized agencies have brought the problem to the attention of governments. The Protein Advisory Group of the United Nations System (PAG) was set up in 1960 and comprised specialists from the United Nations, 1960 and Agriculture Organisation (FAO), the World Health Organization (WHO), and the United Nations Children's Fund (UNICEF). In July 1969 UNESCO began full participation in its activities and the International Bank for Reconstruction and Development joined in 1972. The task of the PAG is carried out in three main directions: adequate food production, research in the human sciences and reorientation of existing methods and techniques and customs tailored to the requirements of present-day indigenous needs.

After centuries of existence under the threat of famine and near

starvation, the non-industrialized countries of Asia, Africa and Latin America are now becoming, one after the other, self-sufficient in the production of cereal grains. Work carried out by the International Rice Research Institute in the Philippines and the International Maize and Wheat Improvement Centre in the Mexico has resulted in the last five years or so, in a major breakthrough in cereal production in many countries. Last year when these two institutes were awarded jointly the UNESCO science Prize for their "outstanding contribution to the technological development" of Member States, the citation declared their work 'has brought not only hope but the reality in solving the problem of food shortages in many areas'.

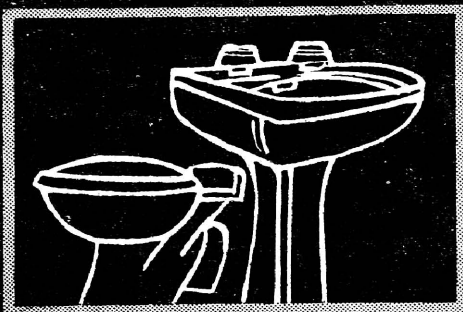
Danger of displacing protein-rich crops:

But the economic benefits of this 'Green Revolution' have also the danger of the displacement of protein-rich crops. Productions of legumes, beans and peas and oil-seeds, such as soya and rape-seed is being reduced in favour of the short-term economic benefits to be derived from the sale of surplus cereals like wheat and maize. Now, fundamental genetic research, that has been so important in the selection of insect and disease-resistant strains of cereals, must be extended to other crops. Many scientists think there is hardly any time to intensify research programmes designed to produce new high-yielding protein varieties and to develop new production methods. They estimate that this will take from eight to ten years to pay off.

As it has been already established that lack of protein causes cerebral deficiency, children living in poverty-stricken areas, including most of the developing world, are, in effect, doomed to failure in both economic and social development. But while the future cannot be predicated it can be invented; today it is within the power of young scientists and educators to control the future.

In order to stop producing future generations of mentally retarded people, the time has come to cry "Halt". Nutrition education must become a built-in component of every type of education plan.

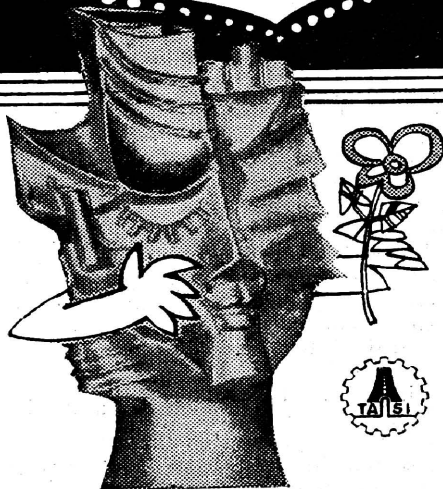
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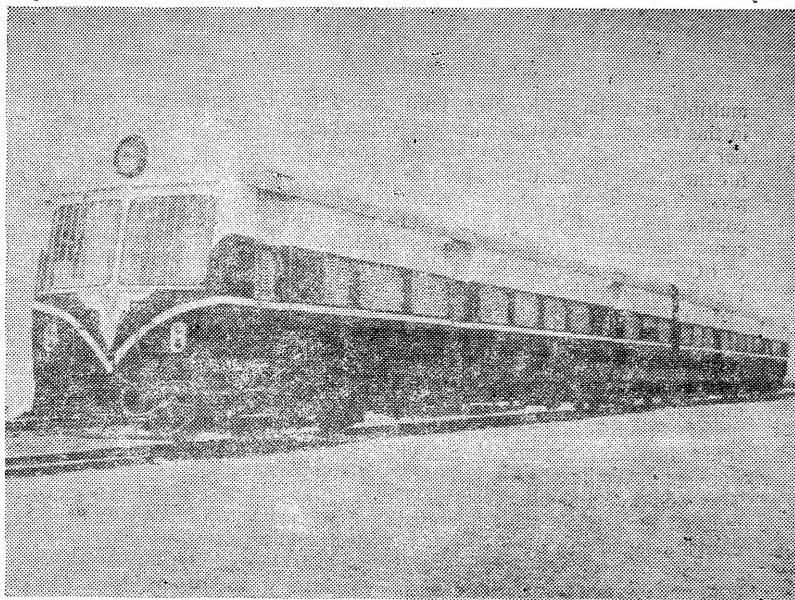
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LOVE ME
TOO, DEAR



STEADY AND SPECTA- CULAR GROWTH OF INTEGRAL COACH FACTORY



An exterior view of Diesel Railcar.

Since October 1955, when the Integral Coach Factory produced its first railway coach, over 9,300 shells have rolled out of its assembly lines. Set up in technical collaboration with Messrs. Swiss Car and Elevator Manufacturing Corporation, Schlieren, the factory's initial target was to produce 350 broad gauge shells per annum. Since then, the factory has come a long way and in 1972-73 I.C.F. has turned out 750 furnished coaches and has set a target of 750 furnished coaches in 1973-74.

It has thus proudly earned the distinction of being one of the largest single producer of railway

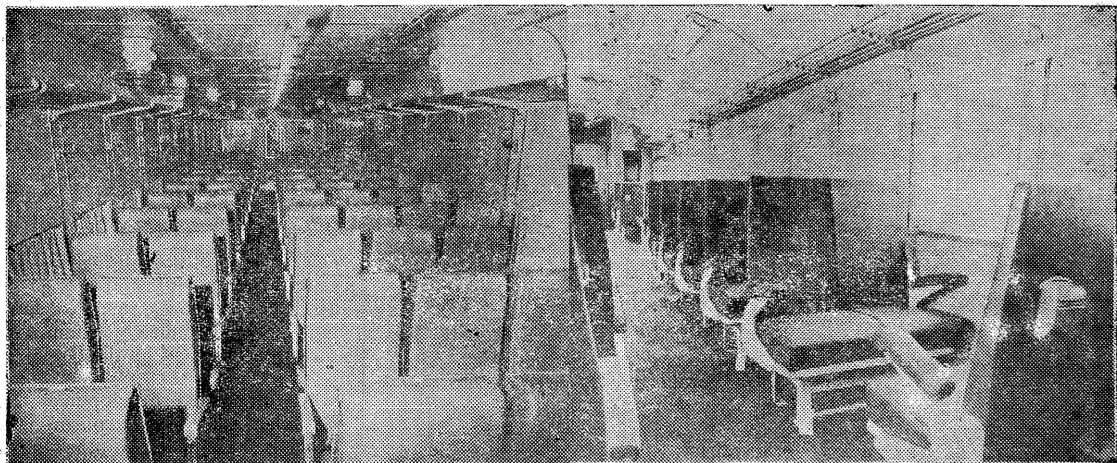
coaches in the world under one management.

