



AGRICULTURE DEPARTMENT

POLICY NOTE

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GOVERNMENT OF TAMIL NADU 2015

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1. AGRICULTURE

1. Introduction

Tamil Nadu has seven distinct agro-climatic zones based on rainfall, soil characteristics, irrigation potential and cropping pattern.

In the State, paddy is cultivated in about 17.75 L.Ha (31%), millets in 6.99 L.Ha (12%), pulses in 6.34 L.Ha (11%), oilseeds in 4.38 L.Ha (8%), sugarcane in 3.24 L.Ha (6%), cotton in 1.29 L.Ha (2%), coconut in 4.29 L.Ha (8%) and Horticultural crops in 12.22 L.Ha (22%).

As per Statistics released by Government of India, during the year 2013-14, the State secured first position in productivity of Maize, Groundnut & total Oilseeds, second in Sugarcane and third in Rice and Sunflower in the Country.

The goal of the department is to achieve production of 170 lakh metric tonnes of food grains, 5 lakh bales of cotton, 545 lakh metric tonnes of cane and 17 lakh metric tonnes of oilseeds in the terminal year of the Twelfth Five Year plan period (2012-2017). The Department is continuously working for increasing the productivity by adopting crop specific strategies.

2. Season

2.1. Rainfall

The State received excess rainfall in summer season, normal rainfall during South West & North East monsoon and deficit rainfall in winter season during the year 2014. Compared to the year 2013, the State received less rainfall during winter and South West monsoon which had impact on coverage of crops during Kharif-2014.

2.2. Crop Status

2.2.1. Kuruvai paddy crop 2014-15

The Mettur dam was opened for irrigation only on August 10th, 2014. The Hon'ble Chief Minister, to succour Delta farmers, announced a special scheme for Kuruvai cultivation at an outlay of Rs.32.95 Crore benefitting 4,08,822 farmers. The announcement included supply of 12 hours 3 phase power supply, distribution of inputs for increasing productivity, raising of community nursery and distribution of seedlings at 100% subsidy. Further, 6993 units of HDPE pipes were supplied to 6993 farmers of delta districts at a cost of Rs.1399 Lakh. In addition, 200 Nos. of paddy transplanners and 200 Nos. of paddy power weeders worth of Rs.440.60 Lakh were given free of cost to the Farmers Groups in delta districts. This resulted in increased area of

2.56 Lakh Acre under paddy cultivation against the normal area of one Lakh Acre in the filter point areas.

3. Area, Production and Productivity

During the year 2014-15, due to implementation of various schemes and new initiatives, the State is expected to achieve an all time high food grain production. When compared to 2013-14, the anticipated area under cultivation, production and productivity of various crops in the year 2014-15 are as follows: -

Crop	Area (L.Ha.)		Production (L.MT)		Productivity (kg/Ha)	
	2013-14	2014-15*	2013-14	2014-15*	2013-14	2014-15*
Rice	17.26	18.30	71.15	79.14	4122	4325
Millets	9.33	9.71	32.73	41.58	3508	4289
Pulses	8.16	9.40	6.14	7.24	752	769
Total food grains	34.75	37.41	110.02	127.96		
Oilseeds	4.08	4.19	9.61	9.73	2355	2322
Cotton (**)	1.51	1.87	4.17	6.28	469	570
Sugarcane(***)	3.13	2.63	324.54	244.63	104	93
Total	43.47	46.10				

* Fourth Advance Estimate

(**) Production (L.Bales) ; (***)Productivity (MT/Ha)

Area and Production Programme for 2015-16

Crop	Area (L.Ha)	Production (L.MT)	Productivity (Kg/ha)
Rice	21.00	93.00	4429
Millets	12.00	45.00	3750
Pulses	11.00	9.00	815
Total food grains	44.00	147.00	
Oilseeds	5.62	13.85	2464
Cotton (*)	1.80	7.50	700
Sugarcane (**)	3.60	400.00	111
Total	55.02		

(*) Production (L.Bales) ; (**)Productivity (MT/Ha)

3.1. Sugarcane

Sugarcane is the second important Agro Based Industrial Crop in Tamil Nadu. It is cultivated in an area of 3.50 Lakh Ha. which accounts for 5% of the total cultivated area. Sugar production in the State is about 7-9 % of the production in the Country. A new technology, ie., Sustainable Sugarcane Initiative (SSI) is being promoted wherein interventions viz., use of Micro Irrigation, raising shade net nursery using single bud chips, transplanting seedlings of 25-30 days, wider spacing and fertigation are encouraged. As per the fourth advance estimate for this year, 2.63 Lakh Ha. is the area under sugarcane crop and the

estimated sugarcane production is 244.63 Lakh Metric Tonnes.

