Chapter IV

CHAPTER – IV

CONDITION OF AGRICULTURE IN THE MADRAS PRESIDENCY

Introduction

This Chapter explores the evolution of food administration throughout the colonial period's final decade, as well as the remedial efforts made by the colonial government, led by British governors and the popular Congress Ministries. It also discusses the immediate component of the Madras Presidency's food problem, namely, food grain shortages, which prompted the government to rely on Food Control Orders, purchases, and rationing. Grow More Food is a public awareness initiative aimed at getting individuals more active in the food chain. The food administration of the Madras Presidency should describe some of the difficulties it faced in feeding its 50 million inhabitants during and after WWII, as well as the government's efforts to overcome these obstacles[1].

The provincial administration was taken over by publicly elected administrations, following provincial elections in the spring of 1946, changing the constitutional status immediately after the War ended. In the Madras Presidency, T. Prakasam and G.P. Ramaswamy Reddiar constituted the Congress ministries. During the War, the Indian government and the Madras Presidency imposed government restrictions on a variety of commodities, particularly foodgrains, which were retained after the War[2].

Food restrictions were first implemented in India in response to WWII-related food shortages. Foodgrain supply must be considered while assessing the nature of the food problem in the Madras Presidency, which has a history of foodgrain shortages and deficits during the British administration. The factors, that conditioned and moulded the Government's food policy, are also discussed in a clear and chronological review of the important Acts made by the Government of Madras, towards the evolution of the Food Administration. The Indian government made the first step toward food regulation on December 5, 1941, when it announced statutory wheat prices. With the commencement of the East Asian conflict and the Japanese conquest of Burma in March 1942, the focus changed from wheat to rice. During the controls, the food administration was concerned about rice

[1] . Palme Dutt, “India today”, “The Gazetter of India, Vol. 5, p.60
[2] . The Assembly after the election on March 1946.[Archives Report Chennai Dec,24,2020]

scarcity. Like the British administration at the start of the War, the Indian government was hesitant to establish a comprehensive all-India food policy. As a result, rather than following a well-thought-out plan, India's food administration evolved by trial and error. This was influenced by constitutional and other political factors, among other things. During the War, New Delhi hosted a series of food conferences to build the basis for an All-India Food Policy. During the inaugural All India Food Conference, held in New Delhi in December 1942, attempts were made to estimate the "surpluses" and "deficits" of provinces and states[3].

Madras Presidency Basic Plan – Normal output of rice and millets in each district with the essential requirements (1942 – 1947)

District	Estimated requirements	Normal output	Surplus or Deficit	Estimated requirements	Normal output	Surplus or Deficit
Anantapur	64	62	-2	122	173	+51
Bellary	34	15	-19	132	225	+88
Cuddapah	53	59	+6	114	160	+46
Coimbatore	147	53	-94	298	254	-44
Chittoor	123	113	-10	135	126	-9
Cingleput	258	251	-7	37	40	+3
East Godavari	295	359	+64	39	47	+8
Guntur	161	220	+59	203	210	+7
Kistna	174	280	+106	64	66	+2
Karnool	46	34	-12	137	225	+88
Madras	117	-	-117	6	-	-6
Malabar	614	317	-297	7	6	-1
Madurai	202	185	-17	186	143	-43
Nellore	104	175	+71	155	189	+34
North Arcot	270	250	-20	141	108	-33
Ramnad	174	143	-31	136	100	-36
Salem	162	115	-47	297	269	-28
South Aroct	260	262	+2	148	126	-22
South Kanara	236	260	+24	9	2	-7
Tirunelveli	224	172	-52	128	84	-44
Tanjore	401	587	+186	12	18	+6
Trichinopoly	166	176	+10	184	165	-19

[3] . Foodgrains Policy Committee Report 1947, P.101, (Chennai Archives)

The Nilgiris	27	3	-24	7	3	-4
Vizagapatam	425	272	-153	179	152	-27
West Godavari						
Presidency	4962	4705	-257	2890	2877	-13

Madras Administration of Agriculture from1937 – 1942

In the year ending in June 1938 the total area of the Presidency for which figures were available was 79,803 million acres. Of this 13,178 million acres were forest, 14,604 million acres were not available for cultivation. 10,538 million acres were cultivable waste other than fallow, 9,451 million acres were fallow and 32,032 million acres were cultivated.

Two important Acts affecting the general condition of the agricultural population, were passed namely. The Madras Agriculturists Relief Act, and the Prohibition Act.

The Prohibition Act was introduced in the Salem District on 1st October 1937. The Act was worked successfully owing to the general acquiescence of the population.

Prohibition helped to raise the standard of living of the agriculturists as the amount which they used to spend on drink was available for necessities, to promote domestic harmony, reduce indebtedness and introduce a better way on life.

The Agriculturists Relief Act became law on 22nd March 1938.

Parts of the Deccan suffered from famine. The rainfall under both the monsoons was neither adequate nor timely in Kurnool and it Bellary and was not evenly distributed in Bellary also. The main activities of the Agricultural Department were as usual directed to research, propaganda, marketing and education.

Madras Agri – Horticultural Society

The Society introduced many new varieties in all classes of plant material, including shrubs, trees, climbers, herbaceous plants, bulbous plants, succulents, orchids and conservatory plants. The number of Central Banks (31) remained unchanged. The number of individual share-holders fell from 4,248 to 4,176 while the number of society share-holders rose from 11,244 to 11,288, of which 199 were Central Societies, and 9,811 were Agricultural Credit Societies[4].

[4] . Foodgrains Policy Report 1943, p.40

The Madras Co-operative Central Land Mortgage Bank made steady progress. There were Ninety Foure Primary Land Mortgage Banks with 478 (457) individual members. The total number of Agricultural societies increased from 11,110 to 11,181 of which 101 were Land Mortgage Banks. 10,520 were credit societies, 135 were purchase and sale societies, 45 were production and sale societies and 383 were others. The number of Agricultural Credit Societies rose from 10,502 to 10,520[5].

The most important event in the Agricultural Department during the year was the reorganization or regrouping of circle charges, reducing their number from eight to four and increasing the number of District Officers (Assistant Directors) from 10 to 13 and the transfer of control over livestock improvement work to the Veterinary Department.

Another event of far-reaching importance on which, however, orders were issued only after the close of the year was the re-amalgamation of the teaching section and the research section of the Coimbatore Agricultural College. The short course in fruit culture and nursery practices started at the Fruit Research Station. The Systematic Botany Section collected as many as 170 species of grass and had under trial the most promising of them.

The Cotton Section was also in charge of four worthwhile projects funded by the Indian Central Cotton Committee. The fodder cholam scheme was closed down during the year but in its place a new Mungari cotton breeding scheme was inaugurated at Adoni.

The Research Engineers Sector continued to focus on agricultural implements and machinery design, testing, and improvement. Messrs. P.S.G. & Sons Charity Industrial Institute, Peelamedu, Coimbatore, was testing the Plough Cooper No.34, which was discovered to be both cheaper and better than the popular Cooper No.11. The light ridge plough designed by the Agricultural Engineer and produced by all the leading agricultural implement manufacturers in India was so well received that no less than 235 ploughs of this design were sold during one year.

There were as many as 1,026 'trial' plots during the year, under paddy, ragi, sugarcane, cotton, cholam, tenai and tobacco as against 902 in the previous year and 7,963 demonstration plots as against 7,554. As in the previous year, co-operative societies, especially Loan and Sale Societies, continued to give their assistance to ryots, granting loans

[5]. Madras Administration Report 1937 – 38, District Archives of Coimbatore Book No.1434

on the pledge of produce. The **Tiruppur Cotton Market Committee,** constituted under the Madras Commercial Crops Markets Act continued to do useful work for the trade[6]

The total area of the Presidency, for which details were available was 79.795 million acres. Of this, 13.191 million acres were forest and 14.407 million acres were not available for cultivation. Other uncultivated land, excluding fallows, accounted for 10.863 million acres and 9.861 million acres were fallow. The economic condition of the agricultural population was much the same as in the previous yeras. The low outturn of crops, especially dry crops, coupled with low prices caused some hardship to the ryots in spite of the liberal land revenue concessions granted by the Governments.

The Madras Agriculturists Relief Act and the Prohibition Act continued to be in force. The Madras Agriculturists Relief Act, 1938, ameliorated the condition of the agriculturists by reducing their indebtedness to some extent. Land Mortgage Banks and Co-operative Credit Societies afforded some relief. The economic condition of the agricultural labourer was on the whole fair. Increasing attention was paid to the improvement of crops, particularly paddy and cotton, by hybridization.

Marketing surveys on citrus fruits, wool and hair, coconuts, sheep and goats and mangoes, were completed. The number of students admitted to the B.Sc., (Agriculture) degree course at the Agricultural College, Coimbatore in 1939 was 49. Farm management, horticulture, insect pests and illnesses, dairying, animal care, beekeeping, Jaggery manufacturing, farm equipment, manuring, and fruit cultivation were among the topics covered. The Botanical Gardens at Ootacamund and Sim's Park in Coonoor were both in excellent condition.

Some tanks in Anantapur District were damaged by the heavy rains of August 1938 and repairs were promptly executed. Heavy rains in July and August 1938 breached certain tanks in Salem District. Repairs were commenced by the special staff, sanctioned by the Government. The Grand Anicut Canal left bank breached at the Vettikad embankment. The breach was repaired. The Kannadian and Nathiyunni channels (Tinnevelly District) were damaged in November 1938 by the breaching of certain Minor Irrigation Tanks[7].

[6] . Agriculture – Administration Report for 1937-38, G.O.No. 2641, 24th October 1938

[7] . Madras Administrative Report 1938-39, District Archives of Coimbatore Book No.1457

There was no material change in the economic condition of the agricultural population. On the outbreak of War, in September, the retail prices of almost all commodities, whether locally produced or imported, rose sharply, and there was a tendency among traders to profiteer at the expense of the public. The Government therefore, set up Advisory Committees, with Revenue Divisional Officers as Chairmen and the Chairmen of Municipal Councils and representatives of wholesale and retail merchants as members, to determine and publish mean fair prices of essential commodities. At the end of the year such committees were functioning in Madras City and in all but five taluks of the Presidency.

The Publication Act which was in force in the Salem, Cuddapali and Chittoor Districts was extended to the North Aroot District, on the 1st October. The Act continued to be popular among the greater part of the inhabitants of those districts, especially the women.

The Agriculturists Relief Act continued to be in force during the year. It reduced the indebtedness of the Agricultural population to some extent but at the same time adversely affected their credit position as money – lenders were not inclined to advance loans freely.

Electricity

The progress of electrical development in the Presidency during the year.

S.No	NAME OF SYSTEM
1	The Pykara Electricity System
2	The Mettur Electricity System
3	The Papanasam Hydro – Thermal Scheme
4	Thermal Stations – Vizagapatam Electricity System
5	Bezwads Electricity System
6	Cocanada Oil Engine Station
7	The Indian Electricity Act

Heavy floods in the Yerracalva in the West Godavari District in September and November 1939, damaged to some extent several irrigation works in the tanks subdivision. The cyclone in November 1930 caused serious damage to several irrigation works and standing crops in the Kistna and Cauvery Delta.

Works, for which Capital and Revenue accounts were kept, were allocated into (a) Irrigation Works and (b) Navigation, Embankment and Drainage Works, each class being again subdivided into productive and Unproductive.

The Madras Co-operative Milk Supply Union purchased during the year from the 14 milk supply societies affiliation to it, 688,120 measures of milk worth Rs.2.21 lakhs.

Credit Societies - The number of Agricultural Credit Societies increased from 10,926 to 13,191 and their membership from 567,279 to 600,412 and their working capital from Rs.47,300 lakhs to its 47,534 lakhs. Loans to the extent of Rs.14,729 lakhs were granted during the year.

Multiple Purpose Societies – The Committee on Co-operation reccommended that the functions of agricultural co-operative societies should be enlarged so as to include all the economic needs of the members. In 130 credit societies, multiple purpose objects, such as the supply of manure, seed and improved implements, joint purchase and distribution of agricultural requirements, thrift, etc, were introduced so as to make the co-operative society the centre of village life. The number of societies rose from 138 to 140 and their membership, and from 27,548 to 36,787 and the loans issued rose from Rs.95'86 lakhs to Rs.107.30 lakhs.

Central Land Mortgage Bank – The Madras Co-operative Central Land Mortgage Bank had a membership of 119 Agricultural credit societies. The share capital rose from Rs.7.76 lakhs to Rs.8.66 lakhs, and the outstanding loans, from 189.18 lakhs to Rs.218.81 lakhs, as a result of the agriculturists Relief Act. The short course in Agriculture at the Research Station, Nandyal, was continued. Fourteen students and one post-graduate, underwent training in Fruit Culture at the Research Station. The Botanical Gardens at Ootacamund and Sim's Park at Coonoor were maintained as usual by the Agricultural Department.