Diversification has been the key note of I.C.F.'s steady progress.

K. VAIDYANATH,

General Manager, (Retd.) Integral Coach Factory.

Not only 32 different types of coaches, both broad and metre gauges, have been placed at the disposal of the travelling public, but diesel rail cars and electrical



An interior view of the Air-conditioned Chair Car of the

An interior view of the Passenger Car turned out by I.C.F.

multiple units have also been built in this factory. Two-tier and three-tier sleeper coaches were introduced for the comfort of third class passengers. The air-conditioned deluxe coaches and the Rajdhani rakes are some of the standing examples of I.C.F.'s technical excellence combined with travel comforts. Manufacture of 48 seater first class coaches equipped with super cushioned reclining chairs with revolving arrangements to cater for short distance first class travel is in progress. For relieving congestion for short distance travellers, design of double decker coaches is in hand. This would combine the features of reduced tare weight with increased carrying capacity.

Manufacture of A.C. third class sleeper coaches for improving the standard of passenger amenities offered to third class passengers is on the drawing board. I.C.F. has been entrusted with the responsibility of developing metropolitan stock for Calcutta metro. The organisation has thus been keeping up its promise of achieving self-sufficiency in all types of passenger coaches.

LATEST TRENDS

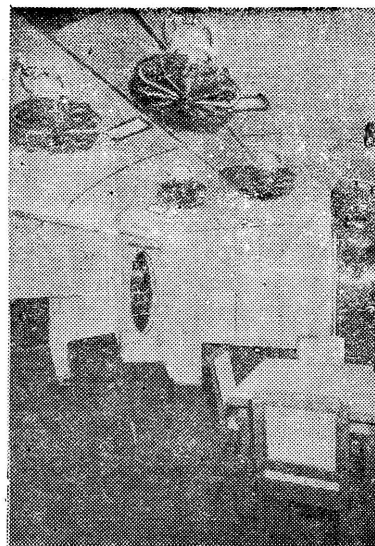
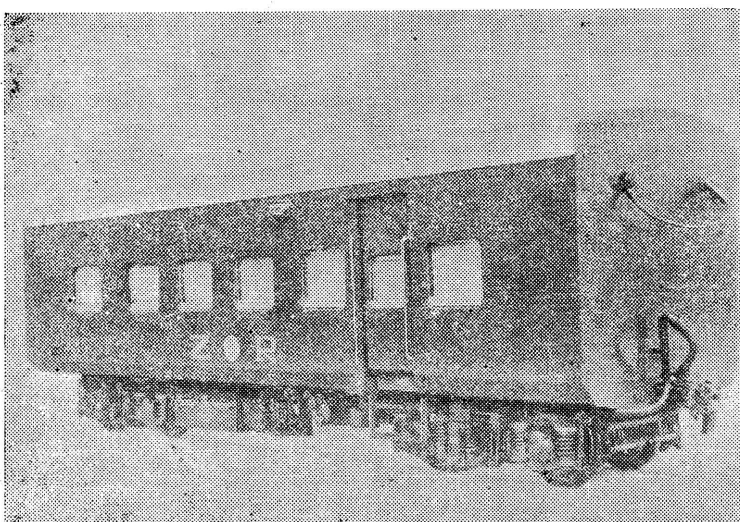
I.C.F. has ventured to keep pace with the latest international trends in coach building. The weight of the coaches has been on the increase as a result of providing better

comforts to passengers such as increase in the capacity of water tanks and the height of the coach for better head room, etc. The weight reduction has, therefore, constantly engaged the attention of I.C.F. designers and various measures are in hand. Use of corten steel, replacement of asbestos-insulation by fibreglass, modified type of flooring, use of lighter fittings, fibreglass reinforced plastic (FRP) water tanks and seat frames, to quote a few, are some of the steps being taken not only to counter the increased weight but also to reduce it still further.

The incidence of corrosion on steel bodied coaches has been a matter of serious concern. Detailed investigations have been undertaken at various railway workshops and series of trials have been initiated. Window sealing arrangement, sealing of through floor by vermiculite, restricted use of stainless steel trough floor in the lavatory portion, trials with FRP or stainless steel bathroom cubicles, use of FRP surface mats over trough floors in one of the intermediate layers of paint, use of corten steel for shell, are some of the promising features which are being incorporated in I.C.F. design and it is expected that the problem of corrosion would be minimised considerably.

Apart from the standardisation of raw materials, the question of

An exterior view of a Coach for export to Zambia.



An interior view of Tourist Car Lounge

standardising the design to enable extensive interchangeability and facilitate production is constantly receiving the attention of designers of the I.C.F. It has been possible to cover different types of coaches on a limited number of types of standard shells. I.C.F. has also been able to reduce substantially the large number of items stocked for production.

ALL-COILED BOGIE.

The collaborators of I.C.F. provided them with a bogie with coil spring for primary suspension and laminated springs for secondary suspension. It was possible to engineer independently an all-coiled bogie with hydraulic dampers on the primary suspension and shock absorbers on the secondary suspension with much better riding qualities. For achieving higher speeds, the search for a new bogie design continued and two prototype bogies fit to run at 160 km. per hour have already been built and are under extensive running trials with the Research, Designs and Standards Organisation of the Railways. Besides achieving higher speed, the new bogie shall be utilising the indigenous plain roller bearing as against the imported spherical bearings, thus completely eliminating the import content on the bogies.