Cane produced is crushed in 43 Sugar Mills functioning in the State. Out of these 16 Sugar Mills are in Co-operative Sector, 2 Sugar Mills are in Public Sector and 25 Sugar Mills are in Private Sector.

In order to encourage sugarcane growers, the Government of India announces Fair and Remunerative Price (FRP) every year. The State Government announces State Advised Price (SAP) based on FRP and local cost of cultivation. For the year 2014-15, GOI announced FRP for sugar of Rs.2200 per MT for 9.5% recovery with an incentive of Rs.23.20 per MT for every 0.1% increase in recovery. However, the State Government has announced higher SAP of Rs.2650/MT which is inclusive of transport cost of Rs.100/- for the crushing season of the year 2014-15.

4. Inputs

4.1. Seeds

Seed is the most critical input in agriculture. The Agriculture department has prepared a comprehensive seed growing plan to meet the requirement for all the crops. The aim of the programme is to achieve Seed Replacement Rate (SRR) of 33% for self

pollinated crops such as paddy, ragi, pulses and groundnut, SRR of 50% for cross pollinated crops such as cholam, cumbu & cotton and SRR of 100% for hybrids.

Government owns 16 major, 2 medium and 63 mini Seed Processing Units with an annual processing capacity of 29,600 MT. Further, the Department has also proposed to strengthen and convert the State Seed Farms into technology information and demonstration centres through land development, adoption of scientific practices, use of innovative cultivation technologies, storage, creation of reliable irrigation facilities and promotion of farm mechanization over a period of five years.

During the year 2015-16, it is planned to distribute 34,650 MT of paddy, 5,085 MT of pulses, 6,000 MT of oilseeds, 425 MT of millets and 40 MT of cotton certified seeds to the farmers.

4.2. Macro Nutrients

Nutrient management is the key to sustainable soil fertility. It is the endeavour of the department to promote ecologically sustainable and balanced use of chemical fertilizers. Government has distributed to almost

all the farmers a Hand Book containing information on Land holdings, soil fertility status, optimized cropping pattern and fertilizer dosage (crop specific) for maximizing the productivity in the farmers' field.

Agriculture Department draws a fertilizer plan based on cropping pattern every year and liaise with Department of Fertilizers, Government of India for supply of fertilisers as per the plan. Fertilizer distribution during 2014-15 and requirement for 2015-16 are as detailed in the table below: -

(L.MT)

Fertilizer	Allocation 2014-15	Distribution 2014-15	Requirement 2015-16
Urea	10.50	9.77	9.80
DAP	3.75	2.33	3.10
MOP	4.00	2.88	4.30
Complex	6.50	4.87	6.40

Tamil Nadu Government is taking all efforts to ensure timely availability of fertilizers especially Urea to the farmers. The State Government, in an effort to reduce the fertilizer price, has waived 4% VAT on the sale of chemical fertilizers in the State. Further, the Government has exempted 5% VAT on Naphtha procured by MFL and SPIC to allow continuing of Naphtha based Urea production in the State. The State Government also provides interest

free loan of Rs.150 Crore per annum to TANFED from 2012-13 for procurement and storage of adequate quantity of fertilizers to avoid shortage during the peak agriculture season.

5. Schemes

5.1. National Agriculture Development Programme

National Agricultural Development Programme has an objective to achieve 4% growth rate in agriculture and allied sectors. This programme hitherto was implemented as 100% Central assistance Scheme. The scheme is being implemented with fund sharing pattern of 50:50 between the Centre and the State from the year 2015-16.

During the year 2014-15, Schemes for promotion of Paddy, Millets, Pulses, Oilseeds and redgram cultivation, sustainable sugarcane initiatives, enrichment of soil fertility through trash mulching, distribution of coconut seedlings, construction of buildings for fertilizer control laboratory, establishing laboratories for organic fertilizer testing, establishing new biofertilizer production units, construction of agricultural extension centres and provision of tablet PCs to field functionaries were taken up at Rs.80.12 Crore.

