



Agriculture and Fisheries

in

Madras State

ISSUED BY
THE DIRECTOR OF INFORMATION AND PUBLICITY
GOVERNMENT OF MADRAS

1954



AGRICULTURE AND FISHERIES
IN
MADRAS STATE

ISSUED BY
THE DIRECTOR OF INFORMATION AND PUBLICITY
GOVERNMENT OF MADRAS
1954

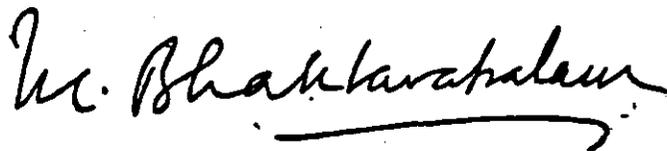
FOREWORD.



THE object of this publication is to make available for the general public detailed information about the Government's programme of activities for the development of agriculture and fisheries during 1954-55. The reader will see from the materials in this pamphlet that despite the financial limitations of the Government they are implementing a number of proposals designed to step up agricultural production. It has however to be emphasized that agricultural production is not a unilateral affair. Mere sanctioning of proposals or spending of money thereon by the Government cannot by themselves promote production. A larger measure of responsibility rests with the ryots. It is up to them to take advantage of the measures initiated by the Government and step up agricultural production. The times are by no means easy. Even in normal times the State does not produce enough foodgrains to meet her requirements. The

separation of Andhra has added to the difficulties. So the responsibility is all the greater on the part of the ryots not to spare any efforts in increasing agricultural production and thereby reducing the dependence of the State in the matter of food requirements on imports from outside.

As regards Fisheries, the facts and figures set out in the pamphlet will speak for themselves. Fish is a supplementary diet and, in the context of the present food shortage, is especially valuable. More than 90 per cent of the population consume fish. There is a plentiful supply of fish stocked in the three seas that wash the shores of the State. We have also a considerable acreage of inland waters and they are rich in different varieties of fish. The measures taken by the Government aim at increasing the stock of fish and making them available to the consumer in a fit condition in the shortest time possible.



Madras,

Minister for Agriculture.

2nd June 1954.

AGRICULTURE AND FISHERIES IN MADRAS STATE

Agriculture and Fisheries are the two basic industries of the people. The demand for Agriculture in the budget for 1954-55 works out to about 4.2 per cent of the total expenditure on Revenue account. A sum of less than Rs. 200 lakhs for Agriculture for this State in which the net area of crops grown is about 19 million acres cannot be considered high. The per acre expenditure on agriculture works out to about a rupee. If one takes population into consideration, the per capita expenditure is about 8 annas. There may be critics who will consider that the demand is inadequate. It has to be remembered that this demand does not include expenditure under other demands for schemes which are intended for agricultural improvements, like Tank Improvement Schemes, Small Irrigation Schemes and other Grow More Food Schemes.

The demand for Agriculture comprises expenditure on Direction and Superintendence, Experimental Farms, Demonstration and Propaganda, Agricultural Education, Agricultural Engineering, Agricultural Research, Marketing and a few other miscellaneous charges. A sum of Rs. 5.61 lakhs is provided for Direction and Superintendence, Rs. 7.59 lakhs under Experimental Farms, Rs. 23.43 lakhs for Research Schemes, Rs. 36.52 lakhs for Demonstration and Propaganda, Rs. 4.35 lakhs under Agricultural Education mainly towards expenditure on the Agricultural College and Research Institute at Coimbatore; Rs. 2.31 lakhs under Agricultural Engineering and Rs. 110 lakhs for Development Schemes under the Five-Year Plan. Among Development Schemes, the important items are the Scheme for Sugarcane

Development, increasing cotton production, control of pests and diseases, employment of additional Agricultural Demonstrators, multiplication of improved seeds, contour bunding, tractor cultivation, running a Central Agricultural Engineering Stores, river pumping schemes, sinking filter point tube wells, etc.