A full-fledged development cell is constantly endeavouring to develop small-scale and other industries to cater to the requirements of

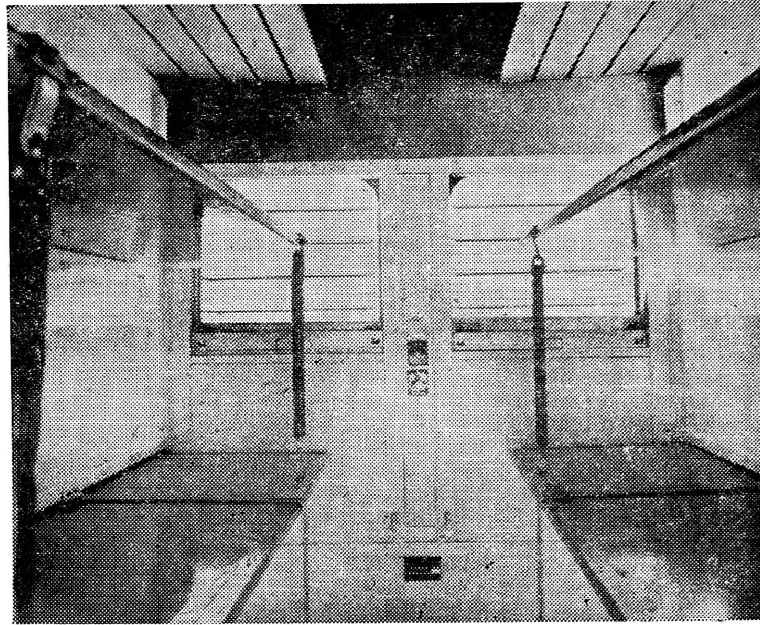
the bought-out components for coach construction. It has been possible to develop alternative sources of supplies thus breaking monopolies. Not only the prices have come down in such cases but also uninterrupted supplies have been assured which has been a frequent feature due to a spate of lockouts, strikes, power-cuts and what not. Regional development has also contributed to shorter procurement time and thus smaller inventories.

Design developments have been possible only with the efforts of the development cell which has been responsible for finding suppliers for unconventional items, viz., PVC mouldings, rigid PVC pipes, FRP wash basins, lavatory pans, wall protectors, seats for EMUs, polythene bush cocks, shower roses and fish-tail heads, etc. In the ever-increasing list of alternative materials, nylon bushes and components, high density polyethylene cloth for the vestibule bellows, FRP lavatory chutes, and partition frames ventilators, mirror frames, shelf below mirrors, are likely to set the pace for the future improvement in the internal decor of the coaches. The use of plastic materials in preference to metals is also expected to contribute to decrease pilferages as the re-sale value of these items is low.

BRUSHLESS ALTERNATORS

With the experience gained from imported brushless alternators fitted on the Taiwan Railway coaches, it has been possible to develop a local firm for similar equipment which is now undergoing trials. Apart from improved reliability of this item which will ultimately replace the D.C. dynamo now in use, it is expected to save approximately Rs. 400 per coach annually in maintenance cost. For providing better passenger amenities, it is proposed to introduce fluorescent lighting in coaches.

Preliminary investigations have also been undertaken to develop nickel cadmium battery in co-ordination with Central Electro-Chemical Research Institute, Karaikudi. This development shall ensure greater reliability of power in the storing system of coaches apart from reduction in coach weight and shall bring us in this respect on par with the coaches of the developed countries. For breaking the mono-



An interior view of a Third Class Three-tier Sleeper Coach

poly of suppliers of air-conditioning equipment of coaches, indigenous development was undertaken for the second Rajdhani Express by ordering the equipment from different sources and matching them to give the desired performance for the air-conditioning required in the coaches. This resulted in a saving of Rs. 16.5 lakhs for the Rajdhani Express. This successful experiment is being extended now for the equipment on the power cars.

With I.C.F.'s sustained efforts in designing, engineering and building, the various equipment like evaporators, control panels, etc. a saving of Rs. 2,00,000 is expected for the partial A.C. coaches. The power generating equipment and the associated drive for partial A.C. coaches have also been progressively manufactured in the country resulting in foreign exchange savings of about Rs. 1,00,000 per coach. Efforts are also in hand to develop hypoid gear box for fully air-conditioned coaches. The proposed indigenous manufacture of components for the MG suburban A.C. electric multiple units is expected to conserve Rs. 10.5 lakhs in foreign exchange.

EXPORT MARKET.

I.C.F. entered export market in 1969 with an export of two bogie trucks to Thailand. Since then 60 bogie trucks to Burma Railways, 45 bogie trucks to R.S.R., Thailand and 100 bogie trucks for Taiwan Railways have been exported. The real break-through, however, came in 1971 with the execution of an order for 113 passenger coaches to Taiwan Railway Administration against keen competition from technologically advanced countries like Japan. It bears ample testimony to the expertise and will of the I.C.F. that the coaches to Taiwan Railways costing over Rs. 3.8 crores were delivered in time in spite of several new features.

Thus, export of coaches, bogies and spares has become a part of regular activity of the I.C.F. With quotations pending for 30 coaches for Philippine Railways and 86 coaches for Zambia Railways and spares for Thailand Railways, the I.C.F. of India hopes to establish itself firmly in the international field.

GENERAL INSURANCE PROBLEMS AND PROSPECTS

Nationalisation of general insurance was debated over the years in Parliament and outside and some saw in nationalisation yet another instrument for accelerating the pace of socio-economic reform. But it was only in 1970 that the ruling party adopted it as an item of policy. The promise has since been fulfilled.

As a first step towards nationalisation, Government took over on May 13, 1971 the management of over 100 Indian and foreign Insurers carrying on general insurance business; the cost, by way of management compensation, was Rs. 33 lakhs per month. Actual ownership of the business was acquired at the beginning of 1973 at the cost of a little over Rs. 38 crores. Thus, the total cost of the entire process of nationalisation covering 107 insurers (including 44 foreign insurers and the General Insurance Department of the Life Insurance Corporation of India) is of the order of Rs. 45 crores.

Under the terms of the General Insurance Business (Nationalisation) Act, 1972, the Government has formed a company known as the General Insurance Corporation of India, with an authorised capital of Rs. 75 crores and initial subscribed capital of Rs. 5 crores. The Corporation is entirely owned by Government which appoints its Directors. All the existing Indian Insurance Companies have become subsidiaries of the Corporation; Undertakings of insurers other than the Indian Insurance Companies (Co-operative societies, mutual companies and the Indian branches of foreign insurers) have been transferred to four of these Indian Insurance companies, namely, National Insurance Company Limited, New India Assurance Company Limited, Oriental Fire and General Insurance Company Limited and United India Fire and General Insurance Company Limited. Government will soon frame schemes under which the subsidiaries will get merged with one another in such a way that ultimately there will be only four subsidiaries, each carrying on business all over India. This

would introduce an element of healthy competition among them and the size of their clientele would depend on the efficiency of the service they render.

The Corporation and its subsidiaries have the exclusive privilege of carrying on general insurance business in India, barring certain organisations like the State Insurance Departments, which have been allowed to continue in their existing limited fields.