This scheme is being implemented during 2015-16 with an allocation of Rs.155.09 Crore.

5.2. National Food Security Mission (NFSM)

National Food Security Mission is implemented with an objective to increase the production of rice, pulses, coarse cereals & commercial crops, area expansion and productivity enhancement. The scheme was implemented with full Central assistance till 2014-15. The funds for the scheme are shared in the ratio of 50:50 between the Centre and the State from the year 2015-16.

5.2.1. NFSM- Rice

National Food Security Mission for Rice is implemented in 8 districts viz., Pudukkottai, Tiruvarur, Nagapattinam, Ramanathapuram, Sivagangai, Thanjavur, Tiruvannamalai and Cuddalore. During the year 2014-15, activities such as cropping system based demonstrations, distribution of certified quality seeds, farm machineries and agricultural inputs were taken up at Rs.25.04 Crore.

During the year 2015-16, activities such as Demonstration on direct sowing method, line transplanting and distribution subsidy for high yielding paddy seeds are being taken up at an outlay of Rs.30.11 Crore.

5.2.2. NFSM- Pulses

National Food Security Mission for Pulses is implemented in all the districts except Chennai and the Nilgiris. During the year 2014-15, the scheme was taken up at Rs.24.28 Crore.

During the year 2015-16, interventions such as cluster demonstrations on improved package of practices in Red gram, Black gram and Green gram, demonstrations on intercropping with cotton and groundnut, cropping system based demonstrations, distribution of certified seeds of high yielding varieties etc. are being taken up with an allocation of Rs.30.20 Crore.

5.2.3. NFSM- Coarse Cereals:

National Food Security Mission for coarse cereals is implemented in 10 districts viz., Salem, Coimbatore, Dharmapuri, Krishnagiri, Tiruchirapalli, Perambalur, Tirupur, Dindigul, Theni and Thoothukudi. Activities such as demonstrations on improved package of practices, distribution of certified seeds of high yielding varieties and establishment of water harvesting structures with portable mobile sprinklers were taken up at Rs.7.94 Crore during the year 2014-15.

Demonstrations on Improved package and distribution of certified seeds of High Yielding varieties & hybrids are being taken up during 2015-16.

5.2.4. NFSM- Commercial Crops

NFSM for cotton based cropping system is implemented from 2014-15 in the districts viz., Salem, Dharmapuri, Madurai, Virudhunagar, Tirunelveli, Theni, Dindigul, Villupuram, Perambalur, Thoothukudi and Coimbatore. Under this scheme, components involving front line demonstration on cotton, intercropping with pulses and high density planting were taken up at Rs.0.28 Crore. During 2015-16, the scheme is being implemented in Perambalur and Virudhunagar districts at an outlay of Rs.0.56 Crore.

NFSM for sugarcane based cropping system was implemented during 2014-15 in Cuddalore, Villupuram, Salem, Namakkal, Erode, Ariyalur and Thanjavur districts at a cost of Rs.0.31 Crore.

During 2015-16, the scheme is being implemented in Tiruvannamalai district alone with an allocation of Rs.0.54 Crore.

5.3. National Mission for Sustainable Agriculture (NMSA)

National Mission for Sustainable Agriculture (NMSA) is under implementation only from 2014-15 with the objective to make agriculture operations remunerative and climate resilient. The programme promotes conservation of natural resources by adopting comprehensive soil health management practices with optimum utilization of water resources in rainfed areas. During the year 2014-15, components of NMSA were implemented with 100% Central assistance at Rs.16.23 Crore.

During 2015-16, the scheme is being implemented with equal sharing between State and Centre with an allocation of Rs.49.53 Crore.

5.4. National Mission on Oilseeds & Oilpalm (NMOOP)

National Mission on Oilseeds and Oil Palm (NMOOP) comprises of three Mini Missions one each for oilseeds, oilpalm and Tree Borne Oilseeds (TBOs). The funds for the scheme is provided on 50:50 basis by the Centre and the State. The objective of this Mission is to increase the area under oilseeds through crop diversification from low yielding cereal crops to oilseed crops and expansion of cultivation area of Oilpalm & TBOs in wastelands. The Scheme is

being implemented with equal sharing between State and Centre.