Some Relevant Factors

Three or four factors may be borne in mind to start with. Firstly, in 1954-55 we shall enter the fourth year of the Five-Year Plan of which the development of Agriculture by raising its technological possibilities and by intensive work through Community Projects and National Extension Services forms the main part. Secondly, with the separation of Andhra we shall have to concentrate more on food production as Tanjore is the only surplus district for rice left in this State. Thirdly, after the trials on account of drought during the last five years, Providence has been more merciful and the season this year has been more favourable. We hope that it will be equally so during the year 1954-55 and it would be a folly if we do not take full advantage of the favourable conditions at present to go all out and maximise production. Fourthly, the policy of decontrol and the moratorium for agricultural debts which Government have introduced for the benefit of the agriculturists should help to concentrate wholeheartedly on increasing production without irksome restrictions or burdens. Viewed against this background the responsibility of the Government and the agriculturist is truly great. The Government will do all in their power to see that every rupee spent by them gives the largest benefit and in this respect will solicit the co-operation of the public in all manner possible.

Food Production

The food production schemes naturally form the dominant activity of the department. The gross cost of the several schemes under this head proposed to be implemented during 1954-55 is estimated at Rs. 4.77 crores out of which a sum of Rs. 4.09 crores will be recovered from the beneficiaries and the



Harvesting.



Bundling the harvest.



Off to the threshing floor.



Threshing operations.

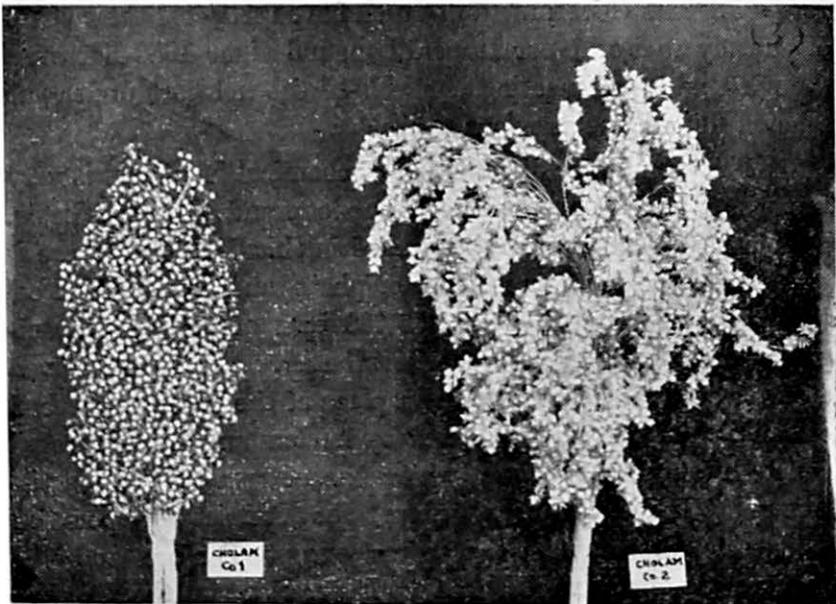
balance of Rs. 68 lakhs will be shared by the State and the Central Governments. Assistance from the Centre will be forthcoming only in respect of schemes worked under the intensive cultivation areas, while the entire net cost on non-intensive cultivation areas will have to be met by this Government. A total additional production of 2.33 lakhs tons of cereals is expected from all the intensive cultivation schemes during 1954-55. The broad items, viz., the distribution of improved seeds, the distribution of chemical fertilizers, lift irrigation by supply of pumpsets under the hire and hire-purchase system, tube wells scheme, river-pumping schemes, land reclamation by tractors under hire and hire-purchase system, etc., are mentioned below :—

Under the scheme for distribution of improved seeds, seeds of paddy and millets are procured from seed farm ryots on payment of a premium and sold at a subsidised rate recovering only the cost price and 50 per cent of the seed farm premium. The scheme envisages the distribution of 8,954 tons of paddy seeds and 1,452 tons of millets and pulses seeds during 1954-55. The Government of India have restricted their share of subsidy to Re. 1 per Imperial maund since 1953-54, even though they were meeting one half of the net cost under the scheme during the previous years.

The scheme for distribution of chemical fertilizers is very important and is worked on a no-loss and no-profit basis. People have become manure-minded in this State and there is great demand for ammonium sulphate and other chemical fertilizers. During 1954-55, 75,000 tons of ammonium sulphate are programmed to be distributed. We have evolved a better system of distribution in place of the previous method of selling through firms selected by tenders and through retail depots established by them which has not proved quite satisfactory. Under the new system, the District Co-operative Wholesale Stores in all districts except Tanjore and the Tanjore Co-operative Marketing Federation in the Tanjore district have been made our stockists and the wholesale-cum-retail distributors in each district will be selected by the



A bumper paddy crop at harvest time.