An important task thrown up by nationalisation is the integration of a large number of employees with widely varying terms and conditions of service. Their continuity in service has been maintained and, for the present, they are also allowed to continue on the same terms and conditions with regard to pay, allowances, etc. But Government is empowered to make alterations and to make provision accordingly in the schemes for mergers of the subsidiaries. These matters are being examined by an Expert Committee which was set up last year to make recommendations for an integrated and rationalised organisational set-up for the future.

It is a truism that nationalisation is not an end in itself. With the change in ownership, a new meaning and a new purpose has to be imparted to the industry. There has to be greater emphasis than ever before on self-sufficiency, probability and prompt and efficient service to the policyholders.

The nationalised set-up has to establish a strong base for future operations so that we could eliminate our dependence on re-insurance abroad (and the consequent drain of foreign exchange) and provide protection to the hitherto uninsured or under-insured sectors of the economy. At present, the more affluent sections of society engaged in commerce and industry, get the maximum benefit of general insurance; other substantial areas of activity (such as the small-scale sector) have not received adequate

attention hitherto. Similarly, not much headway has been made in certain types of insurance, such as householder's comprehensive insurance, fire and theft insurance, agricultural pump-sets and allied insurance.

With State monopoly in insurance, it should now be possible to study in greater depth the nature and extent of demand for insurance and to collect adequate data and analyse them for arriving at scientific premium rates for the large variety of insurance cover which would be required by the different sections of society.

The aim of nationalisation should be to meet the needs of the consumer at the lowest possible price, to act as a model employer and to maximise the welfare of the nation. Though profit-making is not the sole or primary aim, profitability is an index of good performance and it is a condition which a nationalised undertaking is expected to satisfy. Due attention has, therefore, to be paid to sound underwriting practice, proper investment of funds and rigid control of expenses.

In the coming years, greater attention would have to be paid to scientific rating of premiums for the large variety of risks to be underwritten; for this purpose there would also be need for exchange of information with insurers abroad. As regards investments and expenses, the controls provided in the Insurance Act continue to apply to the nationalised set-up. It is to be hoped that the creation of large undertakings would secure the full economics.

In general insurance, particularly, time is of the essence. The machinery must be kept geared all the time to speedy underwriting and expeditious settlement of claims. While due care has to be taken to assess risks and in estimating losses, policy holders must receive prompt, efficient and courteous service. By this criterion, more than any other, would the success of the new venture be largely judged.

TAMILNADU PLANS FOR MORE SILK

SILK INDUSTRY IN INDIA

Silk industry is one of the ancient industries in India. Indian Silk was prized high among the gifts in ancient days and formed one of the commodities for barter deals. In spite of the industry being old, it got confined to localised spots mostly, hilly areas where labour was cheap, and plenty and where climate played the major part in its successful establishment. India occupied the fifth place among the silk producers of the world, the first four being Japan, China, U.S.S.R. and South Korea in that order. Japan is finding its internal consumption increasing and is gradually withdrawing from world market. China is making entry in a big way. With phenomenal speed, South Korea has developed the industry and has usurped India's fourth place.

India has the pride of producing all varieties of silk, viz., Mulberry, Eri, Muga and Tussar. The total production of all these varieties is around 22.50 lakhs kg. The export of Indian Silk, which was Rs. 35 lakhs in 1958, increased to Rs. 5.5 crores in 1968. In 1969, export touched an unprecedented level and exports amounted to Rs. 14.30 crores which earned recognition for silk as an export-oriented industry. The present level of production borders on self-sufficiency and to the extent that export trades pick up, the gap for demand and supply would arise.

The industry in the main was practised in Kashmir, West Bengal and Mysore mostly. It is said that the industry spread in Mysore during the time of Tippu Sultan. The spread to Tamil Nadu was only in the areas bordering Mysore and Kollegal.

TIPPU SULTAN INITIATED SILK INDUSTRY IN MYSORE WHICH SPREAD TO TAMIL NADU

SILK INDUSTRY IN TAMIL NADU

In 1956, with the reorganisation of States, Kollegal merged with Mysore and the State lost 22,000 acres under mulberry. The State was left with 1,500 acres in Hosur Taluk of Dharmapuri District and Thalavadi firka in Coimbatore District. It took some time to reorganise the industry to suit the immediate needs and for consolidating the same in the existing places. During the II Plan (1956-61), the State sanctioned schemes for such consolidation and for the introduction of Sericulture in a few places like Tenkasi and establishment of a reeling unit at Hosur with a total provision of Rs. 2.13 lakhs.

Due to the interest evinced by the Government and propaganda by the staff, the mulberry acreage almost doubled during this Plan period (1,204 hectares). During the III Five Year Plan (1961-66) schemes for improvement of farms and expansion of the existing units were also brought under Plan schemes. Additional marketing facilities were also provided. New farms in Krishnagiri, K.V. Kuppan, Kolli Hills and Shencottah were started. Financial assistance was offered to dig 25 wells and for construction of 31 rearing sheds. The Plan provision was limited to Rs. 13.00 lakhs, though the expenditure came to Rs. 15.25 lakhs. The mulberry acreage went up by 234 hectares. During the 3 annual plans (1966-67, 1967-68 and 1968-69) 13 schemes envisaged for the Fourth Plan to commence in 1966-67 were got sanctioned and work was started wherever lands were available. Four farms one each at Hosur, Erumadu, Uddanapalli and Gearmalam were established.

SILK SCHEMES OF TAMIL NADU IN FOURTH PLAN

Establishment of two large-scale silk farms is another new feature of the Fourth Five-Year Plan. These are being established in the remote corners of the Dharmapuri District and Talavadi firka of Coimbatore District providing large-scale employment opportunities to the rural folks aiming at the same time expansion of the industry at a quicker pace. A twisting unit with 360 spindles was also sanctioned and has been commissioned during the last quarter of 1968.

Coonoor Research Station.

An expenditure of Rs. 75.87 lakhs is envisaged in the Fourth Plan on various sericultural schemes on both spillover and new schemes. The mulberry acreage is expected to register an increase by 1,000 hectares in the private sector and 350 hectares in the public sector by the establishment of large-scale silk farms. During the first three years of the Fourth Five-Year Plan (1969-70, 1970-71, 1971-72) a sum of Rs. 25 lakhs has been spent on continuation of two large-scale silk farms. Four chawkie centres and new demonstration farms were opened during the years and by now nearly 1/6 of the total seed requirements of sericulturists have been made available through Government chawkie reared worms

which has boosted the cocoon production per unit area in our State. A research and extension centre at Coonoor has commenced functioning from March 1971. Production of suitable combination of silkworm races has also begun. Experimental large-scale trials are being conducted to test their efficiency in the sub-centre at Masinagudi.