5.4.1. Mini Mission-I on Oil Seeds

Mini Mission - I deals with groundnut, sunflower, gingelly and castor crops. During the year 2014-15, this programme was implemented in all the districts except Kanyakumari, Chennai & the Nilgiris at Rs.9.80 Crore. Components such as distribution of seeds, improved farm implements, water saving equipments, conduct of front line demonstrations, training of officers and farmers on latest technologies were implemented.

The scheme will be continued during 2015-16.

5.4.2. Mini Mission-II on Oil Palm

Mini Mission - II focuses on expansion of Oilpalm coverage in watersheds and wastelands. The scheme is implemented in districts viz., Cuddalore, Villupuram, Vellore, Tiruchirapalli, Karur, Perambalur, Ariyalur, Thanjavur, Tiruvarur, Nagapattinam, Theni and Tirunelveli. During the year 2014-15, oil palm cultivation was taken up in an area of 398 hectares besides providing maintenance support for older plantations. Planting material for intercropping in oil palm fields was provided at subsidised

cost. All these activities were carried out at a cost of Rs.1.62 Crore.

During the year 2015-16 the scheme is proposed to be implemented with the outlay of Rs.4.40 Crore.

5.4.3. Mini Mission-III on Tree Borne Oilseeds (TBOs)

This Mini Mission deals with promotion of tree borne oilseeds like neem, pungam, iluppai, etc., This scheme is implemented in Sivagangai, Virudhunagar, Ramanathapuram, Thoothukudi, Madurai and Tirunelveli. During the year 2014-15, the scheme was implemented at a cost of Rs.23 lakh.

During the year 2015-16 the scheme is proposed to be implemented with the outlay of Rs.90 Lakh.

5.5. National Mission on Agricultural Extension & Technology (NMAET)

NMAET, introduced during the year 2014-15, consists of 4 Sub Missions viz., Sub-Mission on Agricultural Extension (SMAE), Sub-Mission on Seeds and Planting Material (SMSP), Sub-Mission on Agricultural Mechanization (SMAM) & Sub-Mission on Plant Protection and plant Quarantine (SMPP). The

objective of the scheme is to make the extension system farmer-driven by adopting institutional arrangements for technology dissemination. SMAE & SMSP are implemented by the Agriculture Department, whereas SMAM is implemented by the Agricultural Engineering Department. SMPP is directly implemented by the Ministry of Agriculture, Government of India.

5.5.1. Sub-Mission on Agricultural Extension (SMAE) - Support to State Extension Programmes for Extension Reforms Scheme (SSEPERS)

SSEPERS under SMAE is implemented with 50:50 pattern of assistance between the Centre and the State. The programme is implemented throughout the State with coordinated efforts of Agriculture, Horticulture, Animal Husbandry, Sericulture, Fisheries, Forestry, Agricultural Engineering, Agricultural Marketing and Agri Business, Seed Certification and Organic certification departments, Tamil Nadu Agricultural University, Tamil Nadu Veterinary and Animal Sciences University and Tamil Nadu Fisheries University.

Training of farmers on innovative methods, demonstration, exposure visit, organising kisan goshies and farm school are main activities taken up under this mission.

During the year 2014-15, a sum of Rs.40.96 Crore was spent.

During 2015-16, this scheme is being implemented at an outlay of Rs.59.40 Crore.

5.5.2. Sub-Mission on Seeds and Planting Material (SMSP)

Sub-Mission on Seeds and Planting Material (SMSP) aims at making good quality seeds available to the farmers. Under this submission, foundation & certified seeds of paddy, millets, oilseeds & pulses for an acre are distributed at subsidised rate. The farmers are also trained on scientific methods of quality seed production for meeting their own requirement. The expenditure for the year 2014-15 was Rs.17.25 Crore.

This scheme is continued during the year 2015-16.

5.5.3. National e-governance Plan- Agriculture (NeGP - A)

Under e-Governance initiatives of the department, online portals, AGRISNET, Farm Crop Management System (FCMS), Mobile Enabled Computer Server Gateway and Web Based Scheme Benefits tracking System through Comprehensive Input

Supply Management Information System (CIS MIS) have been developed.