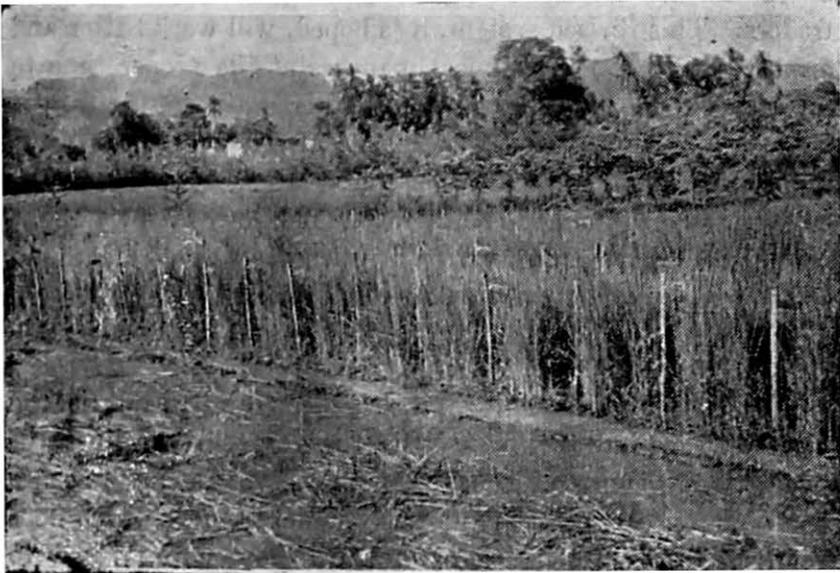


Earheads of Co-1 and Co-2 cholam

Collector from among Co-operative Societies and other private traders. This revised system, it is hoped, will work better and ensure supply of the chemical manures at the proper time to the ryots in the interior areas. Another gratifying feature is that the Government of India have decided to supply fertilizers at a uniform rate of Rs. 315 per ton at select rail-heads in the State instead of at main ports only. This will afford a slight reduction and more uniformity in prices and less trouble and delay in the fixation of prices for each district.

Agricultural Research

Agricultural research, as it has been aptly said, is the power-house, and the field staff, the transmission lines for vitalizing agriculture. As the problems of agriculture are increasing in complexity day by day, a department which does not try to tackle them by research will have nothing new to give to the people. The Indian Council of Agricultural Research and the Commodity Committees are no doubt giving us financial assistance for schemes approved by them but we have to depend on our own resources for taking up normal schemes required to make our agriculture more scientific. Research in agriculture in this State is carried on in the Research Institute at Coimbatore and at the various research stations throughout the State. Agricultural research may be broadly said to cover four fields, viz., crop improvement and agronomy, crop protection, soil improvement and design of improved agricultural machinery. The important lines of research for crop improvement are production of high yielding strains by selection, the evolution of strains to meet special purposes such as disease, drought or flood resistance, hybridization between suitable parents, and introduction of useful exotic varieties. Plant protection covers research in the control of fungus, bacterial and virus diseases of crops and crop pests by chemical and biological control. If we completely succeed in controlling crop diseases and pests both in the field and in storage we will save more than 10 per cent of the total production. Soil and irrigation research consists of treating the



Paddy varieties grown side by side for experimental purposes at a rice research station.

soil to cure it of its alkalinity, salinity or other defects or deficiencies and to enable it to maintain its proper nutritional level by manuring and irrigation. The research in agricultural machinery consists of devising suitable implements to suit particular areas and cultivation practices in order to save time, labour and cost. The field for work in the several branches of agricultural research is indeed vast. The Government have been trying to see that the Department undertakes fruitful lines of research and that worthwhile results are achieved. An experimental station has been opened at Satyamangalam to tackle the problem of the Lower Bhavani Project area. An Arecanut Research Station to investigate the stem-breaking diseases of areca has been opened at Vittal in the South Kanara district. A Pepper Research Station has been opened at Panniyur in Malabar district. Besides research on food crops, work on crops like pepper, cashew and arecanut is also important because they contribute to the economic well-being of the areas and also earn dollar exchange for the country.