Reclamation and planting to the targetted aim of 500 acres has been completed in the large-scale silk farm in Kolatti (Dharmapuri District) and has started yielding successful cocoon crops and it is expected to break even by the end of this plan period. The other farm in Madahalli (Talavadi) is half way through in its planting programme. These farms offer employment throughout the year for nearly 1,000 rural folks in economically backward areas. A silk testing laboratory is to be established for testing and ensuring quality control of the raw silk produced for which machinery is being purchased from Japan. At the end of the Third Plan period, Tamil Nadu could boast of their achievement in the expansion of the industry in all its sectors attaining self-sufficiency in the requirements of local and foreign race cocoons, production of industrial breed seeds, cocoon production programmes for reeling into silk, etc.

The present position is as follows :—

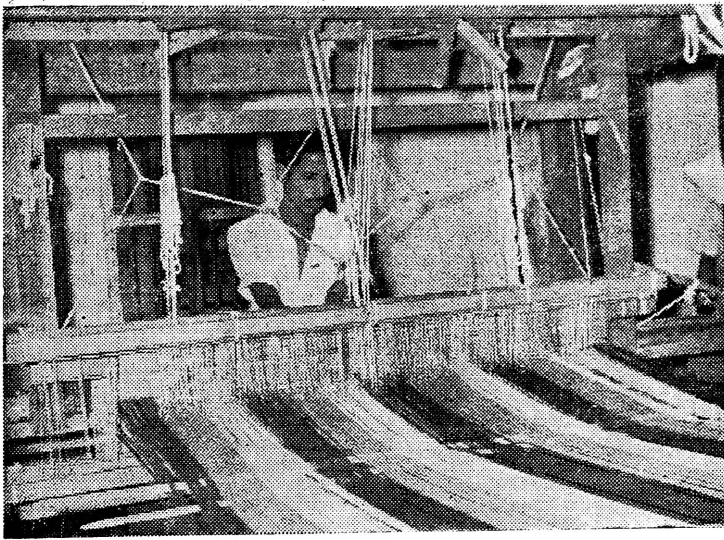
Area under mulberry	2,950 hectares (7250 ac.)
Seed Production	6 lakhs in layings.
Cocoon Production	2 lakhs kgs.

Silk Production—

Raw Silk	2,000 Kg.
Cottage basin Cora Silk	7,000 Kg.

THE FUTURE OF INDIAN SILK INDUSTRY.

The production of silk in India has reached a stage of self-sufficiency. When there was a gap between production and demand, the deficiency was made up by imports which led to a chain reaction if the import exceeded or fell short of the gap. This reaction had an impact on the development of the industry. Having reached self-sufficiency, the industry will have to necessarily examine the scope for exports. The main consumers of raw silk in the world are Japan, Italy, Switzerland, West Germany, U.K., South Korea, and U.S.A. Due to the increase in the domestic consumption of raw silk in Japan, which was the largest supplier of this item to the world market, she had to import silk to meet local demand. Of late, South Korea has developed the industry in a remarkable way to become a supplier to the world market. The current World Market condition for raw silk offers scope for India to enter the same, provided the quality of exports is acceptable to overseas buyers. It will thus be seen that *Export Orientation* has to be given the necessary priority. The boom in 1969 proved the potentiality for export which should be sustained through proper planning of production and quality and reduction in costs by concentrating further development of the industry in areas where it is already well-established. The improvement in quality can only be got by rearing silkworm races which could produce superior cocoons and getting them reared efficiently. It is expected that other States would be planning to increase production in the years to come and therefore a glut is likely to occur if export orientation programmes are not taken up.



While silk production is to be oriented on export basis, the internal demand for lower grade silk has to be met. In this respect, Tamil Nadu is at an advantage over other States as it has 20,000 handloom weavers using such silk. Due to the nascent stage of development of the industry in the State, production of high grade silk straight-away is not desirable and possible and therefore, to begin with, production of charkha silk may be aimed at in the State. The industry has developed in the plains areas like Vinnamangalam, Palladam, etc. Though the potentialities for production are there, because of the warm climate, production of bivoltine cocoons resulting in elimination of local races will be difficult. Therefore, production of high grade silk will be a tall talk. Taking a realistic view of things, the State has to aim in the years to come at production of silk that will cater to the needs of the 20,000 handloom weavers.

Silk for Warp and Weft

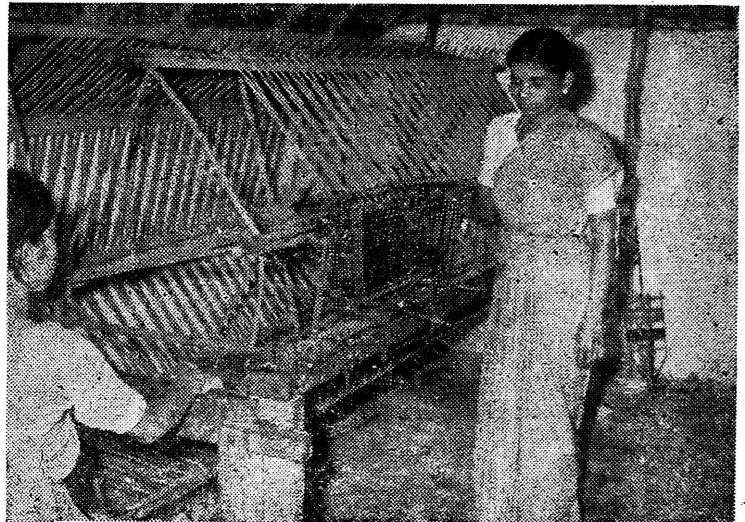
With an estimated annual requirement of 25 kg. for a loom, the calculated requirement for the handloom weavers of Tamil Nadu will be 5-12 lakhs kg. of raw silk. With the anticipated increase in looms, the final requirement can be taken as 6 lakhs kg. On the basis of a ratio 4 : 5 for warp and weft, the requirement will be about 2.6 and 3.3 lakhs kg. respectively. The requirement for warp will be of