As a part of this initiative, 2,319 Tablet PCs with 3G connectivity have been distributed to all the extension functionaries at a cost of Rs.4.64 Crore. Further, 174 hand held mini projectors for dissemination of technologies through video clippings in the villages and 125 nos of "All in one" touch screen kiosks have been provided at a total cost of Rs.1.26 Crore.

During the year 2015-16, under NeGP-A an amount of Rs.3.5 Crore has been provided for providing IT infrastructure facilities.

5.6. Agriculture Insurance Schemes

Major agricultural and horticultural crops are covered under different crop insurance schemes to protect the farmers against natural perils. Various crop insurance schemes were implemented from time to time wherein the premium is shared by State, Centre and farmers. One among the crop insurance schemes is National Agricultural Insurance Scheme (NAIS) which was implemented from Kharif 2000 till Kharif 2013 and withdrawn in Rabi 2013-14 due to implementation of Modified NAIS (MNAIS). Again, it was reintroduced from Rabi 2014-15, with the concurrence of the

Central Government. Weather Based Crop Insurance Scheme (WBCIS), another crop insurance scheme, was implemented in 8 districts in the year 2008-09, in 11 districts during the year 2012-13 and in 15 districts during kharif 2013. It was subsequently withdrawn from Rabi 2013-14 onwards. MNAIS was implemented in 3 districts of Cuddalore, Namakkal and Sivagangai on pilot basis from Rabi 2010-11 till Kharif 2013 and in all the districts from Rabi 2013-14 till Kharif 2014. This was also withdrawn from Rabi 2014-15. Coconut Palm Insurance Scheme (CPIS) is implemented in 11 districts from 2010-11 and in all the districts from 2013-14.

Totally a sum of Rs.64.53 Crore was extended as premium subsidy and 6.18 Lakh farmers were enrolled under crop insurance schemes in the year 2014-15 in both the crop seasons. During 2015-16, it is programmed to enroll 8.50 lakh farmers for which Rs.30.00 Crore has been sanctioned as the State share towards the premium subsidy.

Agricultural Insurance Company settles claims of compensation upto 100% of the premium collected for food and oilseed crops and 150% of the premium collected for annual and commercial crops. If the compensation claim is more than the premium collected,

excess claim amount collected is shared equally between the Centre and the State Government.

During the year 2014-15, State Government has disbursed a compensation amount of Rs.71.17 Crore to 69,900 farmers. During 2015-16, a sum of Rs.444.48 Crore (GOI share: Rs.196.84 Crore; State government share: Rs.196.84 Crore; AIC share: Rs.50.80 Crore) was disbursed as compensation to 1,70,586 farmers towards crop loss during 2014-2015.

During the year 2015-16 NAIS would be implemented in all the districts.

5.7. Coconut Development Board (CDB) Assisted Schemes

Schemes for increasing the area under coconut plantation and production & distribution of quality planting material are mainly funded by CDB. Quality 'Tall x Dwarf' and 'Dwarf x Tall' coconut seedlings are produced in Navlock Coconut Nursery, Vellore district and are distributed to farmers at subsidised cost. CDB also supports strengthening of Regional Coconut Nurseries. All components are shared between CDB and State on 50:50 basis except laying of technology demonstration plots which is 100% funded by CDB. Around 3.40 lakh coconut seedlings are distributed annually under the scheme.

During the year 2015-16 the scheme is proposed to be implemented with the outlay of Rs.1.88 Crore.

5.8. Integrated Soil Fertility Management (ISFM)

Soil degradation is a serious problem which is further exacerbated by the use of chemical fertilisers. To stop soil degradation, Integrated Soil Fertility Management (ISFM) initiatives such as conducting detailed soil survey, soil sampling and analysis, soil specific nutrient management through Farmers Integrated Hand Book (FIHB) and reclamation of Acid and Alkali soils etc., are taken up.

5.8.1. Soil Survey and Land Use Organization

There are four soil survey units at Coimbatore, Thanjavur, Vellore and Tirunelveli to take up soil survey as per the internationally recognised system and prepare comprehensive & reliable database on soil resources of Tamil Nadu.