Agricultural Education

Hitherto our agricultural students were securing admission not only in the Agricultural College, Coimbatore, but also at the College at Bapatla. The latter College is now in the Andhra State. The Government have increased this year the number of candidates to be admitted into the Agricultural College, Coimbatore, from 96 to 108. Some time back, the Government found that the theoretical course for the B.Sc. (Agri.) Degree which the students were given was not enough to give them that type of confidence in themselves not only in the management of crops but also in imparting knowledge to the ryots. On Government's recommendation, the University of Madras has readily agreed to revise the syllabus to give intensive practical training as part of the curriculum and the new scheme will be given effect to from the next academic year. The Government have also sanctioned a scheme for running a short course for six months for farmers in order to give them an all-round practical training in agriculture and allied subjects. Agricultural Research Stations are also being used to train not only the Fieldmen and Maistries but also the Village Level Workers for the Community Projects and the National Extension Service Scheme. According to the Planning Commission, the National Extension Service should be able to cover about one-fourth of the area of the State during the Plan period and the rest of the area during the Second Five-Year Plan. This programme will require trained Grama Sevaks at the rate of ten per taluk and the total required for the State for the next two years is estimated at about 600. The Government have ordered the starting of six training centres at Koilpatti, Aduthurai, Pattukkottai, Bhavanisagar, Taliparamba and Kallupatti. The Agricultural Research Stations will be used as the model farms for imparting the training at all the above centres except Kallupatti where the land attached to the Grama Sevak Vidyalaya will be used as the model farm.

Demonstration and Propaganda

Demonstration and propaganda are an important aspect of the Agricultural Department's work to translate the results of research to the ryots' fields and this requires considerable field staff. Views on the subject as regards the necessity for the lower field staff has in the past differed from time to time. The deficiency in staff is being made up in areas selected as National Extension Service blocks by appointment of additional hands according to the scale approved by the Planning Commission. In other areas, Government have been cautious not to increase the staff without an intensively planned-out programme of work or providing increased supervisory staff at higher levels for supervision and control. The aim of the Department is to have with the assistance of the field staff one demonstration or trial plot in each village to bring home to the cultivator the results achieved at the research stations and farms. Another channel for communication of information is the Grow More Food journals published by the Department in three regional languages. These journals continue to be



Japanese method of paddy cultivation yields more.



Green manure puddling at an agricultural farm.

popular. The usefulness of demonstration and propaganda as has been seen in the case of the improved method of paddy cultivation, which has come to be called the Japanese Method may be referred to here. In our State this method has been modified to suit local conditions. When propaganda for this method was started, there were some sceptics who regarded that there was nothing new in this or that this was an unnecessary elaboration of practices already in vogue in some form or other. But it has been found that progressive ryots who have adopted this method as advised by the Department have had gratifying results to report. Apart from the propaganda materials supplied free of cost by the Government of India we have spent nothing on the new campaign, which has so far been conducted with careful moderation. The Government of India have asked the State Governments to launch a vigorous drive this year in the light of the beneficial results noticed so far. Mention may be made of the universal popularity of the practice of growing the green manure plant *Sesbania speciosa*

around paddy fields in order to provide green manure for paddy lands without using up extra land or water. As a result of demonstration at the Aduthurai Research Station and the energetic propaganda done by the Department, this green manure plant is being widely grown in many districts.