Madras Agricultural – Horticultural Society

The experiments in the Nursery Gardens, on the evergreen Hibiscus, produced a further batch of three new varieties of hybrids. Marketing surveys on jute were completed, and those on maize, Bengal gram, Cashewnuts, sugar, fish and prawns were continued. Four new Agricultural Marketing Assistants were appointed, for the intensive development of existing marketing facilities.

The number of students admitted to the B.Sc, Agriculture Degree Course, at the Agricultural College, Coimbatore, was 50. The demand for improved ploughs and implements continued. Two types of improved iron plough were approved, and manufactured at Peelamedu in the Coimbatore District.

Agricultural research, in the Presidency was undertaken party by research officers such as the Government Agricultural Chemical and Crop Specialist, and partly by the Superintendent of the Central Farm at Coimbatore and the district officers. Many of the problems were similar or related to those in other parts of India, and it was necessary to obtain the maximum result to have a unified direction. This direction was given by the Imperial Council of Agricultural Research and the Central Cotton Committee.

The rainfall in November was below the normal in Vizagapatam and Guntur and above the normal in the rest of the Province, especially in Nellore, Chingleput, South Arcot, Chittoor, Trichinopoly, Tanjore and Ramnad. The rainfall in October and November brought good supplies to the irrigation sources. The heavy rains in Tirchinopoly and Tanjore flooded the drainage channels, breached several tanks, and damaged the standing crops, and in addition, roads and railway lines in Tanjore. Some houses in the taluks of Tanjore, Papanasam and Mannargudi were washed away or damaged and the people were rendered homeless. Owing to the very low yield of crops in the previous year as a result of the failure of the north-east monsoon, there was distress in the Chingleput District, especially in the Tiruvallur and Ponneri Taluks.

The Pykara Electricity System

Two additional 12,500 K.V.A generating units were installed at Pykara, and the operating voltage of the Pykara Coimbatore double credit line was increased from 66 K.V. to 110 K.V Agricultural development maintained good progress. The total number of pump sets connected to the system was 1,810 and their horse power 10,718. Power was available in 165 villages and outposts[8].

[8] . Madras Administrative Report 1939-40, District Archives of Coimbatore Book No.1440

Years of Progress

	1900-01 (IN MILLIONS	1941-42 (IN MILLIONS)
Area of ryotwari holdings	22.52	27.61
Area under cultivation in ryotwari holdings	17.65	20.96
Assessment on holdings	Rs. 438.07 Lakhs	Rs. 603.43 Lakhs
Net ryotwari demand including water-rates and second crop	Rs.490.83 Lakhs	Rs.757.41 Lakhs

The rainfall during the **South West Monsoon** was generally below the average, except on the West Coast. The **North East Monsoon** was a failure and the rainfall was below normal in the areas influenced by it. The **area under crops** at the end of October was, however, greater than usual mainly as a result of the "Grow More Food" campaign. The condition of the standing crops was generally fair, except in the Ceded Districts and parts of the Carnatic and Central Districts. The effect of the December rains on the standing crops, particularly in the southern districts and the Carnatic, was beneficial.

During the beginning of the year, famine conditions prevailed in the **Bellary District. Six famine works** were opened in order to provide employment for the agricultural labourers and other workers. A Rice Research Station was opened at Tirukuppan in the Chingleput District, and the acquisition of an area of 25 acres near Mangalore for the establishment of a similar station for the South Kanara District was sanctioned by the Government. Research in the Chemical and Botanical sections and the experiments on the effect of irrigation on black soils, were continued.

The attention of the demonstration staff was mainly propaganda for the "Grow More Food" campaign. The final market survey of mustard was completed and the report furnished to the Agricultural Marketing Adviser to the Government of India. There were 149 authorized packers under the **"Agmark"** scheme, of whom 78 were authorized to pack rice also. The grading of eggs in Madras City increased considerably and over 17 lakhs of eggs were sold under "Agmark" grades. The value of graded agricultural commodities amounted to nearly Rs.26 lakhs, of which rice alone accounted for about Rs.13 lakhs.

Tungabhadra Project

The investigation of the Tungabhada Project was completed by the Special Executive Engineer in March and the estimate prepared by him was under scurtiny. The **Kistna East Bank Canal** extension scheme was completed and it irrigated during the year. About 800 acres were permitted for wet cultivation under the "Grow More Food" scheme.

The **Kanigiri reservoir** did not receive full supply during the year. The crope were, however, generally satisfactory. New areas under the Pyderu channel. New Vavveru channel and Gudipalli channel were opened for irrigation.

The water supply in the **Periyar System** was satisfactory and its full level was reached on the 5thNovember . The **Stanley reservoir at Mettur** received good supplies and the full level was reached on three occasions.

The National Service Labour Tribunal was constituted on the 14th September 1940. The total contribution to the Madras Governor's War Fund, including the amount previously collected for His Excellency the Governors War Charities Appeal Fund, amounted to Rupees 2,15,65,044. The comparative figures, for the various districts, on the 26th January 1943 were as follows.

Districts	**Amount (Rs.)**
Coimbatore	16,33,435
East Godavari	14,30,553
Madras	13,03,907
West Godavari	13,61,725
Kistna	12,35,900
Tanjoro	12,09,237
Ramnad	11,81,322
Guntar	11,75,930
Madras	10,98,833
Vizagapatam	10,76,972
Tinnevelly	10,16,989
Kurnool	8,84,079
Nellore	8,27,021
North Aroot	7,43,221

Trichinopoly	7,20,125
Chingleput	6,70,920
Salem	6,26,103
Malabar	6,02,122
South Aroot	4,64,'19
Cuddapah	4,30,867
The Nilgiris	4,00,609
Chittoor	3,02,998
Bellary	3,47,678
Anantapur	3,37,574
South Kanara	2,12,886
Travancore	66,085
Bangalore Mysore-Coorg	23,130
Total	**2,15,65,044**

In order to popularise defence Savings Certificate, the Savings Cards were printed in all the South Indian languages and special arrangements were made by the postal authorities to safeguard post office records in an emergency.

Government had thrown open, wherever possible, all unoccupied, assessed and unassessed lands and disafforested lands, both in compact and isolate plots, for temporary cultivation of food crops and vegetables. The lands were free of assessment up to the end of fasil 1354, but they were subject to the payment of water-rate. Government provided that preference should be given to the temporary grantee to take land where it did not form part of a compact block in outright assessment after the expiry of the period of temporary grant, on payment of land value. Arrangements were also made with the Railway administration concerned, for the temporary lease of vacant railway lands, for similar cultivation**. Cultivation of tank beds, backyards and village and town sites was also permitted free of assessment.** Collectors were instructed to requisition private lands, which were left uncultivated without sufficient cause and to lease them temporally to cultivation on payment of a reasonable rental[9].

[9] . Madras Administrative Report 1941-42, District Archives of Coimbatore Book No.1437

Administration of Agriculture Report 1943 – 1947

Reference to measures taken in support of the "Grow More Food" Campaign, by the various Departments of the Government, can be found scattered in the body of this Report. The following is a summary of the other main lines on which the Government promoted the production of food under the grow move food more campaign.

The Provisional Committee consisted of the Agricultural and Irrigation Development Board, with the Registrar of Co-operative Societies and the Director of War Publicity lening appointed to co-ordinate, control and direct propaganda on behalf of the "Grow More Food" Campaign in the districts. Corresponding committees, consisting of the Collector, the Executive Engineer, the District Agricultural Officer, the Deputy Registrar of Co-operative Societies and the District Organizer of the National War Front, were appointed in each District. Their work was later taken over by the District Food Councils, which were appointed to deal with all food questions.

A heavy cyclone in January caused a number of breaches in the Tinnevelly and Palayam channels and also breached twelve tanks. The Thalaianai Dam which irrigated 7,400 acres, was completely washed away. There were heavy floods in May which caused damage to the Poiney, Cheyyar and Palar anicut systems and also to several tanks in the North Arcot District. The South Arcot District was very badly affected by the cyclone, which occurred in May and about 210 irrigtion sources including the Perumal and Wallajah Tanks were damaged.

Thirty six schemes, costing about Rs.30.84 Lakhs and intended to irrigate about 29,000 acres, were sanctioned under the "Grow More Food" campaign. Almost all these works were taken up for execution with the aid of special staffs and it was expected that a number of uncultivated lands would be brought into cultivation before the north-east monsoon of 1944.

The intensive drive in support of the "Grow More Food" campaign was continued. Cultivators were advised to raise more food by reducing the area under commercial crops, applying more manure, by growing more improved strains and by bringing new areas under cultivation. Seeds and manure were distributed free to poor ryots and 8,124 demonstration plots were arranged to impress the cultivators on the advantages of growing improved strains

and adopting improved methods of cultivation. Special attempts were made to intensify the cultivation of vegetables. Special facilities such as the grant of loans for cultivation expenses and for the purchase of good seeds and manures were offered and suitable officers were put on special duty to assist persons desirous of growing vegetables.

Pure seeds of 94 strains of paddy were issued from the Agricultural Research Station and paddy seed farms were run in the East Godavari, West Godavari, Kistna, South Arcot, Tanjore, Vizagapatam, Guntur, Chinglepet and Chittoor Districts. The total area occupied by improved strains was 31,98,000 acres. The sugar ancillary scheme, sanctioned by the imperial Council of Agricultural Research, continued to be in operation.

Six hundred and ninety exhibitions were held on various occasions, the most important of which was the War Services Exhibition which was held at Madras in August and September. Seven new strains were re-leased for distribution in the districts as their performance was consistently superior to the respective local varieties, and a number of other new strains yielded encouraging return in the different stages of their yield tests. The bank issued loans amounting to Rs.19.19 lakhs as against Rs.33.91 lakhs last year and collected Rs.38.10 Lakhs as against Rs.27.59 lakhs in the previous year[10].

Loans

The Government anticipated that they could provide for all the ordinary transactions of the year 1944-45 from the opening balance and current revenue and would not need to raise a loan in open market in 1944 for this purpose. The Government issued three months treasury bills in November 1944 of a total nominal value of Rs.100 Lakhs at an average rate of discount of Rs.0-0-0 per cent per annum. Three months treasury bills of the nominal value of Rs.60 Lakhs issued in 1943 and outstanding at the end of December 1943 were repaid in January 1944. The treasury bills, issued in November 1944 should be repaid in February 1945.

The rainfall during the south-west monsoon was generally below the average in the Circars, the West Coast and parts of the Deccan, the Carnatic and the Central Districts. The area cultivated from April to September 1944 was below the average and was also less than that of the previous year.

[10] . Madras Administrative Report 1943, District Archives of Coimbatore Book No.1438

The influx of evacuees from Burma and the adverse seasonal conditions, compelled the government of open 17free kitchens and a sum of Rs.2-15 lakhs was allotted for the purpose. A poor house for disabled and infirm destitutes was opened in August 1944, for a period of two months. Three thousand pounds of dried milk was supplied for distribution to mothers and children affected by Malaria. There were also seven test works in progress in the Vizagapatam District for the employment of evacuees from Burma.

Considerable damage had been caused in October 1943 by heavy rains and cyclone in the Districts of Vazagapatam, Chinglepet and Madras. The Sino Indian Cultural Association generously donated a sum of Rs.20,000 for the free distribution of rice, standard cloth etc., to the people affected by the cyclone in the Vizagapatam District and the amount was fully utilized.

A survey repot on castor was completed and survey report on millets, gingell, pulses and meat were under preparation. Advice on improved methods of marketing was given to several co-operative societies, by the officers of the Agricultural and Co-operative Departments. The grading of tobacco and some other minor products had to be given up temporarilly.

No effort was spared to ensure the success of the 'Grow More Food' campaign. Paddy received the greatest attention and the Department aimed at expanding the area under improved strains and popularising the proper use of manures and economic methods of planting.

Reference to measures taken in support of the 'Grow More Food' campaign, by the various department of the Government can be found scattered in the body of this report. The following is a summary of the other main lines on which the Government had been working during 1944 to increase the production of food in the Presidency. The concession granted during the previous two years and which were outlined in the Administration Reports for 1942 and 1943, were continued. The Government directed that no security deposits should be collected from the temporary grantees of lands under the 'Grow More Food Rules', except in special cases, where such a course was considered necessary.

Loans, with low interest rates and subsidies, were made available for the reclamation of waste lands and the sinking of wells in specific localities. The Madras Estates Land Temporary Amendment Act, 1944, allowed for the temporary assignment of lands in an

estate that were not already in the hands of a ryot or a tenant for a durations of three to five years for the purpose of cultivating food crops. The many irrigation schemes, that had been approved, as part of the 'Grow More Food' initiative a were continued.