5.8.2. Initiatives towards Integrated Soil Fertility Management

The following initiatives towards ISFM have been taken up in the State: -

- Farmers Integrated Hand book, an information on soil fertility status of the farmers field has been distributed to 67.45 lakh farmers. It has been programmed to distribute 81.18 Lakh Soil Health Cards in a period of three years from 2015-16 onwards under "Mission Soil Health Card". During 2015-16, 27.70 Lakh Soil Health Cards will be distributed.
- Annually, 250 MT of Green Manure Seeds are procured and distributed to the farmers at a subsidy of 50% for in-situ ploughing in order to increase organic content in soil.
- Annually 525 MT of Blue Green Algae and 500 MT of Azolla are produced and distributed to farmers for increasing nitrogen content in soil and reducing the infestation of weed.
- 3500 Kits each containing 1 Kg of Pleurotus and 5 Kg of Urea are distributed every year to the farmers to produce compost from the farm waste using Pleurotus.

- Sugarcane crop residue management through trash mulching was taken up in 4817 Ha at Rs. 1.15 Crore under NADP during the year 2014-15. The scheme is being implemented with an allocation of Rs.5.00 Crore in an area of 20,000 Ha during 2015-16.

5.9. Seed Multiplication Schemes

Good quality certified seeds of paddy, millets, pulses, oilseeds and cotton are multiplied every year through trained farmers. The farmers are given incentives for growing seeds. During the year 2014-15, 16,181 MT of paddy seeds, 308 MT of millet seeds, 3,638 MT of pulses seeds, 3,119 MT of oilseeds and 32 MT of cotton were procured and distributed through Agricultural Extension centres.

From 2015-16 onwards, quality certified seeds are being distributed to the farmers through Tamil Nadu State Seed Development Agency (TANSEDA) for which a sum of Rs.25 crore has been provided as revolving fund.

5.10. Plant Protection

Incidence of pest and diseases is closely monitored by roving survey. Location & crop specific advisories about pests & diseases

prevalence and control measures are communicated through SMS & publicity through Voice messages, radio, television, pamphlets, campaigns and Newspapers is also organised.

5.10.1. Integrated Pest Management

Integrated Pest Management as a holistic approach to crop protection is being popularised in the State.

The Department, with a view to promote environment friendly agricultural practices, has already established model "Eco-Friendly Integrated Pest Management Villages". The Department is now focussing on Ecological Engineering for Pest Management, a new paradigm, which is gaining acceptance as a strategy for promoting Bio-intensive integrated Pest Management. The Department to safeguard the environment is promoting this approach among the farming community under various schemes such as NADP, NMOOP, NFSM and SSEPERS. The initiatives of Government have helped reducing the consumption of pesticides from 10,926 MT in the year 1984-85 to 2,096 MT in the year 2014-15.

5.11. Tamil Nadu Cotton Cultivation Mission

Tamil Nadu Cotton Cultivation Mission was launched during the year 2014-15 to increase area under cotton cultivation from 1.34 L.Ha to 2.50 L.Ha and improve productivity from 493 kg/ha to 870 kg/hectare over a period of five years. In the year 2014-15, an area of 1.87 L.Ha has already been brought under cotton cultivation against the target of 1.70 L.Ha.

The scheme is being implemented in all the districts except Chennai, the Nilgiris, Kancheepuram, Tiruvallur, Tiruvannamalai, Karur, Pudukottai, Sivagangai and Kanyakumari during 2015-16 at an outlay of Rs.40.68 crore.

5.12. TN-IAMWARM PROJECT – Irrigated Agriculture Modernization and Water Bodies Restoration and Management (IAMWARM) Project

This is a World Bank assisted project implemented by the Water Resources Organization of Public Works department. The aim of the project is to increase area under irrigation, crop productivity and farmers' income in 61 selected sub basins, by integration of activities of the departments of Agriculture, Horticulture, Agricultural Engineering, Agriculture Marketing & Agri Business, Animal Husbandry and Fisheries.

During the year 2014-15, scheme for support of area expansion under millets and minor millets through Crop Demonstrations in 10,000 ha, provision of value adding machineries to traditional millet farming groups, support for seed multiplication and Information, Education and Communication (IEC) activities were taken up in 24 districts excluding Thanjavur, Tiruvarur, Nagapattinam, Kanyakumari, Tiruchirapalli, Erode, the Nilgiris and Chennai districts at Rs.6.32 Crore.