Agricultural Engineering

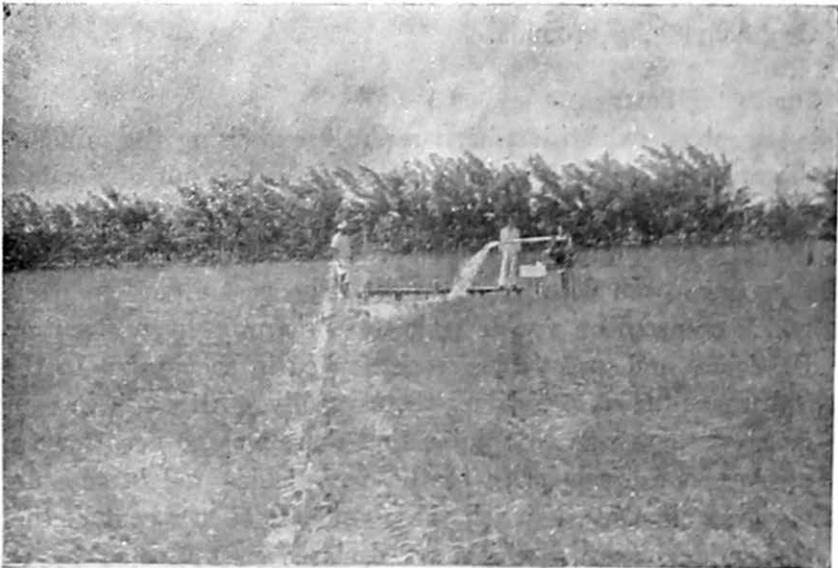
Now about Agricultural engineering, the only branch of activity from which the largest demand has been made by the ryots during the past few years since the Government introduced the supply of oil-engines and pumpsets and electrical motors and reclamation of land by tractors in order to increase the extent of land under cultivation and irrigation and also to offset the difficulties created by drought and high cost of labour and cattle. There has been incessant demand from all quarters for more oil-engines, pumpsets and tractors. It must be evident to anyone who bestows the least thought on the subject that the Government do not have and will never



Tractor with 6 feet disc harrow at work.



Plough of new design being used in the Burmese Section of the paddy fields at the Ambasamudram Rice Research Station.

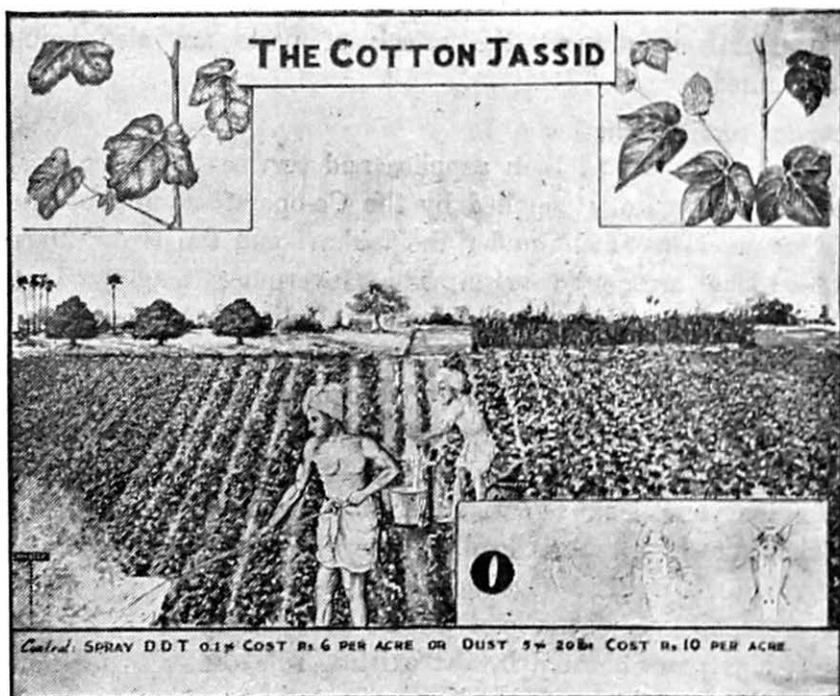


Filterpoint pumpset in operation in a field.

have the finance to invest on these machineries to satisfy the entire demand of the agriculturists. The Government can provide the service only for middle class and poor class agriculturists who cannot afford to invest any capital on these machineries. The others will have to invest capital to purchase their own oil-engines and tractors. When there is only a limited number of oil-engines or tractors with the Government, distribution will necessarily have to be made on a system of priority and if applicants do not secure them as readily as they would wish they should not complain and ask for out-of-the-way turn. As regards the complaint that pumpsets are not easily available under the hire-purchase system it may be mentioned that the total number of additional units proposed to be purchased before 30th June 1954 and for which provision has been made in the budget is 617 oil-engines and 311 electric motor pumpsets. When these additional units are purchased and distributed to the applicants in the waiting list, the position will ease to some extent. The co-operation of the public is necessary in working these schemes smoothly. Very frequently applications are received for postponement of the payment of hire charges or hire instalment payment on not very convincing grounds.