Post – War Planning

The question of planning for post-war development was under the consideration of the Government for the last two years and more. Various schemes in regard to agriculture, irrigation, development of hydro-elective power, etc., were taken up and necessary staff for preliminary work was sanctioned. For the purpose of co-ordinating the activities of the several departments of Government, regarding to the preparation of Post-war Reconstruction Schemes, intended not only for the benefit of solders on demobilization but also for the Presidency as a whole, the Government established, in August 1944, the Post-war Reconstruction Co-ordination Department, with a separate Secretary to Government in charge of it[11].

The economic condition of the agricultural population improved to some extent in Cuddapah, South Kanara and the Nilgiris and at was good in East and West Godavari, and satisfactory in other districts of the Province except in parts of Bellary, Anantapur and Nellore where ryots were affected by bad seasonal condition and low outturn of crop. The high level of prices of food and commercial crops was of assistance to the farmers though they had to incur increased expenditure because of the increased cost of living and cultivation. The grant of takkavi loans for the purchase of manures, seeds, etc. and special loans for cultivating fallow lands and sinking wells, were of great help to the ryots.

The south-west monsoon burst on the Malabar coast and continued till the end of September 1945, being active in various parts of the Province at various periods during the season. A depression formed in the Bay of Bengal on the 14th October and developed into a cyclonic into a cyclonic storm by the following morning, crossed the const just south of Cocanada by the morning of the 18th, causing violent gales and heavy rainfall along the Circar Coasts.

The work of the Agricultural Department normally consists of Research and Propaganda, but during the last few years, it had also been attending to the distribution of

[11] . Madras Administrative Report 1944, District Archives of Coimbatore Book No.1439

manures, agricultural implements, etc., which were in short supply during the War. The work of the Department had considerably extended, as will be indicated by the following additional staff, appointed or sanctioned during the year under report.

1) Five Deputy Directors of Agriculture, one in Bellary in connection with the Tungabhada Project, three at Vellore, Elloro and Madras respectively for the Grow More Food Campaign and one at Madras for Propaganda
2) A Deputy Director and two Assistant Engineers at Madras for work connected with the engineering activities of the department.
3) An Agricultural Chemist for carrying out soil studies in cyclone affected areas in the Circars.
4) A Soil Survey Officer for Fruit Development in the Codded Districts.
5) Two Plant Physiologists, two Cyto-Geniticists and an Agricultural Meteorologist, for general research work.
6) A Sugarcane Specialist, a Chemist and gazetted assistants in Mycology, Entomology, Physiology and Agronomy, all for sugarcane research.
7) Three Special Officers in Cocanada, Bezwada and Cannanoro respectively for crop cutting experiments financed by the Imperial Council of Agricultural Research.
8) An Assistant Millet Specialist for work on hybrid cambu in Coimbatore.
9) Nine Gazetted Superintendents for nine Agricultural Research Stations in the Province.

The research work of the Department was conducted at the Agricultural Research Institute, Coimbatore, and the data for the research were collected from several field stations located all over the Province.

Madras Agri – Horticulture Society

An interesting feature of the year was the introduction of a new "all the-year round" competition to test the ability to keep their gardens up to competition standard, for nine months in the year.

A further expansion of departmental plantation was undertaken during the year 1862, but there was a reduction in factory output due to decreasing bark supplies. There were 13 fruit growers co-operative societies during the year, of which the most important was the one at Koddur in Cuddapah District. There were 12 sugarcane growers co-operative societies and five Unions working in the Province.

There were 21 such Unions and 253 such societies at the end of the year. Of these, 208 societies were affiliated to 21 union and functioned an feeder units of the latter without undertaking direct sale of milk. The Madras and the Coimbatore Unions supplied large quantities of milk to the Army.

The Madras Handloom Weavers Provincial Co-operative Society continued to supply yarn and other raw material to the primary societies, and to market a portion of their finished goods. There were 14 societies in Tanjore District and one in Trichinopoly District for the reclamation of land in the Canvery-Mettur Project area.

There were 17 such societies formed for the purpose of undertaking work such as repairs to irrigation channels, tanks, etc., and the regulation and supervision of the distribution of water. The Societies covered an extent of 7,928 acres. There were 67 such societies working with the purpose of supplying their members with improved varieties of seeds, manures, fertilizers, agricultural implements, tyres and axles.

Tungabhadra Project

The construction of the project was in its initial stages and preliminary arrangements for survey and the final setting out of the alignment of the canal, lay out of camps, etc., were made during the year. The Government of India modified its scheme of subsidy for the 'Grow More Food' Campaign by giving 50 per cont of the net outlay on the scheme or the average value at current prices of the increased annual production in terms of foodgrains, whichever was less, instead of Rs.50 per ton for additional foodgrains produced subject to a maximum of 25 per cent of the total cost.

The construction of the buildings for the Irrigation Research Station Laboratory, static tanks and out-door flumes at Poondi was completed and the laboratory was opened in July 1945[12]. There were a slight improvement in the economic condition of the agricultural population in general in the presidency. The economic condition was almost the same as in the previous peirod in Vizagapatam and South Kanara Districts. There was a slight improvement in Anantapur, Cuddapah and Madura Districts. Conditions were satisfactory in Kistna, Chingleput, Trichinopoly and Ramnad Districts, good in East Godavari and West Godavari Districts and fair in the other Districts.

The south-west monsoon commenced in the first week of June 1949 and remained active the throughout the month. During the whole period of the monsoon, the rainfall was normal in North Arcot, above the normal in East Godavari, Nellore, Chingleput, Salem, Coimbatore, Malabar, South Kanara and the Nilgiris and below the normal in the other Districts. The rains in October were generally beneficial to the crops. The monsoon was active in November 1949. The depression formed in the Bay on the 7th November developed into a cyclonic storm and crossed the Cricar coast, causing locally heavy rainfall.

The food situation in the Province deteriorated over after the end of the War, owing to the fact that it was not possible to obtain fully the usual quota of imports. The Government realized early enough that the Province would have to rely on its own resources and with a view to making the Province self-sufficient in food, were sanctioned several schemes for intensive and extensive cultivation to increase food production.

One was a three-year comprehensive scheme of intensive cultivation for the multiplication and spread of improved strains of paddy, millets, pulses, groundnut and green manures. The Government of India agreed to meet half the net cost of the scheme. All existing schemes in this line were merged in this comprehensive scheme.

There was a great rush for admission to the two agricultural colleges at Coimbatore and Bapatla. The research work of the Agricultural Department was done mostly at the Agricultural Research Institute, Coimbatore. The Fruit Specialist alone worked at Kodur in Cuddapah District.

[12] . Madras Administrative Report 1945-46, District Archives of Coimbatore Book No.1447

Research was carried out on the utilization of gas for running engine pumps, on improving a drilling implement for paddy in wet land, and on a paddy thresher and multi-purpose agricultural implement. The Malt Factory at Coimbatore was in operation throughout the year. Research work was done as to how the malt products could be best pressed into consumption by increasing the yield, reducing the cost of production and utilizing the by products to the fullest extent possible, so that the stuff could be marketed on a commercial scale.

A branch was newly started in April 1940, in order to give assistance to the ryots in matters relating to the supply and hiring of crude oil engines, electric motor-driven pumps, agricultural implements and machinery.

Six market survey reports were completed on giner popper, turmeric etc. Two reports in barley and bengalgram were revised. Reports of cattle and important commodities in selected and important markets were furnished to the Director of Agriculture and a monthly review on the market conditions was furnished for incorporation in the "Grow More Food Journal".

The scheme was financed entirely by the Indian Council of Agricultural Research. The result of the experiments was not yet published but the scheme was being continued. The "All the Year Round" competition introduced by the Agri-Horticultural Society. Madras, in the previous year proved a great success and attacted more entries.

Grow More Food Scheme

Several major schemes, taken up for execution earlier were pushed through vigorously and a number of them were either completed or were in an advanced stage of completion. The Government of India agreed to give financial assistance to the Gorw More Food Campaign, by giving a subsidy of 50 per cent of the outlay on the schemes or of the average value at current prices of the increased amount of average annual production in terms of rice anticipated as a result of the execution of the scheme, whichever was less. The Irrigation Research Station at Poondi made substantial progress during the year. The maximum flood level over the crest of the Dowlaishwaram Anaicut was 13-9 feet on 29th July

1940 at 6 a.m. There was no damage due to floods or cyclones in the Godavari Delta during the year[13].

Administration of Agriculture Report From 1947- 1952

The total area of the Province, for which details were available was 19.935 (79-934) million acres. The continuance of high levels of prices of food and commercial crops helped the ryot population in general to meet their increased cost of living and cultivation expenses and to reduce to some extent their agricultural indebtedness. The grant of takkavi loans for the purchase of manures, costic, seeds, etc and the special loans for sinking wells were of much help to the ryots. Agricultural labourers continued to be paid in kind in some districts and for some operation.

The Prohibition Act was in force in all the districts of the Province except in Vizakagaptnam, East Godavari, West Godavari, Krishna, Chingleput, Madras, South Arcot, Ramnad and Tirunelvelli. The introduction of prohibition tended to improve the economic condition of the agriculturists.

Agriculture

The more important activities of the department included : 1

1) Five Year Plan
2) Green Manure Campaign
3) Distribution of seeds, manures, iron material and pumping sets
4) Intensification of efforts, regarding dissemination of practical results of research.

With a view to intensifying the production of food in the Presidency, a plan was prepared for increasing the annual production of rice in the Province by 5.5 lakhs of tons by 1951-52. An overall target for all schemes, including irrigation and well-sinking schemes at 6-5 lakhs of tons of rice, was fixed. This was accepted by the Government of India who decided that those schemes should be financed from the 'block grant' allotted for development schemes to the province. The estimated cost of working the agricultural schemes, for the year, 1947-48, was as follows.

[13] . Madras Administrative Report 1946-47, District Archives of Coimbatore Book No.1442

Capital - Rs.2,99,69.00 Lakhs

Recurring - Rs. 86,91,200 Lakhs

The estimated financial assistance, required from the Government of India, was Rs.49,08,275 Lakhs. Research work was chiefly carried out by the Agricultural Research Institute, Coimbatore. Research in sugarcane was carried on under a scheme sanctioned by the Indian Central Sugarcane Committee, at Anakapalle and Gudiyattam. The Malt Factory at Coimbatore continued to work throughout the year.

The Government also provided funds for through short term loans and advances to the extent of Rs.206 lakhs through the Provincial Co-operative Bank and Rs.30 lakhs through the Central Land Mortgage Bank.

Milk Supply Unions and Societies

At the close of the year, there were 23 milk supply unions and 354 milk supply societies. Co-operative milk supply received an impetus in the District where prohibition was introduced as a means of solving unemployment. The increase in the amount of loans was indicative of the popularly of these loans among milk producers.

The Dairy Development Officer and the Dairy Surveyor, appointed under the special scheme for the improvement of milk production, by the Government of India continued their surveys covering all the districts of the Province.

Irrigation Societies

There were 19 Irrigation Societies. They executed irrigation works, valued at Rs.17,792 and provided extra irrigation facilities to 3,105 acres.

Agricultural Demonstration and Improvement Societies

There were seven demonstration societies and 57 improvement societies.

Several major schemes were in the advanced stage of execution during the year[14]. The rainfall during the South-West Monsoon was above normal in the Districts of West-

[14] . Madras Administrative Report 1947-48, District Archives of Coimbatore Book No.1458

Godavari, North Arcot, Salem, Coimbatore, Tiruchirappalli, Madurai, Ramanadthapuram, Tirunelveli, Malabar and South Kanara.

Crop failure was prevalent in Fasli 1360, due to the failure of the north-east monsoon and lack of rains during the south-west monsoon. In the absence of regular agricultural operations, most of the afflicted areas, especially Guntur, Nellore, Cuddapah, Kurnool, Chittoor, Chingelput, North Arcot, Ramanathapuram, Tirunelveli, and Coimbatore, experienced a labour shortage. The Prime Minister's National Relief Fund provided a grant of Rs.2.75 lakhs, with the majority of the money going to 15 Districts. Despite the fact that 18 Districts were affected, only parts of Guntur, Anantapur, Bellary, Chittoor, and Chingelput, as well as the entire District of North Arcot, experienced a shortage of fodder. The Collector looked at importing fodder from the districts of Nellore and South Arcot. There was Districts among the handloom weavers to the State due lack of yarn supply. The levels in Yerracalva and Yenamaduru rose quite high due to severe rainfall in the West Godavari District, from July 17th to July 25th, 1951, resulting in significant floods in the lands along the river in the West Godavari districts.

(a) The revised Three Year Plan of Intension Cultivation Scheme' was in its third year of operation during the year. All the agricultural schemes in operation during 1950 were continued in 1951. In order to create a healthy rivalry among farmers to put forth their best efforts to produce more, the Crop Competition instiuted in 1950 for paddy, was continued.
(b) Intensive propagandas on green manures were continued and 13,600 bags of seed were distributed during the calendar year 1951. 'Sesbania Specious', a new green manure crop with decided advantages over other green manure crops, was distributed in all wet land areas for growing along field margins.
(c) The Madras Agri-Horicultural Society organized a crop yield competition for topics in the State and the department had agreed to run it on behalf of the society.