5.13. Crop Yield Competition

Crop Yield Competitions are conducted every year to encourage farmers to adopt progressive farming practices. Such farmer-centred competitions are conducted for irrigated paddy, maize, cholam, cumbu, groundnut, redgram, blackgram, greengram, cotton & sugarcane and rainfed groundnut at District and State level.

Totally, 88 District Level Competitions and 9 State Level Competitions are conducted every year. An enrolment fee of Rs.100/- for Paddy, Groundnut, sugarcane and cotton and Rs.50/- for other crops for State Level entry and Rs.50/- for Paddy, Groundnut, sugarcane and cotton and Rs.25/- for other crops for district level entry is collected from the farmers. The

following cash prizes are awarded to the farmers attaining highest productivity at State and District level.

Crop	State Level		District Level	
	1st Place (Rs.)	2 nd Place (Rs.)	1st Place (Rs.)	2 nd Place (Rs.)
Paddy, Groundnut, Cotton & sugarcane	25,000	15,000	15,000	10,000
Other Crops	15,000	10,000	10,000	5,000

A medal worth of Rs.3,500/- and a cash prize of Rs.5 lakh are given by the Hon'ble Chief Minister on the Republic Day function to the farmer obtaining highest yield in paddy using System of Rice Intensification (SRI) technique.

During the year 2015-16 the scheme is proposed to be implemented with an outlay of Rs.14.07 Lakh.

6. Facilitation Centres

The Department, to cater to the needs of the farmers, maintains facilities such as Soil and fertilizer testing laboratories, seed processing units, seed godowns, state seed farms, bio-fertilizer production units, Bio-

pesticide production units, Bio-control laboratories, Parasite breeding centres, Organic fertilizer testing laboratories, IPM centres, Micronutrient mixture manufacturing unit, Farmers' Hub, Farmers Training Centres, Water Management Training Centre, State Agricultural Extension Management Institute (STAMIN) and agricultural extension centres.

6.1. Quality Control

The Fertilizer Control Order (FCO), 1985 enacted under The Essential Commodities Act, 1955, is implemented by the Agriculture Department. The Department is keen in providing quality inputs especially fertiliser to the farming community by strictly enforcing the provisions of the FCO. Fourteen Fertilizer Control Laboratories are functioning in the State to test samples collected by Quality Control Inspectors.

During the year 2014-15, 17,500 samples were tested of which 514 samples were found non-standard. Action has been taken against all the defaulters.

Government is establishing two new Organic Fertilizer Testing Laboratories at Tiruchirapalli and Coimbatore at a total cost of

Rs.2.84 Crore under NADP for analysis of organic fertilizers such as Vermicompost, City Compost and De-oiled cakes which have been recently included under FCO, 1985.

Central Control Laboratory located at Kudumianmalai, Pudukottai district conducts training for laboratory personnel and helps in calibrating and maintaining accuracy of analysis of the laboratories.

Thirty Soil Testing Laboratories and 16 Mobile Soil Testing Laboratories with a capacity to analyse 11.26 lakh soil samples annually are functioning in the State. For analysing the Micro Nutrient status of the soil, Atomic Absorption Spectrophotometers have been provided to all the Soil Testing Laboratories.

In order to ensure safe use of quality pesticides, the department runs 15 notified Pesticide Testing Laboratories. These laboratories check the quality of pesticides by testing samples drawn by inspecting authorities from 147 Pesticide Manufacturing Units and 13,321 private sale outlets, in accordance with the Insecticide Act, 1968 and Insecticide Rules, 1971. During the year 2014-15, 21,850 samples were analysed in these laboratories.

6.2. Production Units for Agricultural Inputs

Forty one Government owned State Seed Farms play a pivotal role in growing foundation seeds required to produce good quality certified seeds in the farmers' field. These seed farms also act as centres for demonstrating latest technologies to the farmers. It is programmed to modernize all the State Seed Farms in a period of three years from 2015-16.

Micro nutrients are essential for plant growth and play an important role in balanced crop nutrition. The Department has a Micro Nutrient Mixture Production Centre at Kudumianmalai, Pudukottai district with a capacity to produce 1,600 MT of 14 types of notified Micro Nutrient (MN) mixtures annually. The MN mixtures are distributed to farmers through Agricultural Extension Centres. During 2014-15, 2,107 MT of micro nutrient mixtures were produced and distributed to farmers.