Combating Pests

A subject which has been recently exercising the minds of the public is the widespread pest attack as a result of a sudden spell of hot weather after a period of rains. Happily the Plant Protection staff in this State is better organized and they have been doing good work. The pest attack on paddy which occurred on a wide scale was promptly given attention. Pesticides and insecticides were stocked in each depot so that the agriculturists could buy them readily. Although in some quarters there was an opinion that there was no need for concession in the sale price of these pesticides and insecticides, Government agreed to sell these stuffs at 50 per cent of their cost price in areas which are declared pest-affected by the Collectors. This has greatly benefited small ryots who had



*Combating the cotton jassid pest with D.D.T. spray and
D.D.T. dusting.*

expended their all in cultivation expenses and had no money left to buy these pesticides soon after transplantation. The pest attack has been successfully combated and wherever the pests were acute, the measures taken were fairly effective. But in the case of the stem-borer it was not so, as effective measures have not yet been evolved although the efficacy of a recently discovered drug is being examined. Nevertheless, on the whole, due to the timely measures taken by the Government, the agriculturists have been saved from considerable loss of their crops. It is believed that the loss is only 20 to 30 per cent on an average, where ryots failed to take timely measures. Although there was enough stock of pesticides, the number of dusters was inadequate. The Government have therefore sanctioned the purchase of additional dusters. The concessional sale of pesticides has also been extended to the betel-vine

crops in the Namakkal taluk of the Salem district. Proposals to effectively prevent the attack of pests are also being examined.

Agricultural Credit

More important than supplies and services is agricultural credit. The loans supplied by the Co-operatives and by the Revenue Department under the takkavi and the Grow More Food loans are not adequate. This Government long ago drew the attention of the Government of India to this important aspect and both the Grow More Food Enquiry Committee and the Planning Commission have recognized the importance of the subject and on their recommendation the Government of India have made a modest start to provide funds for mid-term and long-term loans to agriculturists. They have offered Rs. 24 lakhs for this State as loan for providing additional credit to agriculturists. The question of availing of this loan is under correspondence. This loan will be available not only for the usual purposes covered by the existing rules but also for new ones like purchase of breeding animals, cost of dairy sheds, etc. The Government are trying to obtain this loan on favourable terms of interest as otherwise it will not be worthwhile. Suggestions are also frequently made for the starting of an Agricultural Finance Corporation. Actually this question was considered two years ago but was dropped. When the financial position of the State Government becomes easier, it might be possible to reconsider the subject. Meanwhile, the other facilities referred to here and the liberalization of rules made by the Reserve Bank for agricultural credit supplied through Co-operatives should be made full use of.

FISHERIES

While the Agricultural Department attempts to increase the harvest of the land, the Fisheries Department attempts to reap the harvest of the Sea and of our inland waters.

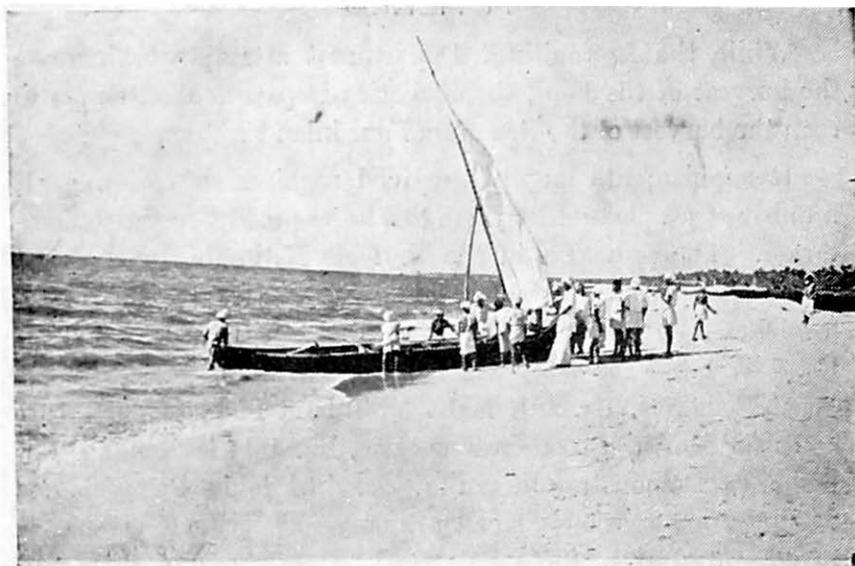
It supplements largely the food requirements of a great number of people and its value lies in its protective supplementation. The provision in the Budget Estimate for the next year for Fisheries is Rs. 29.42 lakhs. It provides for Rs. 87,600 for Direction, Rs. 3.43 lakhs for Pearl and Chank Fisheries, Rs. 1.47 lakhs for Deep sea fishing, Rs. 0.26 lakh for West Coast Fisheries, Rs. 2.04 lakhs for Inland Fisheries, Rs. 1.97 lakhs for Mettur Reservoir Fisheries, Rs. 1.34 lakhs for Rural Fisheries Demonstration Units, Rs. 4.31 lakhs for Fisheries Schools and various smaller sums for Inland Fisheries Research, Marine Biological Stations, fish preservation and transport, fish marketing, etc.