The propaganda staff in the Districts concentrated their efforts, on the implementation of intensive cultivation schemes for production of food – crops and the cotton extension plan, scientific methods of crop production, irrigation with power operated pumps and land reclamation and cultivation by tractors. Interest – free loans, to the tune of Rs.61.38 lakhs

were issued. Thirteen improved strains of paddy and three improved strains of cholam were released for distribution in the Districts during the year.

The Malt Factory at Coimbatore continued to work. The production of food yeast by the pilot plant at Coimbatore was stopped from 1st February 1951. The year under report was one of all-round progress and rapid expansion of the co-operative movement. The Madurai Thermal Scheme was mangurated Minister for Public Works on 19th February 1951 with a 4,000 KW. turboset and connected gear. The 4th 7,250KVA unit at Papannasam was commissioned in July 1951. The 4th and 5th 150KW unit at Visakapatnam Power house and the fourth 3,000 KW unit at Vijayavada commenced operation during the year.

Irrigation

The Stanley Reservoir was opened for irrigation on 20th June 1951 about a week later than the scheduled date of opening. Godavari Delta System, Krishna Delta System the were also in operation.

Grow More Food Schemes

Since the inauguration of the Grow More Food Schemes, 333 schemes, including major and minor ones, were sanctioned, at a cost of about Rs.4.52 crores for irrigating about 1,62,388 acres and providing better irrigation facilities to about 58,385 acres, including lands under the Cauvery-Mettur Project.

Intensive Cultivation Schemes

All the Grow More Food schemes were continued in the State during the year. The Intensive Manuring Scheme, was also continued in the selected areas. Under this Scheme, special interest-free loans at the rate of Rs.25 per acre subject to a maximum of Rs.200 per ryot, were granted to agriculturists for the purchase of chemical fertilizers. The Crop Yield Competition was organized in respect of long-duration paddy during the fasli year 1360 and prizes were awarded to the successful competitors.

The Madras Land Utilization Order, 1950 continual to be in force during 1951. **Lease of Lands for Grow More Food Purposes –** Assessed and unassessed waste lands and unobjectionable porambokes, at the disposal of the Government, were granted temporarly for cultivation in the interests of the Grow More Food Campaign.

Five Year Development Plan – Agriculture. High priority was given to Agricultural Production Schemes under, the Five-Year Development Plan of the National Planning Commission. The last year of the Three-Year Food Production Plan (1949-50 to 1951-52) was also the first year of the Five-Year Plan (1951-52 to 1955-56). All the Intersive Cultivation Schemes under execution under the Three Year Food Production Plan were continued under the Five Year Plan.

Grow **More Fish Schemes,** sanctioned in 1950-51, were continued during 1951-52[15]

Seasonal conditions all over the State were generally unsatisfactory. In parts of East Godavari and West Godavari Districts, particularly in the low laying areas, heavy rainfall damaged standing first crops.

Pegged down by controls, prices of foograins remained steady, while prices of commercial crops soared to high levels. The normal increase in the acreage of the important commercial crops, as a result of this phenomenon did not occur. This was due to the prevalence of acute drought. The higher prices of farm products helped mainly the larger landholders who were able to liquidate a part of their debt.

Loans disbursed by the primary and Land Mortgage Banks also indicated the better condition of the agricultural population. The number and value of loans issued in 1951-52, were both lower than in the previous year. Foodgrains were decontrolled towards the end of the year. Relief shops for their distribution at controlled prices, however continued to function. Agricultural laboru was on the whole well employed despite the adverse seasonal conditions. Wages continued to be high.

The Three-Year Intensive Cultivation Plan was merged into the Five-Year Plan of the Planning Commission. The year under review was the final year of the Three-year Plan and the first year of the Five Year Plan. The work done under the Intensive Cultivation Scheme, are detailed below. The Agricultural Department supplied 743 oil engine-pumpsets to ryots on hire, at concessional rates.

River Pumping Schemes

River pumping schemes on a pilot scale were in operation in Chingleput District and they were extended to Malabar, South Kanara, Ramanathapuram and Chittoor districts.

[15] . Madras Administrative Report 1950-51, District Archives of Coimbatore Book No.1445

Machanized Cultivation

Reclamation of waste and fallow lands, to increase the area under cultivation at moderate cost, was done by tractors and bull-dozers, with accessory equipment. Some private agriculturists were very keen to purchase tractors but, high cost was the limiting factor.

Supply of Fertilizers

In order to increase the yield per acre of food crops the Department supplied large quantities of nitrogenous and phosphatic fertilizers for manuring the crops. Special District Agricultural Officers were appointed, for granting 'interest free' loans for the purchase of these fertilizers so that ryots might be benefited.

Rural Compost

A subsidized scheme for preparting rural compost, was in place. Farm wastes like weeds, grass, dried leaves and stubbles of crops were composted and applied to food crops.

Urban Compost

The urban scheme continued to be under the control of the Inspector of Local Boards and Municipality.

Supply of Improved Seeds

Supply of improved seeds was given high place in the Grow More Food Campaign. Supply of improved seeds of paddy, millets and pulses was ensured all districts of the State. The increase in yield, on account of this factor alone, was estimated at 10 to 15 per cent. Improved seeds produced in Agricultural Research Stations, were multiplied in 'primary' and 'secondary' seed farms in ryots' holding. The details of improved seeds distributed, are shown below:

	Quantity distributed in 1950-51	**Quantity distributed in 1951-52**
	Tones	**Tones**
Paddy	8,211	11,211
Millets	301	686
Pulses	3	65
Green Manure	728	1,469

Green Manure

Green manuring of paddy constituted an important phase of crop production.

Control of Pests and Diseases

Prevention and remedial measures against crop pests and diseases formed another an important aspect of the Grow More Food Campaign.

Agricultural Marketing

Agricultural marketing work was done by State Marketing Officer stationed at Madras along with the assistance of Assistant Marketing Officers stationed at Cuddapah, Kakinada, Coimbatore and Tiruchirappalli.

State Trading Schemes

The State Trading Organization in the Department vested with the responsibility of administering the schemes for purchase and distribution of (1) chemical fertilizers, (2) iron and steel for agricultural implements and (3) pipes and fittings for irrigation purposes.

Investigation of Projects

- Thungabhadra Project
- Lower Bhavani Project
- Malampuzha Project
- Mettur Canals Scheme
- Krishna Pennar Project
- Walayar Project
- Manimuthar Reservoir Project
- Araniar Reservoir Project
- Upper Pennar Project (at Perur)
- Bhairavanitippa Project
- Rallapad Reservoir Reddikalva Scheme II Stage
- Grow More Food Schemes
- Post-War Reconstruction Scheme
- Tank Restoration Scheme
- Irrigation Research Station[16]

The report on the working of the Agricultural Department submitted by the Director of Agriculture, recorded the following remarks. Seasonal conditions like the onset of south-

[16] . Madras Administrative Report 1950-51, District Archives of Coimbatore Book No.1460

west monsoon (June to September) started favourably in the Circars Districts and the West Coast but it was very disappointing in the Central Districts.

The Three-Year Intensive Cultivation Plan was merged into the Five-Year Plan of the Planning Commission. The year under review was the final year of the Three-Year Plan and first year of the Five-Year Plan. The cotton extension scheme continued to be in force during the year as part of an All – India plan for increasing the production of cotton

One hundred and twenty – three graduates passed out of the Agricultural Colleges, Coimbatore and Bapatla. The number of admissions to each of the two Agricultural Colleges was raised from 80 to 96. The work in the several research sections of the Department was satisfactory.

Improved strains of paddy had covered 60 per cent of the area under paddy cultivation. During the year under review crop-cutting experiments were conducted on paddy, cholam, cumbu, ragi, castor, gingelly and groundnut.

The Government Malt Factory at Coimbatore worked with some profit for the second year in succession. But there was heavy accumulation of malt product manufactured in the factory due to the absence of an easy market in competition with the lower priced foreign products. The Fruit Products Laboratory at Kodur continued to do experimental work on the manufacture of fruit products.

The Agricultural Engineering Branch was engaged in arranging supply of implements, oil and electric-driven pumpsets and mechanical cultivation units, such as tractors and bulldozers. Demonstration or tractor attached with the new ‘Rotovator’ was conducted successfully in the Districts of Chingelput, Chittoor, Tanjore, Nellore, Krishna, North Arcot and South Aroct.

A programme of extention work was approved by the Government in (G.O.Ms. No. 1018, Food and Agricultural dated 23rd June 1952). The Grow More Food monthly journals in the regional languages continued to be very popular and 1,06,819 copies were circulated towards the close of the year. The Department took part in 201 exhibitions held during the year.

The main items of work of the marketing section were survey of new products, revising the market reports already published, rendering help in grading commodities,

organizing regulated markets, furnishing market information on important agricultural commodities and giving advice and help in marketing agricultural produce. The record of work of the Department during 1951-52, was on the whole satisfactory. The achievements would have been more striking if there had been no adverse seasonal conditions.

The Director of Agriculture was requested to consult the Commissioner of Food Production while preparing intensive cultivation schemes and report of agricultural engineering activities before submitting it to Government in future. The Government had decontrolled foodgrains. The Agricultural Department was expected to do its best to increase production under this favourable circumstance.

The Five-Year Plan was finalized and the resources available and results expected were unambiguously known. The Government expected it to rise to the occasion[17].

Administration of Agriculture Report 1953 - 1958

During the three month period from July to September 1953, the Director of Agriculture inspected the Agricultural Research Stations at Siruguppa, Hagari, Aduthurai, Tirurkuppan, Maruteru, Anakapalle, Samalkota, Sugarcane Liaison Farm, Hospet and the crop breeding stations at Coimbatore.

The Deputy Director of Agriculture, Headquarters, inspected the following research stations and centres.

(a) Regional Millets Station, Ongole,
(b) Cocanadas Cotton Improvement Scheme, Narasaraopet
(c) College Farm, Bapatla,
(d) Tuber Scheme, Bapatla,
(e) Rice Research Station, Buchireddipalem,
(f) Regional Millets Station, Ariyalur,
(g) Coconut Nursery, Marudur,
(h) Sugarcane Liaison Farm, Kulittalai.

[17] . Food and Agricultural Department (1952) G.O.No. 2007, 26th December No. E. 2 pdl, 88/52

Post – graduate Diploma course in Horticulture

The first session of the Horticultural Diploma Course leading to the Diploma in Horticulture of the University of Madras commenced at Coimbatore on the 1t4h August 1953.

Refresher course in Agriculture

The Government sanctioned a scheme for holding a Refresher Course in Agriculture for young farmers aged 17 to 25 years for a period of six months in order to provide an all-round practical training in agriculture and allied disciplines in(G.O.Ms. No. 491, Food and Agriculture, dated 31st March 1953). Except in East Godavari, West Goadvari, and Krishna Districts, the south-west monsoon started slowly, but the rains helped start small-scale sowings in the remainder of the northern districts. In the southern areas, the start of the south-west monsoon was quite weak. In comparison to prior years, the south-west monsoon of 1953 provided agriculturists renewed confidence that they would have a relatively normal year.

FIVE YEAR PLAN

Intensive Cultivation Schemes

During the period under report, the following **intensive cultivation schemes** continued under the Five – Year Plan of the Composite State

1. **Land development schemes**
   (a) Reclamation of waste lands and old fallow with tractors.
   (b) Soil conservation
2. **Irrigation Schemes**
   (a) Oil engine and electro motor pumpsets on hire and purchase systems.
   (b) River pumping schemes
   (c) Filter point-tube wells
3. **Distribution of Fertilizers**
   (a) Ammonium sulphate
   (b) Super phosphate
4. **Distribution of manures**
   (a) Rural compost
   (b) Urban compost
   (c) Green manures

5. **Distribution of improved seeds**
   (a) Paddy
   (b) Millets
   (c) Pulses

6. **Control of pest and disease of crop**

The particulars of working of the above schemes are given below

I. Land Development Schemes

(a) **Reclamation of Waste lands–** There were 301 tractors, working in the Department as on 1st July 1953 of which 185 were provided with bull dozer attachments.

Supply of tractors under Hire-Purchase System

The schemes for supply of tractors under hire-purchase system continued this year also. This scheme received appreciable popularity among the more enterprising and progressive agriculturists who were keen to have their own tractors according to their own choice but they were unable to purchase for cash. During the period under repot, 13 tractors were supplied under this scheme and they were put to very good use by the ryots for various field and haulage operation.

II. Irrigation scheme

(a) Oil engines and electric motor pumpsets under hire and hire purchase system – To develop power lift irrigation, the Agricultural Department had on hand 767 oil engines of the portable type for hiring to ryots. The scheme was popular and there was great demand for oil engine on hire.