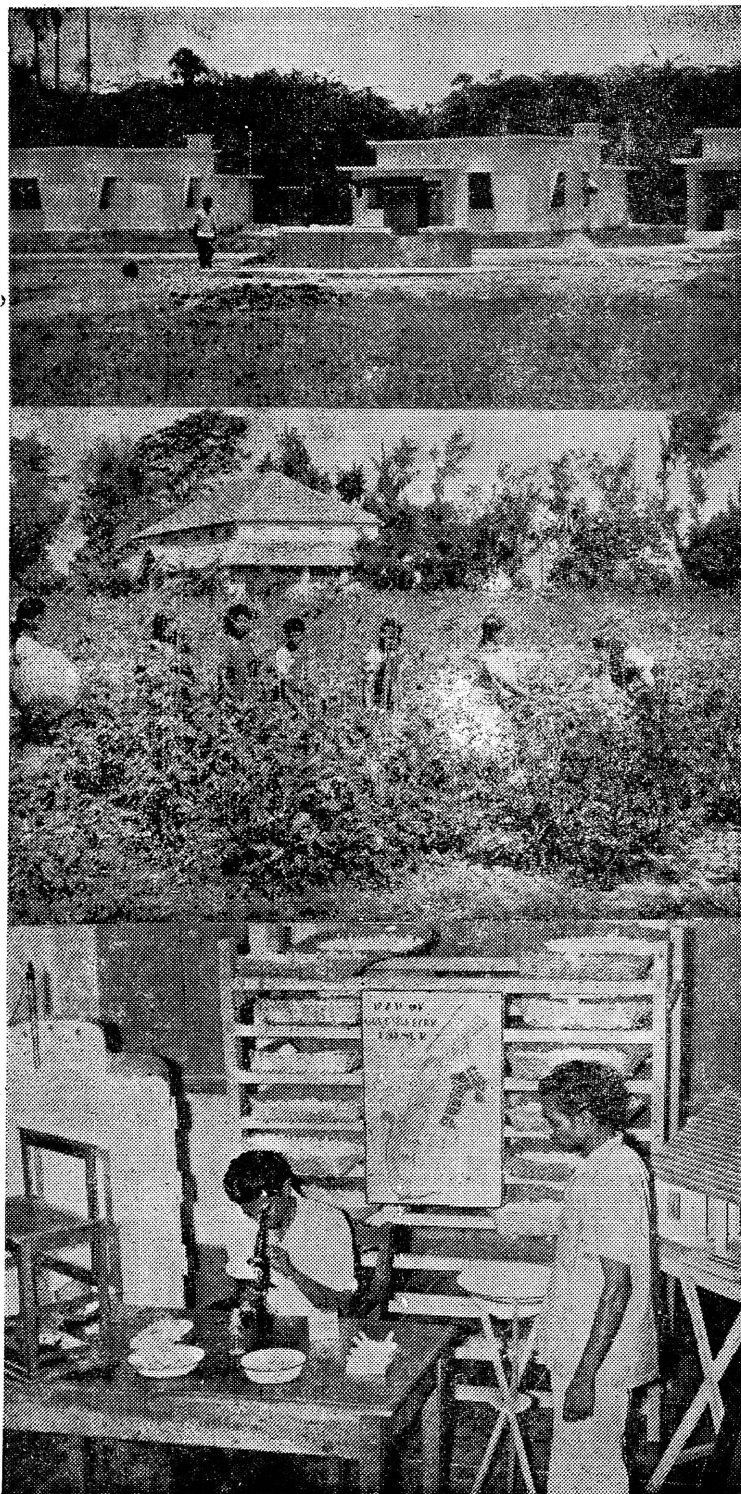
TAMIL NADU PLANS TO FULFIL SILK NEEDS OF ALL 20,000 SILK WEAVERS

finer denier, not easily obtainable from charkhas. So an ambitious programme for the production of about 3 lakhs kilos of raw silk of 20/24 denier for weft purposes, can be at once set as the goal to be reached in the years to come. As pointed already, over production may result in glut and the finer denier requirement of silk for warp can be expected to be produced from the States with established sericulture and where rearing of improved varieties for producing silk with such denier is possible.

The Premises and the Strategy

The Plan for sericulture development will be oriented on this premises. It must however be stated here that the development of the industry will be influenced to a great extent by the policy that will be laid down for the whole of India in general and by the neighbouring Mysore State in particular. For example, import-export strategy of the Government of India will influence the cost of silk and consequently of cocoons. The continued production of charkha silk in the established Mysore area and the slow development in production of high grade cocoons/silk will also affect the State. The purchase policy for cocoons or the sale price of silk, which result in losses even in neighbouring States, will also affect the pace of development. This, of course, is an issue to be brought to the notice of the Central Silk Board to protect the interests of the State.





To achieve the target of 3 lakhs kilo silk of weft quality, Tamil Nadu will require either 72,000 acres of dry mulberry gardens (at 50 kilos per acre) or 24,000 acres of irrigated gardens (at 150 kilos per acre). Depending on the areas available or those to be tackled, the expansion programme has to be chalked out. On the assumption that about 25,000 acres of dry and irrigated garden have to be brought under mulberry to meet the requirements of silk for weft by the weavers, the phasing has to be made according to the export market and the gap in internal demand. If an ambitious target of realising 25,000 acres is set for a 10 years period, an expansion of 2,500 acres per year has to be brought about.

In this context, it may be examined how the expansion scheme has functioned so far. The pattern has been to start a Demonstration Silk Farm in select places and to encourage ryots later to take up to the industry. The establishment of the farms themselves in ideal situation has been found difficult and time consuming. The spread of the industry in Talavadi/Hosur all these years and the recent spread in lower elevations of Coimbatore district would show the difference. While in Talavadi and Hosur a cautious approach was made with Demonstration Farm to begin with, the expansion has been slow. In Coimbatore district a new approach was made without Demonstration Farms as such and involving private persons directly. The expansion has been rapid. If these were to be a pointer, the future expansion which has to be necessarily rapid could be on the pattern of Coimbatore district. The cautious approach in Hosur and Talavadi involves besidetime factor, creation of assets and expenditure and departmental agency. With a future which calls for rapid expansion with least expenses on departmental agency, a new strategy has to be evolved.

The area under mulberry in Dharmapuri district is 1,860 acres held by 2,100 families. This has been achieved over the years by offering the following incentives:—

- (1) Free supply of seed cuttings,
- (2) Supply of Dfls. at nominal cost,
- (3) Supply of rearing appliances at subsidised cost,
- (4) Rearing and supply of young worms,
- (5) Grant of loan for sinking

irrigation wells and construction of rearing sheds with 50 per cent subsidy to be needed.

For supply of DfIs. a cross bred gramage for production of 10 lakh DfIs. was established. Chawkie (Young) worms rearing centres were established at 3 places.

An attempt at large scale silk farm was done at Kolattu to provide job opportunities to rural folk. 868 acres of Government land were taken over and cultivable area planted. The farm is providing employment to 750 agricultural labourers.