Developmental Activities

During the last few years, the activities of the Department have expanded considerable and several schemes relating to the development of Fisheries have been undertaken. Some of the schemes were worked under the Grow More Food Campaign and some have been included in the Five-Year Plan. The activities of this Department may briefly be stated as follows :—

- (1) Accelerated increase of fish production.
- (2) Intensive fishing operations with modern methods of fishing and by scientific pisciculture.
- (3) Provision of marketing facilities by means of cold storage and quick transport.
- (4) Improving the material, moral and economic condition of the people who are actually engaged in fishing operations.

The Development Schemes under Fisheries for which provision has been made in the Budget are deep sea fishing operations, installation of ice plants and cold storages for fish,



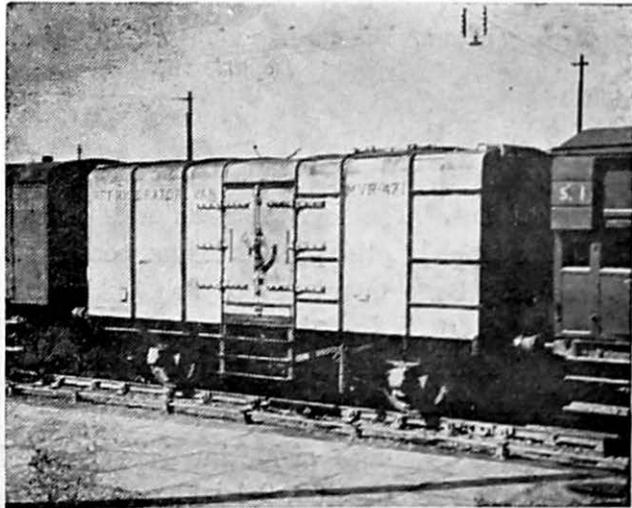
Returned with a good haul.



A portion of the day's catch.



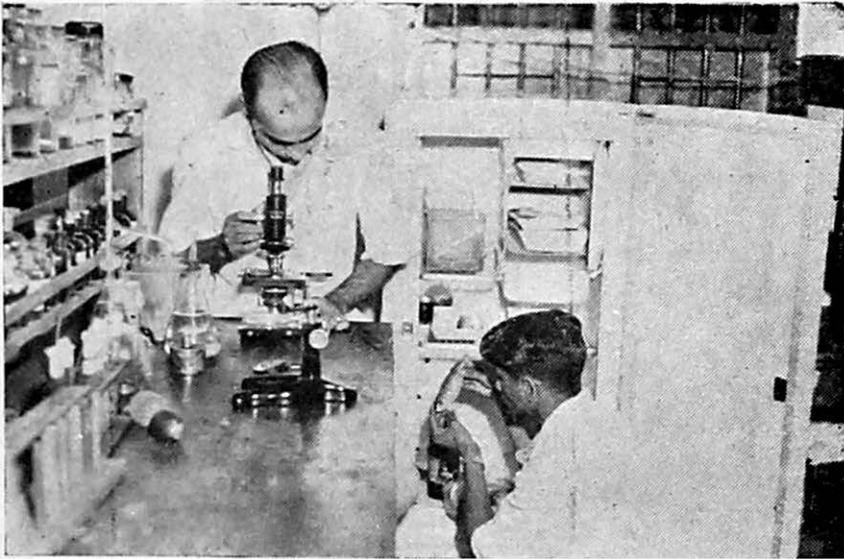
*Fish for quick
distribution
inland*



*Refrigerator
Van for the
transport
of fish*

intensive seed collection and distribution for stocking fish in inland waters, improvement of indigenous crafts and tackles, provision of quick transport facilities, marketing of fish and Fisheries Technological Station, Kozhikode, etc.