(b) River Pumping Scheme –The river pumping schemes provided irrigation facilities for a group of ryots in a village from rivers through big pumping units it was continued as they were popular in certain districts.

(c) Filter point tube wells – A scheme for sinking 600 filter point tube wells for the year 1952 – 53 for the Composite State, was completed with fitting oil engine pumpsets by 30th September 1953.

(d) Intensive Manuring Scheme – Under G.O.Ms. No. 155, Food and Agriculture (Food Production), dated 16th April 1953, the Government sanctioned the

continuation of the scheme for 1953-54, for distributing chemical fertilizers to ryots by giving loans under the Intensive Manuring Scheme.

The following were the loan amounts disbursed and the quantitative distribution of fertilizers under the scheme during the quarter under report:

Amount actually disbursed	-	Rs.1,03,73,289
Ammonium sulphate distributed	-	44,034 tons
Super Phosphate	-	5,730 tons

Celebration of Compost Tree Planting Week, 1953 – The Compost Week Celebrated as usual, along with the Tree Planting Week Celebration by almost all the local bodies throughout the State. Green manuring of paddy is an important and cheap means of increasing crop production, by raising and maintaining the producing capacity of the soil.

The Cotton Extension Scheme was launched in June 1950 as part of the Government of India's Integrated Production Plan. The Agricultural Research Institute in Coimbatore and its breeding stations, as well as the state's 50 Agricultural Research Stations and regional research centres, conducted the majority of the department's research. The review of research work is presented below under the following heads :-

(1) Research Council.
(2) Agricultural Chemistry.
(3) Agricultural Entomology.
(4) Agricultural Mycology.
(5) Agricultural Meteorology.
(6) Crop Improvement.
(7) Systematic Botany.
(8) Plant Physiology.
(9) Cytogenetics.
(10) Botanic Gardens and Parks.
(11) Agronomy.
(12) Agricultural Engineering.
(13) Agro – Industries.
(14) Agricultural Research Stations[18].

[18] . Food and Agricultural Department (1953) 1st October

Administration of Agriculture Report 1956 -61

During the period 1956 – 1961, the south-west monsoon was more or less normal. But the north-east monsoon was practically a failure in the State. The rainfed crops depending entirely on this monsoon, a experienced a set back on this account. The fourth year programme of the Five – Year Plan of the State related to food production scheme, was executed during the year under review.

Majority of schemes, under the Plan continued under the old three – year Grow More Food Plan, and realized self-sufficiency by the end of 1956. An additional quantity of 320 tons of foodgrains was estimated to be produced during the year as a result of the operation of all schemes which directly contributed to increased production.

The Indian Council of Agricultural Research supported a project for a survey of fertilizer practises in Coimbatore that lasted nine months during the year. Throughout the year, the Cotton Extension Plan was implemented as part of an all-India plan, to increase cotton output, alongside food grains.

The Revised Sugarcane Research Scheme was sanctioned during and the Central Sugarcane Research Station at Palur started functioning from 15th April 1955. A scheme for increasing the production and quality of high yielding and superior plants, their perpetuation by propagation and distribution of such plants to the public, was sanctioned.

The area under the modified Japanese method of cultivation during 1954-55 was 4,93,377 acres and this was the highest for all States in India. The adoption of mechanized food production continued to be popular and there was increase in demand for these aids from the farmers.

The Indian Government approved a loan of Rs.20 lakhs for the purpose of sinking filter point tube wells, and 895 wells were successfully drilled, out of a total of 600. Agriculture across the State joyfully celebrated Pongal Week in January 1955 as an agricultural week in response to a government appeal.

The Agricultural information Committee set up by the Government suggested the use of audio-visual methods. National Extension Service Development Blocks in the State were ordered to be converted into Community Development Blocks. Ten new National Extension Service. Blocks were set up during the year, in addition to the existing 28 blocks. The Special

National Extension Service Scheme which was introduced in the Mayuram and Kumbakonam Divisions of the Tanjore District, was intensified.

The development of grading is essential for increased activity under marketing, warehousing and processing contemplated in the second Five Year Plan. The Director of Agriculturor was requested to furnish in future a complete list arranged chronologically.

While fixing the responsibility on the subordinate staff for their irregularities, the Director of Agriculture was requested to take into consideration the responsibility of the Heads of Offices for the lapees on their part. Besides the number of regular inspections, the Director of Agriculture was requested to see that the Inspecting Officers also make surprise inspections. His attention was invited in this connection to the orders issued in G.O.Ms. No. 1910, Agriculture, dated 30th July 1955 and in Government Memorandum No.83226/Accts / 55-1Finance, dated 27thOctober 1955. Even in the headquarters office the control and supervision could should be more effective.

The Government reported that these defects should be remedied quickly in the light of past experience. The internal audit by the Chief Auditor of State Trading Schemes, should also be prompt and effective. The Director of Agriculture was requested to consolidate this information and bring it under the broad heading, "Horticulture" in future reports. The work of the Department during 1954-1955 was, on the whole satisfactory. Some of the measures of reorganization, taken during the year under report are bound to improve the tone of the work of the Department. One of them was the re-organization of the field set up to fit the Department.

The Agriculture Department along the special staff, with in the areas covered by the Community Projects and National Extension Service Schemes, was re-organized with effect from 1st December 1954[19].

Implementation of the Madras Land Utilization Order

The implementation of the provision of the Madras Land Utilization Order, 1955 (since amended), was vested with respective Districts the Collectors of the respective District. The seasonal conditions, were generally satisfactory. These was partial failure of crops in

[19] . Government of Madras, Agricultural Report – 1956, G.O.No.294 7th February (1956) No. E. 2 pdl, 88/52

certain parts of Kanyakumari and Thirunelveli Districts. The condtion of the agricultural population in other areas, was generally satisfactory.

The rainfall, during the south-west monsoon season was above normal in Chenglput, South Arcot, North Arcot, Salem, Tiruchirappalli, Madurai and Ramanathapuram Districts, bordering on normal in South Kanara District and below normal in the other Districts of the State.

During the north-east monsoon period the rainfall was above normal in North Arcot, Salem, Coimbatore, Tiruchitrappalli, Madurai, Ramanathapuram and the Nilgiris districts and below normal in Chengleput, South Arcot, Tanjore and Tirunelveli Districts. The rainfall for the period November to December 1956 was below normal in Kanyakumari District. This was the first year of the Second Five-Year Plan Period. As against a target of 2.70 lakhs of tons of additional production of food-grains, 1.74 lakhs of tons of foodgrains were produced.

The Department was in possession of 142 tractors at the end of the year, excluding those transferred to Kerala and Mysore States. Twenty-four tractors valued of Rs.4.39 lakhs were distributed under the hire purchase system. The cultivation of Sesbania special was largely advocated both as a border crop and as a pure crop after the cultivation of paddy. As against a target of 570 tons of green manure seeds covering an area of 1.43 million acres, a quantity of 599 tons was distributed during the year.

Vanamhotsava or National Tree Planting Week was celebrated all over the State. The Agriculture Department was supplying pesticide and insecticides to ryots to combat pests and diseases. Under the Second Five – Year Plan, it was proposed to instal each year six high – power pumping sets on the banks of perennial rivers and to utilize the water running to waste, by pumping to high-level areas for raising short crops.

Filter Point System

The Government of India sanctioned a loan of Rs.16 lakhs for this Scheme of filter point. A few research schemes were sanctioned under the Second Five-year Plan in addition to the existing research work undertaken by the Department. Metrological data in the observatory and micro-climate data in the open and amidst crop fields, were collected as per schedule. Crop weather experiments were conducted in four Agricultural Research Stations on paddy, cotton, cholam and cumbu.

After the recognization of the State, there were Five market committees, with 17 regulated markets in the Districts of South Arcot, North Arcot, Coimbatore, Ramanathapuram and Tirunelveil, No violation of the regulation, under the Act, was reported.

Irrigation Works – Productive

The capital expenditure, incurred on Productive Irrigation Works, (Direct and Indirect), during the year amounted to Rs.95,512

Irrigation Works – Unproductive

The capital outlay on Unproductive Irrigation Works Direct and Indirect was Rs.4,36,34,522. A major portion of this sum was spent on the following projects

(a) Lower Bhavani Project
(b) Mettur Canals System
(c) Manimuthar Project
(d) Araniar Project
(e) Amaravathi Project
(f) Vaigai Project
(g) Sathanur Project
(h) Krishnagiri Project
(i) Kattalai High Level Canal Scheme, and
(j) Pullambadi Canal Scheme

Several schemes of Grow More food, taken up for execution in the previous years, were completed or were in an advanced stage of execution during the period.

Planning – Second Five Year Plan

The Planning Commission approved the Madras State's Second Five-Year Plan, which called for a total expenditure of Rs.152.27 crores. The target for additional production of foodgraines for the State, originally fixed at 14 per cent over the level in 1955-56 was raised to 28 per cent i.e. by 12.70 lakhs of tons. The increase could be achieved by extending intensive production methods to as large an area as possible. One of the major schemes under 'Agriculture' under the Second Five Year Plan, was the opening of 360 State farms, each of 25 acres for promoting. National Extension Service and Community Development.

The Japanese method of paddy cultivation was advocated. Agricultural extension service, as usual occupied the foremost place in the Community Development Programme. As in the previous years, all important activities, necessary for increasing agricultural production were intensified during the year[20]. The progress of the season was watched and reviewed month. A review on the progress of monsoon was published in the dailies.

During the south-west monsoon season, which lasted from June to September 1956, Madras State received only 1.1 percent of the typical rainfall. October 1956 was the start of the North-East monsoon season. The rainfall in Madras State was 36.4 percent over normal during the north-east monsoon period, which lasted from October 1956 . Special reports on agricultural statistics were compiled and sent to Government of India and other Departments of the Government, as detailed below:

(a) Special Reports sent to Economic and Statistics Directorate, New Delhi

The Economic and Statistical Advisor, Government of India, New Delhi, was furnished with periodical reports on legislation having a bearing on agriculture accepted on the production stocks exports details of was prepared and submitted to the Government commodities covered were groundnut, chilies cane jeggery, tamarind and potato.

In the agricultural sector, agricultural aspects were bright in view of increase in favourable, seasonal conditions in important programme centers. India had achieved the targets of agricultural production, under the First Five-Year Plan and also the standard of living of the people. The increased expenditure on account of purchase of capital for carrying out the development programmes resulted in a large increase in imports from foreign countries.

When prices of agricultural commodities began to slump in January 1955, the Governmental of India took steps to stabilies prices and announced a policy of price support. A sum of Rs.19.30 lakhs was provided for the Integrated Scheme in the Second Five-Year Plan.

Crop sampling surveys, on paddy and millets were, continued. Scheme for investigation efficiency of agricultural production, Statistics of area and production under improved seeds, fertilizers, green manures, etc. Scheme for the collection of new types of

[20] . Government of Madras, Agricultural Report (1956-57) District Archives of Coimbatore Book No.1455

data relating to agricultural economy. Schemes to come under the Ministry of Food and Agriculture, Government of India[21], were watched and reviewed from time to time as detailed below. The rainfall during the year as compared with the normal.

During the South-West monsoon period, entending over June 1957 to September 1957, the rainfall in the Madras State as a whole was deficient, by 19.7 per cent of the normal rainfall. The condition of crops was generally satisfactory in all the Districts of the State except in parts of Changleput, South Arcot, Tanjore, Tiruchirapalli, Tirunelveli and Kanyakumari District, where pest attack on paddy crop was reported in the month of December 1957, but the damage was not appreciable.

Crop forecast was, as in the previous year, usual in respect of the following 25 crops

1. Rice
2. Cholam
3. Cumbu
4. Ragi
5. Korra
6. Varagu
7. Samai
8. Maize
9. Gingelly
10. Groundnut
11. Castor
12. Bengalgram
13. Greengram
14. Horsegram
15. Blackgram
16. Redgram
17. Cotton
18. Sugarcane
19. Tebacoo
20. Chillies
21. Onions
22. Pepper
23. Ginger
24. Senna
25. Mests
26. Potatoes

The overall agricultural production in 1957-58 in the reorganized Madras State rose by nearly 37 per cent as compared with the production in the base period, namely average of three years ending 1949-50 due to better seasonal conditions and increase in area. The increase in agricultural production in 1957-58, for All-India was nearly 13 per cent more than that of 1949-50 which was attributable to better seasonal conditions.[22]

[21] . Madras Administrative Report (1956-57), Government of Madras, Book No. 1515
[22] . Madras Administrative Report (1956-57), Government of Madras, Book No. 1516

Administration of Agriculture Report 1958 - 1967

Rainfall during the South West Monsoon period, extending over June 1958 to September 1958 in the Madras State as a whole was deficient by 13.4 per cent of the normal rainfall. North-East Monsoon Period extending over October 1958, the rainfall in the Madras State as a whole was deficient by 26-2 per cent of the normal rainfall.