Besides attempts to utilise waste land by Government, a scheme for conditional leasing of Government poramboke lands was also taken up, the stipulation being 50 per cent of the land would be planted with mulberry for a period of 5 years. An extent of 5,042 acres was leased to benefit 2,119 families. The plantations are being taken up in the leased lands.

The silk production has increased from 200 kg. to 2,000 kg. in the course of 10 years.

In the light of experience, it is proposed to make the leasing schemes more effective by offering assignment benefits as soon as the condition of mulberry plantation is fulfilled. Mulberry takes over 3 years to establish itself and stands for over 15 years. For such a crop, the offer of lease has to be on a long-term basis and its absence lends a doubtful bias to investment on improvement. In order to overcome the time lag and expenditure in the initial stages, it is proposed to give financial help at Rs. 100 per acre.

It is proposed to allow the natural spread of the industry under rainfed conditions in Hosur and Denkanicottah taluks in patta hand poramboke lands. Vigorous propaganda for expansion of industry in new places like Dharma-puri and Krishnagiri will be taken up. As irrigation is a must for these new places, aid for irrigation will be afforded for sinking wells and bore wells. It is learnt that a total extent of 92,000 acres of ex-estate Zamin lands is available in

Tamil Nadu has captured cocoon Market.





Hosur and Denkanicottah taluks. If the ambitious target of development of 25,000 acres is to be achieved, at least 25 per cent of these lands will have to be ear-marked for mulberry cultivation. These lands can be developed and leased out to agriculturists. For expeditious implementation of this scheme, appointment of special revenue staff is being considered.

The area under mulberry is 4,735 acres and being mostly a dry area, each sericulturist owns about 2 to 3 acres. All concessions offered in Hosur were also extended to sericulturists in Talavadi. A unique scheme of conditional assignment of lands to landless, with a condition that 2/5 of extent be brought under mulberry, was implemented in 1964. This gave a boost; but the full benefit of mulberry expansion could not be achieved as the beneficiaries were mostly non-resident and major lands remain to be resumed for breach of conditions. An expansion of 25,000 acres is envisaged in these two areas, Hosur and Talavadi. But in the next ten years the area under mulberry will go up by 8,000 acres in these two areas.

Since this 8,000 acres of dry lands would account for a production of only 32,000 kilos of silk, the total production with existing acreage would come up to a production of 50,000 kg. There would still be 2.5 lakh kilos of silk to be produced. This has to be achieved by tapping ex-Inam forest lands in Hosur.

The spread in new areas has to be under irrigated conditions. With capacity to rear 750 dfls. an acre under irrigated condition and a production of 15 kg. silk, an extent of 17,000 acres under irrigated condition will have to be brought under mulberry. This would mean getting 1,700 acres per year if the target is to be achieved within the planning period. As this cannot be achieved by existing personnel of the sericulture section, the agency of Block and Rural Development will be tapped for the expansion.

Sericulture has already spread to areas in North Arcot and Coimbatore districts. Intensification of efforts in these areas of promise will give immediate realisation. In other adjoining districts, wherever new agencies take up allied works, their services will have to be utilised. For example in South Arcot, the centrally-sponsored scheme of Small Farmers Development Agency will be useful and full advantage arising out of this will be derived. The expansion in areas like Kolli Hills, Elagiri, etc., is proposed to be taken under schemes for the uplift of hill tribes. To the extent silk fabric manufactures would organise silk production to meet their requirements, encouragement will be given.

A small pilot unit, which will take up all aspects of work, will be organised to study all aspects right



from seasonal conditions to silk reeling. This will be the nucleus for future expansion and training ground for the prospective entrepreneurs. The increased acreage would call for increased production of eggs. It is proposed to have the entire production in Government hands as the microscopic test is involved and quality seeds can be produced without descending to commercialisation by Government. This is the expressed desire of the Central Silk Board that all eggs should be tested and legislation should be created to present production of unexamined seed.

There are individual cases of outstanding performances in the sericulture section. But techno-

logically, there has not been much improvement. For example, study on dry farming has been neglected. As bulk of the existing area is under dry cultivation and improvement could be brought about only by research, a research unit has been established in 1971 and it will tackle problems which are of practical importance. The maximisation of production in a unit area alone is capable of reducing the cost of cocoons (consequently silk. Studies leading to this factor are being given top priority. Evolving disease and heat resistant varieties will be another major task that will be tackled by the Research Unit.

Export orientation of handloom fabrics is outside the provisions of

this scheme. It is expected suitable measures will be taken by Handloom Board and Export Promotion Council to encourage export of handloom fabrics so as to create the necessary base for larger commitments in the years to come, as fashion is something unpredictable. The advances made, and that will be made in man-made fibre may also be phenomenal. A saving feature is that silk contributes about 1 per cent of the total textile fibre production of the world. Even with an increase of 200 per cent in the production of silk in India in the last 40 years, it accounts for only 1/5 of 1 per cent of the total textile fibre production. Even with this infinitesimal production, it has carved a place of its own in textiles.

HOSUR FARM'S SUCCESS IN COCOON AND SILK PRODUCTION

The Royal Government of Bhutan has asked for the finest quality raw silk yarn from the Hosur Silk Farm and a sample consignment has been despatched.

Thiru M. Radhakrishnan, Assistant Director of Sericulture, said the Government Silk Reeling Unit at Hosur has specialised in producing superior quality raw silk suited for production of zari. The unit was sending 1,500 kg. of yarn for zari production to Surat every year. Hosur silk has also captured the handloom market in Kancheepuram and Kumbakonam. Production at the unit, which was 400 kg. in 1959, had gone up to 3,600 kg. in 1972 and plans were afoot to step it up to 6,000 kg. by installing modern equipment.

The unit was located in Hosur with the prime objective of arresting the flow of cocoons in the area to Mysore State. A cocoons market, where arrangements will be made to buy cocoons from mulberry cultivators, was inaugurated at Berikai on 27-7-73 by the Director of Industries and Commerce, Thiru H. B. N. Shetty.

The cross breed grainage programme undertaken at the Hosur Silk Farm has increased egg production from 1,38,128 in 1968-69 to 8,03,435 in 1972-73. The layings are of finest quality and are in great demand even from traditional sericulturists from Mysore.

INCENTIVES FOR DEVELOPMENT OF TAMIL LANGUAGE

On account of the alien rule in the Country for a very long time the languages of the Indian soil had not been allowed to have their normal and due growth as they were relegated to the background, importance being given to English for all official purposes. After the dawn of Independence, the languages of this soil were slowly but in a sure way elevated to the status of official language of the respective states. Accordingly, Tamil was recognised as the official language of the then Madras State in the early 60's. But till 1967, the policy was not given effect to with so much zest and zeal as the problem required. After 1967, when the new ministry under the stewardship of Dr. Arignar Anna, as the Chief Minister of Tamil Nadu assumed power in the State, all kinds of encouragements and incentives have been given to accelerate the use of Tamil in all branches administration including the sphere of Judiciary.