Three strains of Bio-fertilizers viz., Azospirillum, Rhizobium and Phosphobacteria are produced in the department owned 15 Bio-Fertilizer Production Units (BFPU). These units have an annual production capacity of 3000 MT. Biofertilizers are distributed at a cost of Rs.6/-per packet of 200 grams. Facilities to produce 2.5 L.litre of liquid biofertilizers per annum have been created in 5 BFPU during

the year 2014-15. Further, 7 new Liquid Bio fertilizer laboratories are being established at a cost of Rs.8.93 Crore.

The Department also runs 10 Bio-control labs & 2 Integrated Pest Management (IPM) Centres for producing Bio-control agents. They are distributed to farmers at subsidized cost through Agriculture Extension Centres.

Following bio control agents are produced and distributed to the farmers as follows: -

Bio-control agents	Production centres (Nos.)	Pests / Diseases controlled
Trichogramma chilonis (egg parasitoid)	19	Sugarcane Internode borer
Bethylid, Braconid [larval parasites] and Eulophid [prepupal Parasites]	12	Coconut Black headed caterpillar
Green Muscardine fungus [Metarhizium sp]	2	Coconut Rhinoceros beetle
Nuclear Polyhedrosis Virus	12	Groundnut Red hairy caterpillar, Prodenia and cotton boll worm
Bio fungicides - Pseudomonas sp, Trichoderma viride	12	Diseases in cotton, pulses and paddy

6.3. Agriculture Information Dissemination Centres

Government runs 22 Farmers Training Centres and imparts training to 28,820 farmers, convenors, farm women and rural youth annually on farm management practices and technologies.

Water Management Training Centre at Vinayagapuram, Madurai district is functioning from 1985 with a capacity to train 180 field functionaries and 900 farmers annually on irrigation technologies and irrigation efficiency.

The State Agricultural Extension Management Institute (STAMIN) commissioned in the year 1975 at Kudumianmalai, Pudukottai district is the main centre for training of Extension Officers of the department. Annually, 1,100 field functionaries are trained. A State Agricultural Management and Extension Training Institute (SAMETI) has been established in the year 2012-13 in the premises of STAMIN, to provide consultancy services in areas of project planning, project appraisal, etc.

7. Special Programmes - 2014-15

The following special programmes were implemented during the year 2014-15 for increasing the productivity and income of farmers.

- ❖ A pilot project to bring back an area of 12,500 acres of fallow lands to cultivation in Villupuram and Tiruvannamalai districts benefitting 8,032 farmers.
- ❖ Food Grain Mission resulting in all time high production of food grains during the year 2013-14. During 2014-15, the mission was implemented at an outlay of Rs.182.34 Crore.
- ❖ A programme of adoption of SRI in 13.65 L.Ha of paddy besides implementing SRI in 3000 villages on whole village basis covering an area of 2.61 L.Ha.
- ❖ A programme for promotion of Redgram cultivation on mission mode by integrating all relevant activities like redgram transplantation, precision farming, bund cropping & bush cropping and formation of FPOs at a total financial outlay of Rs.55.152 Crore.
- ❖ Sustainable Sugarcane Initiative (SSI). A project for adopting precision farming and SSI each in an area of 5000 Ha at a cost of Rs.42.76 Crore and Rs.17.95 Crore respectively.
- ❖ Establishment of Tamil Nadu State Seed Development Agency (TANSEDA) at an initial financial support of Rs.25 Crore to ensure timely availability of high quality seeds of various crops.

- ❖ A programme for Popularisation of **environment friendly sustainable agricultural practices** by establishing model organic villages, model eco-friendly IPM Villages, 7 new Bio-fertilizer production units and 2 organic fertilizer testing laboratories at a **total cost of Rs.22.47 Crore.**
- ❖ Interface with the individual farmers, farmer clusters and the commodity groups through improved fixed schedule of visit by involving Agriculture extension functionaries. **Fixed Schedule of Village Visit on Cluster basis under Farmer Oriented Integrated Agricultural Extension System was launched on 5.1.2015** in 379 blocks through Agriculture Department and 6 blocks through Horticulture and Plantation Crops Department.
- ❖ As a mark of International year of Family Farming, **770 Amma farm women groups** have been formed to **empower** and engage women in **Group oriented agricultural activities.**