The rainfall in the Madras States was a whole was deficient by 19.5 per cent of the normal rainfall. Seasonal conditions were less favourable than in the previous year. The overall agricultural production in 1957-58 in Madras State rose by nearly 38 per cent as compared with the production in the base period namely, for the three years ending 1949-50, due to the food production measures and improved agricultural practice adopted, better seasonal conditions and increase in area. The increase in agricultural production in 1957-58 for All-India was nearly 15 per cent more than that of 1949-50.

Provisional figures of area under different classifications and area irrigated in the Madras State for 1957-58 , were specially worked out and furnished. Periodical reports on legislation having a bearing on Agriculture, Land Revenue, etc., in Madras State were prepared and sent to Delhi[23].

Rainfall during the South-West Monsoon period extending over June to September 1959, in the Madras State as a whole was deficient by 17.6 per cent of the normal rainfall. The deficiency in rainfall as compared with the normal, ranged between 20 and 50 per cent in Madras, Chingleput, South Arcot, North Arcot, Tiruchirappalli, Thanjavur and Ramanathapuram Districts. It was 7 per cent in Salem district and 8 per cent in Madurai District. The rainfall was in excess of the normal by 10 to 30 per cent in Coimbatore.

The rainfall was in excess of the normal in Salem and Coimbatore districts respectively. The overall agricultural production in 1958-59 in the Madras State rose by nearly 37 per cent as compared with the production in the base period, viz., average for the three year ending 1949-50 due to the various food production measures and improved agricultural practices adopted, and increase in area. The increase in agricultural production in 1958-59 for All-India was nearly 31 per cent more than that of 1949-50.

[23] . Madras Administrative Report (1956-57), Government of Madras, Book No. 1517

Compared with '1957-58, the index number of agricultural production for the Madras State for 1958-59, fell by one point to 137[24]. The North-East Monsoon set in over the Madras State on the 23rd October 1960. The rainfall, during the North-East Monsoon period, extending over October 1960, to December 1960 in the Madras State as a whole, was above the normal by 15.3 per cent. In Madras and Chingleput Districts, the rainfall was in excess of the normal by 51 per cent and 43 per cent respectively.

Type of Irrigation and Crops Irrigated – Area Irrigated

Out of 5'8 million hectare of area not sown, two to three million hectares or 33.8 per cent was irrigated. The proportion of net area irrigated to the net area sown was above 50 per cent in the deltaic District of Thanjavur and the non-deltaic district of Chingleput. Wells were the chief source of irrigation in Salem and Coimbatore Districts, raccounting for 60.2 per ent and 57.4 per cent of the net area irrigated.

The North-East Monsoon set in over the Madras State on the 23rd October 1960. The rainfall during the North-East Monsoon period, extending over October 1960 to December 1960, in the Madras state as a whole was above the normal, by 15.3 per cent. In Madras and Chingelput Districts, the rainfall was in excess of the normal by 51 per cent and 43 per cent, respectively[25].

Second Five-Year Plan-Review Of Progress

The following are the targets fixed under the Second Five-Year Plan and achievements made during the Five Years of Second Plan Period.

	1956-67 target production potential	1956-57 (Achievement)	1957-58 (Achievement)	1958-59 (Achievement)	1959-60 (Achievement)	1960-61 (Achievement)	Total (in thousands tons)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
A) Food Production							
1. Major Irrigation	99-0	0-16	33-7	17-7	19-8	20-5	107-7
2. Minor Irrigation	110-0	17-6	13-9	17-0	29-0	30-9	108-4
3. Land Development	55-0	8-1	6-5	3-1	3-1	3-9	24-7
4. Fertilizers and manures	606-0	137-8	69-0	69-0	71-0	(-) 19-9	323-4
5. Improved seeds	390-0	(-) 17-4	(-) 8-5	(-) 8-5	45-8	(-) 10-4	65-9

[24] . Madras Administrative Report (1956-57), Government of Madras, Book No. 1518
[25] . Madras Administrative Report (1956-57), Government of Madras, Book No. 1512

6. Improved Agricultural practices	30-0	4-24	84-0	84-0	35-7	57-8	253-6
Total	**1,279-0**	**204-5**	**208-8**	**182-3**	**205-3**	**82-8**	**883-7**

(B) Commercial crops

1. Oil seeds	2-66	0-15	0-26	0-67	1-20	2-35	2-35
2. Sugarcane	10-00	1-77	2-37	2-17	2-37	3-04	11-72
3. Cotton (Bales)	1-55	0-32	0-61	0-65	0-88	0-84	0-84

* Up to March, 1961

Despite the fact that the cotton season extended until the end of July 1961, the achievement statistics were only computed through the end of March 1961, in order to maintain a consistent period for monitoring targets and results under agricultural production plans. The main research centres are the Agricultural Research Institute in Coimbatore and its crop breeding stations, as well as other agricultural research stations and Regional Research Centres around the State. The research work completed during the year 1961 :

(1) Research Council.
(2) Agricultural Chemistry.
(3) Agricultural Entomology.
(4) Agricultural Mycology.
(5) Agricultural Meteorology.
(6) Botany.
(7) Plant Physiology.
(8) Cytogenetics.
(9) Agronomy.
(10) Agricultural Engineering.
(11) Crop Improvement Research.
(12) Agricultural Research Stations.
(13) Botanic Gardens and Parks

Central Office

A scheme was sanctioned for the centralizations of the offices of the various research sections at the Agricultural College and Research Institute, Coimbatore, (G.O.Ms. No.356,

Agriculture, dated 8th February 1955). Role of calcium in the fertility of South, Indian soil types, digerent soil types like, red, black, mixed, alluvial. lateritic, saline and alkaline, collected from different research stations and other places of Madras State, were analyzed for their complete chemical and physical compositions[26].

Period of the South-West Monsoon (June to September 66), reported The average rainfall in the Madras State as a whole. The index number of wholesale prices of foodgrains in Madras State advanced from 687 in 1965-66 to 714 in 1966-67 and that of commercial products from 908 in 1965-66 to 1,126 in 1966-67.

The Agricultural Prices Review Committee continued to review the prices of agricultural commodities every week. Intensive Agricultural District Programme was in operation in Thanjavur District in 1966 – 1967.

According to the programme, formulated by the Institute of Agricultural Research Statustics, New Delhi, 1,206 crop cutting experiments were proposed to be conducted in Thanjavur District and the control blocks on Kuruvai, Samba and Thaladi crops of which 1,142 experiments were successfully conducted during 1966-67. Besides the above 51 additional crop cutting experiments 88 additional crop cutting experiments on the High Yielding variety of A.D.T. 27 paddy were also conducted during 166-1967 the year. The filled in schedules, relating to the crop cutting experiments and the Agronomic and Agro-Economic Enquiry conducted during the year, were sent to the institute of Agricultural Research Statistics, New Delhi, after scrutiny and coding, for final analysis and drafting of the report.

During the year, the wet weight of straw was recorded for all the crop cutting experiments conducted on Kuruvai, Samba and Thaladi crops in Thanjavur District . Furhter experiments were also conducted, for estimating straw to grain ratio for paddy crop, in Thanjavur district. Operational Research Studies, under the Intensive Agricultural District Programme, in Thanjavur district were continued during 1966-67 also.

During the year 1966-67, the survey under groundnut crop covered 7 units, viz, Cuddalore. Villupuram units of South Arcot District, Tiruvannamalai unit of North Arcot

[26] . Government of Madras Agricultural Report (1956-61)

District, Anamalai, Gobi and Erode units of Coimbatore District and Cumbum unit of Madurai District.

The survey for block level estimates of agricultural production, which was implemented in North Arcot District of Madras State in November 1963, was continued during the year 1966-67 also for the purpose of obtaining reliable estimation of yield rates of important cereal crops at the block level, by suitably combining the information on visual estimates obtained from large number of fields, selected in the block and on crop cutting conducted on a subsample of fields selected from a large sample.

In 1966-67 the survey was conducted on Paddy I and II and Cholam as a dry crop. The data collected in respect of paddy I and Cholam as a dry crop collected during Kharif Season 1966-67, were sent to institute of Agricultural Research Statistics. New Delhi after preliminary tabulation. A detailed report of the survey, conducted during Kaarif 1966-67 was prepared. The data collected in respect of Paddy II crop during 1965-67, was also sent after tabulation.

Agro Economic Survey of Parambikulam – Aliyar Project Area

Agro Economic Survey, in the ayacut area of Parambikulam – Aliyar Project was conducted at the instance of Government. The survey covered four taluks in Coimbatore District. A sample of 10 per cent of the total number of village benefited by the Project was selected for the survey[27].

Chief Ministers of Madras State from 1937 – 1967

In the Madras Presidency the first assembly session was held in February 1937. In the legislative assembly, the Indian National Congress won 159 of the 215 seats available. This was the Madras Presidenc's first electoral victory. C.Rajagopalachary was elected as the first congress chief minister of Madras in July 1937. This congress government, which was constituted following the elections, resigned in protest over India's participation in World War II.

When the elections were held in 1937 under the Government of India Act of 1935, the congress was willing to put the agitations on hold for the time being and work on the new

[27] . Madras Administration Report (1966-67) Tamilnadu of Tamil Nadu, Book No.1522

political system. Rajaji, the stalwart among the congressmen in Madras made a vigorous election campaign and this alone helped the congress party to capture a majority of seats both in the Madras Legislative Council and the Legislative Assembly. In july 1937 C.Rajagopalachari became the prime minister of Madras Presidency and true headed the first ministry set up under the scheme of provincial autonomy. He carried on the administration very well, avoiding confortation with the governor, Lord Erskine. His Ministry introduced, in 1939 the Prohibition Act in three districts to which social reform the congress party had committed itself in the election pledge. In 1939, Rajaji and his ministry resigned and the period from 1937 to 1939, when Rajaji ministry was in power, was the most constructive period of congress political activity in Madras.

Governor's rule in Madras from 1939 to 1946.

Due to India's engagement in World War II, Rajaji resigned from the Congress Ministry, which had come to power in Madras Presidency in 1937 after winning the 1937 elections. The Governor assumed direct administration of the Madras presidency on October 30, 1939. In the years running up to the 1946 election, C.Rajagopalachari and K.Kamaraj vied for the leadership of the Madras Provisional Congress. He governed the congress in 1942 due to conflicts with congress leaders over Pakistan-related issues. After Rajaji's departure, the Tamilnadu Congress leadership was firmly in Kamaraj's hands. In the middle of 1945, Rajaji re-entered Congress.

During this period from 1934 to 1936. Lrod Ershkine governor of Madras presidency. In 1936, Erskine became the Governor of Madras Presidency, for the second time (1936-1940).

Tanguturi Prakasam 1946 - 47

In the provincial elections in 1937, the Congress Party won a majority of seats. Prakasam was denied the chance to become the Chief Minister by Rajaji, who returned to active politics as a result of the congress working committee's recommendations. Prakasam rose to the position of Revenue Minister, and his most famous achievement was chairing the Zamindari Enquiry Committee, which looked at the structural inefficiencies in agriculture, caused by the British government's zamindari system. The congress ministries quit when World War II broke out because the government had not consulted them about India's participation. Prakasam was the first prominent south Indian leader to offer individual

satyagraha in opposition to the war effort in 1941. After the Congress won the Madras presidential elections on April 30, 1946, Prakasam became Prime Minister. During his time as Premier, Prakasam stated publicly that he planned to dismantle all existing textile mills in the Province and replace them with khadi manufacturing and weaving units.

O.P.RamaswamyReddiyar 1947 – 1949

Omandur Ramaswamy Reddiyar was an Indian National Congress politician and liberation fighter. From March 23, 1947, to April 6, 1949, he was the Premier of Madras Presidency. India gained independence from the United Kingdom during Reddy's premiership. Following India's independence and partition, the Province experienced a shortage of staple grains, particularly rice. Reddy ordered the purchase of a de Haviland Dove, the first aircraft owned by the Madras Government, in 1948.

P.S.Kumaraswamy Raja 1949 – 1952

P.S. Kumaraswamy Raja (1949 – 1952) From April 6, 1949, to April 2, 1952, was the Chief Minister of the Madras Presidency from April 6, 1949 to April 2, 1952. In beginning he joined **" Home Rule Legae" under Annie Besant.** He started "BoopathiRaja" Co-operative scoeity. During his period, he foucssed several problems, on especially unemployment and shortages of food. Public Distribution System was organized by him. Midday food system also continued. During Five Year Plan, the government included many schemes in agriculture, especially irrigation and pumpset methods. He abolished zamindar system. one of the greatest achievements during his period. In means villages, the Government organized many Harijan Colonies and Co-operative Societies, Agriculture Loans were sacntioned to people.