The progressive introduction of Tamil as the Official Language and the adoption of Tamil as the Medium of Official correspondence are being pursued vigorously by the State Government in accordance with the policy directive given by the State Legislature in its resolution, dated 23rd January 1968.

District Officers have now been appointed to accelerate the pace of inspection and the adoption of Tamil in the District Offices, and to give constructive advice to the members of the staff in noting and drafting in Tamil.

A translation section is also functioning in the Directorate of Tamil Development with three Officers for translating the Codes, Manuals, Acts and Regulations of the State Government into Tamil. A consolidated glossary of Official terms is to be prepared and published during 1973-74.

As an incentive to Government servants to adopt Tamil in their drafts and notes, 15 cash awards of

Rs. 500 each are being given annually to the Government servants who are adjudged to have produced the best drafts or notes. From 1973, one prize of Rs. 500 will be awarded to the Government servant adjudged to have made the best use of the official language in the secretariat.

The Directorate is engaged in preparing the bibliography of Tamil publications from 1867 up to 1940. During 1973-74, final proof correction for the bibliography Volumes III, IV and V each in three parts will be completed. The preparation of Volumes VI, VII and VIII will be taken up in 1973-74.

The Tamil Development and Research Council has been encouraging the production of literature in Tamil by awarding prizes. From 1971-72, the prize amounts have been increased and one first prize of Rs. 2,000 and one second prize of Rs. 1,000 are being awarded every year to the two best books in each of 20 chosen subjects.

The Council is also implementing a scheme of financial assistance to authors to encourage the publication of books in Tamil. Assistance under this scheme has been given so far to three authors and the question of extending assistance to some more authors is under the consideration of the Council.

The Government have been giving generous grants to the Tamil Academy for the publication of the Childrens' Encyclopaedia in Tamil to the Southern Languages Book Trust for its general publication programme (including a Tamil edition of the UNESCO Courier), and to the Dravidian Linguistics Association, Trivandrum, to further the objective of bringing together the four major Dravidian languages of South India. Certain Universities in other States have also been given grants for conducting research work and for post-graduate Studies in Tamil. Under this Scheme, Government have granted assistance to the Osmania University, the Kerala University, the Agra

University, the Venkateswara University, the Viswa Bharathi University and the Calcutta University for the promotion of Tamil or for the creation of fellowships or for the institution of chairs in Tamil.

Since June 1971, a Committee of Scholars under the Chairmanship of Dr. Mu. Varadarasanar appointed by Government, is engaged in writing an authentic history of Tamil Nadu in Tamil. The history will consist of six parts and the first one, on the Pre-historic period will be published in 1973-74.

TAMIL MEDIUM IN LAW COURSE.

As in the case of Arts Colleges in the State where Tamil medium has been in vogue for the study of all art subjects, the Tamil Medium of instruction is to be introduced in Madras Law College during the coming academic year (1973-74), if there is sufficient demand for it from the students. Almost all the staff of the Law College have volunteered to co-operate in the experiment which is designed to provide students in Tamil Nadu with an opportunity of studying law in the mother-tongue. Many North Indian Universities already offer students the option of studying law in Hindi.

The Madras Law College students who choose to study law in Tamil medium will have the option to take the examination in English or Tamil. The Tamil medium will be available for the evening course students only in June 1974 when a new batch is admitted.

The Tamil Nadu Textbooks Corporation, a State Government undertaking, has initiated the necessary action for bringing out books on law in Tamil, in the context of the State Government's efforts at introducing Tamil medium in various courses of study. Manuscripts for books on almost all law subjects have been prepared by the staff of the law College by a special committee. A textbook in international law in Tamil by Prof. A. Palaniswamy, Director of Legal Studies, has already been brought out. The State Official Languages Committee has brought out a law Lexicon in Tamil, containing a glossary of legal terms in Tamil.

Law students who opt for the Tamil medium could of course have access to the original case laws in English to augment their knowledge.

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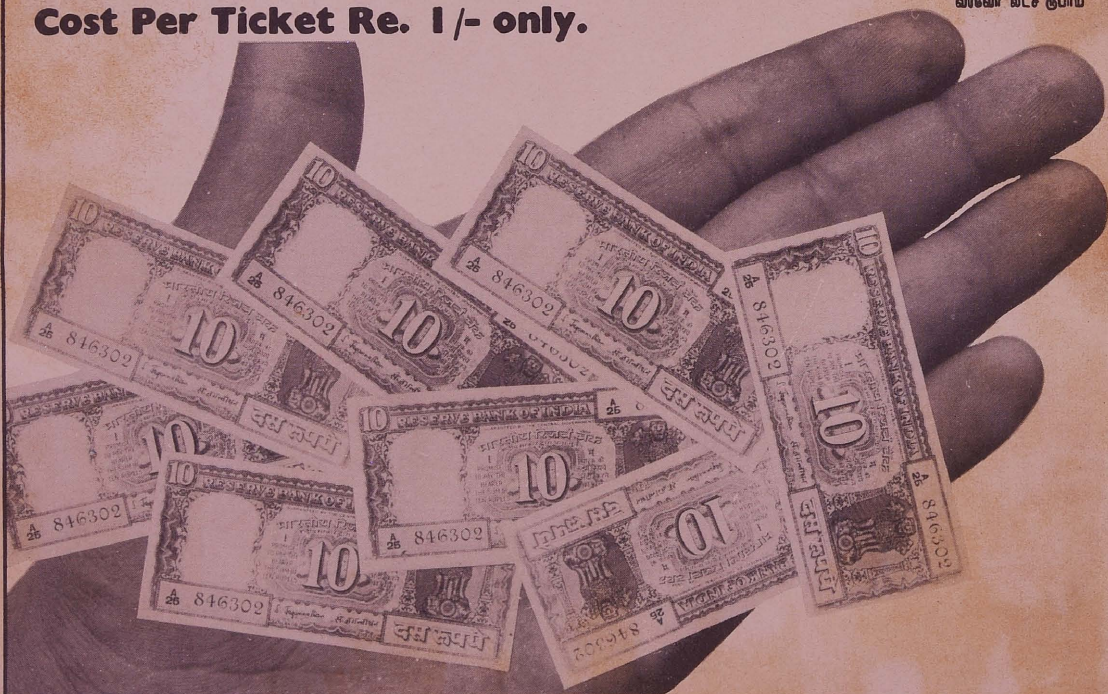
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