With nearly 1,000 miles of coast line in this State, the potentialities of marine fishery are sought to be fully exploited. Motor fishing vessels and luggers of the Department are



Fishery Research is an important activity of the Fisheries Department.

helping fishermen to reach farther into the sea and to secure larger catches. The fallow inland waters in this State have also been tapped to the utmost extent possible for stocking and multiplying large quantities of fish. About 50,000 acres of such inland waters have been stocked. During 1952-53, about 152 lakhs of fries and fingerlings were collected and distributed to different areas.

The fish resources of Mettur lake have also been fully utilized. During 1952-53, 9.4 lakhs of lb. of fish were landed from the Mettur Reservoir. Encouraged by the success in Mettur the Government have drawn up proposals to develop the fish resources of new irrigation projects such as Bhavani-sagar and Malampuzha. It was only recently that a fish farm was established at Bhavani-sagar. It has a promising future. Facilities for quick transport are being provided for marketing the Mettur fish in the nearest towns such as Erode, Salem, etc.

To ensure and promote the development of inland fishries, two schemes are now being worked, namely—

- (1) the Rural Pisciculture Scheme; and
- (2) the Rural Demonstration Scheme.

Research work on the suitability of varieties of fish in different waters is being carried on under the rural piscicultural scheme. Practical demonstration of scientific methods of fish-culture and fish-farming in the rural water-spreads such as tanks, wells, ponds, etc., is being carried on under the Rural Demonstration Scheme. These schemes have been working in places such as Palghat, Kozhikode, Madurai, Bhavanisagar, Tanjore, Srivaikuntam and Kancheepuram. The fishes available in river courses are also conserved by regulating fishing operations under statutory rules issued from time to time.

Welfare of Fishermen

The backbone and mainstay of the Fisheries Department are the fishermen who are carrying on fishing operations all over the coast line of our State. Their interests and their needs have not been neglected. Sixty-two schools are specially run by the Department for the benefit of the fisher children. Proposals for providing higher standards in some of the schools have been approved and provision is being made in the next year's budget. Nearly 176 Fishermen Co-operative Societies have been started for affording credit facilities to fishermen to obtain their supplies of tackle, nets, yarn and other requirements. To enable the fishermen to make the best and utmost use of their surplus catches, the Government have opened 69 fish-curing yards, where they are allowed to cure fish under hygienic conditions. They are also supplied with salt at subsidized rates. The total quantity of fish thus brought to these yards for curing during 1952-53 was 15.55 lakhs of maunds.

Storage of Fish—More Facilities

One of the handicaps in the development of fishing industry is the lack of facilities for storing fish and keeping them in

fresh condition till they are marketed. Towards this end, two *ice-cum-cold* store plants are being erected one at West Hill, Kozhikode and the other at Mangalore. Large quantities of fish can be kept in cold storage in fresh condition till they are sent out to the markets. Besides these, there are about 6 motor vans under the use of the Department for the quick transport of fish from the shores or from inland waters to markets. In this connexion it must be mentioned that there was an exceptionally large catch of oil sardines on the west coast early this year. All the catches could not be converted to fishmeal. To avoid loss to fishermen, the Government have allowed the export of a limited quantity as dried fish manure to places outside the State.

Expert Assistance

In view of the growing national importance of fish industry, the Government have also secured the services of some experts to come and give their advice and to demonstrate to our people, important and modern methods of fishing. A Naval Architect and a Fishery Engineer with two small powered vessels and improved fishing implements have already arrived under the F.A.O. Aid. The Government will also be receiving assistance under the American Technical Co-operation Aid Programme. Under this programme ten diesel oil marine engines, one purse seiner, two insulated vans, three small powered vessels and one *ice-cum-cold* storage plant are expected shortly. With their aid and assistance, the Department will gain much knowledge and experience in the methods of modern fishing industry.

Pearl and chank fisheries form an important source of revenue to this Department. Though in recent years there has not been pearl fishing operations, the yield from chank fishery has been consistently satisfactory. Our chanks are in great demand in Bengal and are superior to those in Ceylon.

**PRINTED BY THE SUPERINTENDENT
GOVERNMENT PRESS
MADRAS**