C.Rajagopalchari 1952 – 1954

The first election in Madras in 1952, after Indian independence, produced no clear majority for any party. Sri Prakasam called Rajaji form to the government in April 1952, and he was swom in on the 10th Arpil, 1952. M.Baktavatsalam was given the portfolios of agriculture, forestry, fisheries, rural welfare community programmes, and the national extension programme.

Kamaraj 1954 – 1963

Kamaraj was appointed Chief Minister of the Madras Presidency in 1954. C.Subramanaiam and M.Bakthavatsalam were induced into the newly formed cabinet by him. He repealed Rajaji's. Hereditary Education Policy, which was based on family vocation. He introduced the "midday meal" project, which aims to deliver at least one meal, every day, to impoverished schoolchildren. During the Kamaraj period, significant irrigation works were developed. Dams and irrigation canals were constructed in the higher Bhavani, Mani Mutharu, Aarami, Vaigai, Amaravathi, Sathanoor, Krishnagiri, Pullampadi, Paramikulam, and Neyyaru Districts. Farmers with dry lands were also supplied oil engines and electric pump sets on an instalment basis.

M.Baktavatsalam 1963 to 1967

M. Bakatavatsalam was involved in the **Home Rule Movement** and participated in various a satyagraha programmes like the vedaranyam salt agitation. . After the end of the second world war, India faced severe food problem as well as unemployment . In 1964, Dhanushkodi was affected by flood. He served as the Madras Chief Minister from 1963 to 1967.[28.]

History of the Green Revolution

Understanding the events of the last four centuries is essential to understanding the background of our food famine and the need for Green Revolution. During the Mughal Rule, different types of land ownership and taxation systems came into existence across the country. Our traditional agriculture was set up in such a way, that the peasants defended this freedom and, it strengthened the local economy. Even in places where it was not in private possession, the land was sold from one farm to another farm in the village and the landlord did not leave the village for any reason.

Land Ownership

When Robert Clive won the battle of plassey in 1757, he took control of Bengal after gaining the right to tax three villages in Bengal for the first time. The British felt that Indain agrarian land ownership systems would not be of much use to them. Based on their experience, they believed that a profitable business model could be developed only when the

[28] . Dr. K. Venkatesan, Tamil Nadu History and Culture , Vardaman Padipagam , Volume IV

whole land became privately owned and thus formed a system of Zamindar in the Bihar and Orissa provinces of Bengal, which were first occupied by the British.

A certain area of land under each zamindar was subdivided and leased to small farmers. Depending on the area of the land, they had to pay rent according to the fertility of the land. Zamindar collected the rent and paid it to the Company twice a year. In the early days the rights to the lands were auctioned off and the person, who offered to be the highest tax payer, was made the landlord for the Company. Unable to predict exactly was a big problem for the company and farmers' interest in increasing production had waned because it was not known how much grain would be carried through the landlords in the next harvest and hence this system did not last long. In 1793, Lord Cornwalls, Governor – General, granted the Zamindar a permanent right to collect lnad tax in Bengal. The belonging of Zamindars was auctioned off when they failed to pay taxes within the specified days. It was through such cases that Zamindars were replaced by foreign merchants, interested in business. Thus much of the land in the country came to be owned by the unrelated landlords, who owned their land.

Tax amount levied in Bengal

With the money thus exploited by the British, they bought from our people the most expensive silk, cotton, indigo and other commodities at very cheap prices and made a profit by selling them in foreign countries. The local people received concessions in times of drought during the Model period. But during the British rule, Zamindars broke the social obligations. During the Great Famine of 1861 and 1869, Zamindars used the power given to them by the British, to raise interest many times over, in the absence of income to pay taxes.

Famines in India occurred even before the British rule but only occasionally in certain areas. The terrible famines of the Eleventh Century were only local.

A Famine in 13th Century Delhi around Delhi Only

- 14th Century three famines and of which two famines of the Fifteenth Century occurred locally.
- Sixteenth Century three famines locally.
- 17th Century, three famines and four famines from 1700 to 1745 and they were are local.

In 1763 the English first began collecting taxes :

- Four famines, from 1769 to 1500 Bengal, Madras and Bombay.
- Five famines, from 1700 to 1875 one lakh died.
- The famines, from 1826 to 1850 were Five lakhs died.
- Six famines, from 1251 to 1271 and 50 lakhs died.
- 18 famines, from 1826 to 1900, Two crore and 60 lakhs died.

Numerous sources state that there was a total of eighteen famines in India, from the Eleventh Century to 1845 but all of these occurred only in a specific area i.e. locally. For example, the famine in Delhi, in the 13th Century affected only the area around Delhi. But in the period from 1800 to 1900 alone, 31 famines left 3.25 crore people and millions of cattle died[29]. Sunderland pointed out that not the cause of famines. Insufficient food production not enough food was produced in India even during te worst famines. According to Dow, Bengal was producing enough food for three crore people despite the drought.

The real reason for this was explained in a letter to England by Governor General Warren Hastings in November 1772, explaining the cause of the famine of 1770. Even though one-third of the people in Bengal lost their lives and therefore, one-third of the land was not cultivated, the tax levied in 1771 surpassed that of 1769. The tax should have been levied less during the Greater Famine. Similarly, during the great famine in Gujarat in 1900, the government claimed that there were enough food grains Loarded in traders warehouses for two years. In other words, even though there was abundance of food, people were pushed into poverty where there was no way to buy it. Even the British famine relief work was not a big help to the people[30].

The people protested as much as they could against all these atrocities and tried not to cooperate with the government. Though the foundation of Indian agriculture became permanent during the British period, the peasantry lost their freedom and became slave laborers. This was because agriculture became a mere money-making business. Farmers' interest in agriculture began to wane as they saw the food produced for them being exploited

[29] . Famines Lajpat Rai; England's Debt to India Ministry of information and Broadcasting, Government of India, 1917

[30] Malcolm Lyall Dasling, 'The Punjab Peasant in propensity and Debt. (Oxford University Press, London, 1925)

for someone else. Millions of people lost their livelihood due to grain exports and they went bankrupt[31].

Beginning of Cash Crops

Farmers who were already weekend by the tax buden, were going to plant what they could. Even an acre of land can grow a variety of food crops and useful crops. The work of converting thousands of acres of land into cash crop plantations began in the 18th Century[32]. The East India Company forced all the farmers in their native Bengal to cultivate opium. The company prohibited even the cultivation of vegetables and punished farmers who refused to cooperate. In 1783, the East India Company exported opium to china. A fine of Rs.300 per box was imposed on farmers, who refused co-operate with the company.[33].

AURI (Indigo)

There is evidence that India had been producing small quantities of blue dye material for centuries and exporting it to other countries. Indigo dye was in high demand in the 1850s for tons of cotton fabrics produced in English factories. United States and the West Indies, had reduced their exports of IndigoIndia for political reasons. Forced to replace indigo, it with food crop indigo it was widely cultivated in the 19th Century in Bengal and soon it became the largest indigo produced in the producer in the world.

The situation worsened after the outbreak of the Indigo Royts of 1868 and the discovery of the method of producing the chemical blue dye in 1880. The livelihood of the farmers, who depended on Indigo, was ruined. Indigo shrank further from 16 lakh acres in Bengal in 1895 – 96 to 5 lakh acres in 1905-99 Many Indian plantation workers languished in poverty[34].

Tea Leaf

The British thought that if they wanted to cultivate the tea, they needed to conquer other parts of India. The first tea plantation was established in Assam in 1835 and the first Indian tea was exported for sale in London in three years. According to the rules of barren

[31] VandhanaShiva : The violence of the Green Revolution : Ecological degradation and political conflict in Punjab (zed press New Delhi, 1992)
[32] . Claude AlphonsoAlvares : Decolonizing History Goa, the other India press, 1993
[33] . George watt, The Commercial products of India, (New Delhi, Today and Tomorrow's printers and publishers, 1908/ 446, p.848-851, 669, 672, 218, 240, 795-97, 935, 936)
[34] . M.D. AfrozAlam, Champaran, Madas for Non – Violence (1998)

land created by the British government, the forests of North India were left for at least 45 years in the same of barren land and only the British could buy it for so much money[35].

Coffee

Coffee replaced Tea by the modern-day countires of Arabia and Abyssinia by the year 1690. After that coffee gradually became as addictive around the world as tea. The vast majority of coffee grown in the early days was exported, with the introduction of coffee in Southern India in the 1900s, became a popular drink.

Tobacco

400 Years ago there was no mention of tobacco in India. The Mughal Emperors were the first to use tobacco. It was not until the 15th Century that tobacco began to be cultivated in India. It was exported to Goa and used domestically. Due to ill effects of smoking, tobacco cultivation in the United Kingdom and India was banned for a period but by 1905, tobacco was grown on 11 lakhs acres across India.

Cotton

Indian cotton fabrics, made in innumerable varieties and colors, have long been exported to many countries, including the United Kingdom. Since UK used to make garments from wool and thus came from good respect for Indian cotton in U.K. During the American Civil War in the 1860s, imports of long grain cotton from the United States were disrupted, and the government encouraged farmers to cultivate American cotton on India by giving them gifts and medals. But after the end of the Civil War in the United States, The demand for Indian cotton and its price plummed. Thousands of farmers who grew low – yielding cotton varieties, with high maintenances, were disappointed as they could not rely on exports .[36].

This made them stronger. The cotton farmers, set up cotton mills widely in India. Again the demand belonged variety of cotton increased and farmers gradually began to abandon the cultivation of traditional short varieties. In 1841, during an experiment at the

[35] . A.R. Venkatachalapathy, " In those days" (Yoda Press, New Delhi, 2006)
[36] . John Augustus Voelcker, Report on the Improvement of Indian Agriculture", 1893

Coimbatore Research Station, the American cotton insect attacked everything. It is important to note that the Indian cultivar, a nearby crop, survived without any damage[37].

Cane

Sugarcane has been important food item in India since the Vedic Period. Spread to other parts of the world there are two main types of sugarcane grown in India. These new hybrid varieties require lot of water. Sugarcane was grown on 42 lakh acres of land.

Thyme Tree

Thyme Tree was introduced into the Nilgiris. It spread across the country as it could quickly grow into material for paper mills. Other crops, like rubber, oilseeds and hemp, were widely cultivated, throughout the country, to feed English mills[38].

Effects

During the British Period, agriculture all about money. This was the basis of our country's agricultural crisis. Food production began to decline, with cash crops such as opium, replacing food crops. The cash crop area under increased from 1600 lakh acres in 1900 to 240 lakh acres in 1930. The British began to count everything according to how much food crops could be converted into land for task crops to increase profits.

Independent peasants became tea plantation workers. Tricks to seduce farmers for private gain through advertisement were discovered and harmful substances like tobacoo, which are detrimental to the health of the people, were raised in large quantities. In addition to the British Our peasants also played a major role in this radicalization. Money economy dominater and became the master of our farmers[39].

Violation of Natural Laws

It is not only the farmers but also our land and agricultural waste which were weakened in turning agricultural into business. Traditional farmers used cow dung collected rainwater. Traditional farmers, ignored the principles of traditional agronomic science[40].

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[37] . Forbes Royles, culture and commerce of cotton in India, 1851
[38] . Report of the National Commission on Agriculture, Government of India, New Delhi, 1976
[39] . Albert Howard, Crop Production in India; A Critcal survey of its problems, 1924
[40] . PPST – Madras Group ; Indian Agriculture at the Tule of the Century, PPST Bulletin Vol. 2 No.1 (Peatriotic People and Science and Technology)

Knowledge of crop rotation system

A new interpretation of monoculture on hundreds of acres of land had sprung up and Indian farmers began to move away from the practice of cultivating crops, which would be suitable for hydrogen-rich soils. Farmers in East Punjab have forgotten to cultivate legumes, to protect the soil fertility since they had to cultivate wheat, cotton and oilseeds for export[41].

Damage to Forests

The English Government took control of the forest management system in 1800s to meet their needs. First, it was forbidden to go to the villagers to graze the cattle and take forest waste for use. In 1803, the Malabar teak trees, which were set aside to build ships for maritime trade, were cut down by Government order. Forests were set aside for their use under "reserved forests" and they were used for buildings train compartments. In 1866, Indian cut down a variety of trees, as logs, for use on railroad tracks. The government had set up the Forest Department, which had caused significant damage to the forests[42].

Development of Modern Agriculture

Chemical products were invented for use in World War II. Today we treat the earth with chemicals. Post infestation in our country has become a major problem and the use of pesticides has become necessary[43].

Modern Agriculture Universities and Research Centers

JC kumarappa welcomed the Economy of permanence which producing is limited to demand. Hence it is the economy of peace. But modern economy is market seeking economy and hence it is a violent.

In the 1860s, the British Government decided to encourage the cultivation of American cotton varieties to feed factories in the UK. But due to many benefits available to the native cotton crops our farmers did not accept this variety for many years[59]. The Government tried, gifts and penalties but it was of no use. During the American civil war of 1861, American cotton imports to England were severely curtailed. It was at this juncture that

[41] . John Augustus Voclecker; "Report on the Improvement of Indian Agriculture, 1893"
[42] . http://www.livinghistoryform.org
[43] . Opcit, p.109

that the idea of forming agricultural research institutes and universities in India, was contemplated.

The suggestion made by the Madras Agricultural Committee on these lines in 1890, was widely accepted. Attempts to teach students should be abandoned until he becomes seriously aware of the conditions and practices of Indian farmers. Scientists were brought from England and many experimental farms were set up across the country, to spread the knowledge of chemical fertilizers and the hundreds of iron tools that had accumulated in india. The farm, which was set up on 350 acres of land in Saidapet in 1863, was pulled down and closed within 20 years[44]. The Mayor Prabhu, who had a genuine interest in the welfare of Indian farmers during the same period, had been relentlessly urging the Government for many years, to establish an agricultural sector that would serve the people[45].

All the provincial Directors of such departments should travel from village to village, throughout the cropping season of the year, to collect information on Indian agricultural practices, to identify the real needs of the farmers. They should stay in their offices only during summers and submit their opinion reports to the Government.

Indian Agricultural Research Institute was lanuced in 1905, under the leadership of Lord Curzon. Founded in Bihar for the first time, the process of study of Indian agriculture was initrated. Curzon ordered laboratories in all Provinces of India, modeled on modern research institutes and universities operating in Germany, United States, Europe and Japan. Agricultural colleges and research institutes, with farms, were established. In 1929, the Imperial Agricultural Research Committee was established[46].

The agricultural revolution was a technological solution that modern science had given us to solve the food problem. It was considered a major national issue in those days as the problem of food scarcity spread across the country. After researching this and proposing various solutions, doctors, scientists, ministers and the general public sent thousands of letters to Gandhi, all of which were carefully selected and responded to.

Great Famine in Bengal

During the World War II. was a campaign to produce more food to alleviate the country's food shortages, but production did not increase significantly. Food grains were

[44] . M.S. Randhawa, "A History of Agriculture in India Volume3", 1757 – 1947, New Delhi 1983
[45] . Ibid., p.110
[46] . Amartyase, Poverty and Famines : An Essay on Entitlement Deprivation, Oxford University press, 1982

exported to the Indian Army by the British in the Middle East, during World War I 1942, the Japanese defeated the British and occupied Singapore and Burma. This stopped the supply for rice from Burma to India. This was 5% of our country\s demand and then enough food was hastily stockpiled for the British troops in Bengal for fear that the Japanese would invade Bengal from Burma. As if this were not enough in October 1942, a great strom struck Bengal and destroyed young crops. Apart from these, the British continued to export Indian grains as usual[47].

At a time when food stocks in Bengal were declining for a number of reasons, the Government did one thing. The Government spread a kind of fear of food famine despite the ample stock of food in warehouses. Following the policy of price control, the merchants began to keep their stock. This caused an artificial shortage of food without enough food coming to the market. While the fear psychoses was building up a huge back market was created by the rich, who sold it at a higher price[48].

It became an endless cycle of control and scarcity, fear and a black market, that fueled government corruption. There was no interest or compulsion on the part of those in power to change such a lucrative arrangement so that the food in circulation was out of reach of the poor. In August 1943, the Government of India announced that all food exports from Bengal had been suspended but it was later revealed only 22,504 tonnes of rice had been exported in August – September alone, according to the Calcutta customs export list.

In 1943 alone a total of at least 80 thousand tons of food grains were exported. Thus all the people of Bengal had enough food for a year but it did not go only to the poor people. Nobel Prize – winning Indian Economist Amartya sen has written a detailed account of the Great Famine in Bengal, in the book on and famines[49]. He points out in his book that all the 30 lakh people who died in the famine were coolies and orindary workers and in the year of famine, war was taking place. Food production was higher in 1947 than in 1941 and hence so food scarcity was not an issue of production. But it was mainly a political and economic issue[50].

[47] . M.K.Gandhi (Harijan, 24.02.1946)
[48] . M.K.Gandhi (Harijan, 07.07.1946)
[49] . Anand Bazar patuika, (08.02.1946)
[50] . M.K.Gandhi (Harijan, 31.03.1946)

Food shortage across the country

As a result, food shortage began to spread not only in Bengal but also across the country. Gandhi printed out that the main reason for this crisis was the government's price control policy. Gandhi often appealed to the government, to stop this policy because the food it possessed, did not reach the poorest of the poor and stayed only in warehouses. Imports from Burma had stopped and rice imports were only 5% of our demand. In 1938-39 India's rice production was 240 lakh tonnes and import from Burma was 14 lakh tonnes[51].

Losses in Warehouses through Transportation

1500 tons of rain – soaked wheat bundles were wasted on the railway tracks in Lahore[40]. Food grains, harvested in the fields were taken to factories and centers hundreds of kilometers away. The damage caused by rain, rats and birds was enumerous. Large quantities of spoiled wheat flour were dumped in the river. Gandhi received a lot of letters on this issue.[52].

Lands Left for Cash Crops

Cash crops, which were profitable to the British, continued to grow and grow unhindered, even as food shortage worsened. Gandhi demanded that at least 13 factories make porridge paste with rice, wheat, potatoes, sorghum and barely as raw materials. But the government started talking about the possibility of importing food grains from other countries. This was objected by Gandhi who maintained that we required to resolve this for a crised self-confidence good ideas and hard work[53].

Agriculture in independent India

One of the first important steps, taken by the Government of India after independence, was the development of agriculture reforms. At that time the yield of food crops in our country was poor. Dr.Rajendra Prasad, who became the first minister of independent India, set up an Advisory Committee, to plan food production augmentation projects. Many non – official personalities, including Gandhi, played an important roles. The group hopes and aims to make India self-sufficient in food production without importing from abroad. Until about 1960, that is, until the Second Five Year Plan.

[51] . M.K.Gandhi (Harijan, 16.11.1947)
[52] . M.K.Gandhi (Harijan, 02.06.1946)
[53] . Pyarelal (Harijan, 26.06.1946) (Food shortage and Agriculture Navajivan Publishing House)

The Congress Agrarian Reform Committee Set up under the leadership of J.C. Kumarappa in 1947, issued a statement. The committee recompended that should be formed in the interest of the farming, village based co-operative societies. It suggested that the farmers should set up village multi – purpose service co-operative societies to buy their inputs and sell their products, to buy their inputs. Hence in the first two five – year plans in 1951-60 land redistribution became and tenant rights became important aspects. Farmers can mobilize everything and increase agricultural production through small projects, without the use of large machinery. J.C. Kumarappa's recommendation reflected Gandhian ideal of village autonomy.

The Ford Foundation projects, established 15 community developement to serve 1500 villages in line with this policy. All these looked better on a policy level but they not yield did the bigger benefits than expected, when they became operational. The zamindars, who came together to defend their interest, exerted pressure on the state government, to increase the maximum amount of land that could be held by an individual[54]. The zamindari system was abolished in independent India. But at the state level transformation did not take place in depth in 1950. The former minister of agriculture and food, K.K.Munsi firmly believed that all agricultural development projects should be formulated from the grassroots level, on the basis of climatic conditions, with appropriate water, land and crop varieties[55].

Food to the United States

Even though land reform was not properly and fully implemented in independent India, our agricultural lands were enriched through many good projects. World War II marked the beginning of the Cold War between capitalism and communist nations. Hence the main goal was to stop the spread of communism from the Soviet Union. The US economy recovered after the war and factories began to make large quantities of chemical fertilizers and pesticides. Agricultural production increased exponentially and all US warehouses over flowed. In 1947, US President Truman called for financial and military aid to Turkey and Greece to counter the community influence. It was this Marshall Plan that laid the foundation for spreading the green revolution around the world.

[54] . K.M.Munshi, Towards Land Transformation Government of India, Ministry of Food and Agriculture
[55] . M.K.Gandhi, Harijan, New Delhi, 21.12.1947

The basis of CS's new agricultural plan

C.Swaminathan presented to the Government a plan to realize his dream of transforming India into an agricultural research base. Our farmers had farming for two thousand years and there was nothing in this world that they did not know. There was no doubt that our farmers know everything about traditional agriculture but they knew nothing about modern agriculture. Hence C.Subramaniam was going to introduce modern agriculture using modern inputs based on modern science and technology. The idea was to increase food. He had encouraged vegetable gardens in roof tops. In 1963, Norman Borlaug developed new short wheat seeds and sent them to India for testing. 24 varieties of rice were brought to India from Mexico in 1965 but the color and texture were changed to suit Indian Plate. MS Swaminathan, then a scientist at IARA, released 12 varieties of paddy to Indian scientists for research.

Drought and Food Shortages

While, wheat imports by PL 480 were declining due to food shortages, Indian food production fell declined to the 1965-66 drought. CS visited Washington that year and asked the US Secretary of Agriculture for help. Lyndon Johnson, then President, changed the one – year food aid agreement that had been in effect until then and changed it to monthly arrangement. His condition was that the new Governemnt should adopt the Green Revolution. Further, the Government of Indian was asked to devalue the currency and remove barriers to private investment.

Indira Gandhi is Enthusiasm

Indira Gandhi, who became the Prime Minister after the death of Lal Bahadur Shastri in January 1966, fully supported the plan. She eagerly volunteered to do what was necessary to introduce the project. C. Subramaniam removed the three secretaries and replaced a single was recommended by America for this purpose. The introduction of the Green Revolution would not have been possible without these fundamental changes in the administrative system. The draft of the new agricultural policy was prepared in August 1966. He was the new Minister of Finance at the John.P.Louie was then working as an adviser to the US President[56].

[56] . George C. Marshall , Secretary of state Commencement address at Harvard University (MA, USA, June5, 1947)

Intensive Development Program Five – Year Plan Financial Assistance

Many works were carried out through land reform and village co-operative societies. In 1960-61, the program was discontinued and the intensive agriculture program was launched as an intensive agricultural development program. Hybrid seeds were used, including chemical fertilizers and chemical pesticides. The plan was to sow new hybrid seeds, in lands with high soil and water resources and use chemicals to facilities high yields.

6114 crores had been allocated mainly for the import of seeds, chemical fertilizers and pesticides. The World Bank and USA also provided loans to implement the costly Green Revolution. In the process of bringing the new seeds and inputs of the Green Revolution to the farmers. The government subsidized the sale of seeds and other inputs, at very low prices. The problem of our government was not only to increase production but also the bigger question was how to take production to the urban market. The solution to these problems was to connect the farmers with the food market. The solution proposed by the, Government to the Rockefeller and Ford Foundations was that if the Green Revolution project was already implemented in good fertile lands, the surplus yield will automatically reach the urban areas. Hence they first selected Punjab and Haryana. The Green revolution in India was not a single project that was implemented and completed in one year but it was a collection of projects and initiatives spread over from 1967 to 1978.

The Government of India initiated the Green Revolution in wheat, by importing 64 varieties from the Rockefeller Foundation and tried on four lakh hectares. But the Indians refused to accept these varieties because they were deep red in colour[57]. The Government of India planned to cultivate these sees widely in the soil and water rich States of Punjab and Haryana, to increase production. They celebrated their victory of the Green Revolution by sowing short wheat seeds in the ground and increasing water availability, whenever needed.

It is interesting to note that large scale machine ploughing was used and chemicals were used as pesticides and fertilizes.

Food production in Punjab increased from 33.89 lakh tonnes in 1965-66 to 172.21 lakh tonnes after 1985-86. Large farmers mostely enjoyed the benefits of the Green Revolution. Prominent among those senior scientists, who vehemently opposed the Green

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[57] . The History of America's Food Aid, USAID – United States Agency for International Development

Revolution program of paddy was Dr.Richaria, who showed through his research that our native varieties can be used in short – term harvest varieties, with low pest and greaters disease resistance. But Dr. Richaria who played such an important role in paddy research in our country and in the world does not find a place in CS's autobiography[58].

It was not necessary to spend millions of rupees from abroad to import grains to be tested on a large scale while there were wonderful paddy varieties available in our country. The Amerian company came to India to solve the problem of the pests, that were part of the Green Revolution. They needed traditional seeds that were resistant to pests that our farmers had created and preserved for centuries.

As a result, the Madras Presidency had experienced serious food crisis throughout the time period under study. The administration at the period compounded the problem by utilising novel and unrealistic approaches, resulting in a food situation that was chaotic. Any government worth its salt should confront the country's challenges with courage and fortitude, ensuring that ordinary people feel safe and secure, and that their living conditions are typically consistent. The lack of effective attempts to address the food issue had resulted in significant suffering for many individuals.

[58] . C.Subramaniam, Hand of Desting, Vol.2 "The Green Revolution" Bharathiaya Vidya Bhavan 1995