

3. HORTICULTURE

1. Preface

Horticulture contributes much for the growth of Agriculture, the primary sector of the State. The growth of horticulture has expanded rural employment opportunities, increased income and enabled better livelihoods to farmers. The agro-climatic diversity of the State supports a wide variety of tropical, sub-tropical and temperate horticultural crops. Horticulture crops are cultivated in an area of about **10.26 lakh Ha** (2009-2010) with a total production of **174.01 lakh MT**.

Much focus will be on expanding the area under horticulture crops and increasing their productivity by using hybrids, pedigree planting materials and advanced crop cultivation technologies. Intensive and focused extension will be taken up to enable farmers to adopt these advanced technologies. Area under horticulture crops will be increased by converting current and permanent fallows. Productivity of identified focus crops will be increased by leveraging advanced and proven technologies. Precision farming and promotion of integrated crop management practices will be encouraged.

2. Policy Focus

- Technology will be leveraged to bring in a second green revolution as a people's movement.
- Horticulture will be promoted as a profitable and viable activity by leveraging technology to improve productivity. The policy aims at increasing the income levels of farmers and assuring them an improved quality life.
- Efficient and effective utilization of water resources for cultivation will be ensured by giving thrust to Micro irrigation. This will be followed for bringing more area

under assured irrigation with existing water resources and improving productivity.

- Precision farming will be popularised by providing all necessary incentives to universalize efficient utilisation of inputs.
- Farmers will be mobilized to form clusters and synergistically access forward and backward linkages that will be created.
- Hybrid seeds, pedigree planting materials and quality inputs will be identified and recommended for specific crops. These inputs will be provided at subsidized cost to the farmers.
- Infrastructure will be created to minimise post-harvest losses. Entrepreneurs will be encouraged to provide post harvest management facilities by providing them capital subsidy.

3. Strategies

1. Area expansion
2. Productivity enhancement
3. Use of Hybrids and pedigree planting material
4. Micro-Irrigation with Fertigation
5. High density planting
6. Rejuvenation of old orchards with Canopy management
7. Thrust on Integrated Crop Management
8. Strengthening the production of pedigree planting materials.
9. Effective Transfer of Technology through development of technology demonstration centres in State Horticulture Farms.
10. Rejuvenation of extension machinery with adequate capacity building.
11. Post Harvest Management and reduction of post harvest losses.

4. Area, Production and productivity of Horticultural crops

The Area, Production and Productivity of Horticultural crops are as under:

(Area: Lakh Ha., Production: Lakh MT, Productivity: MT/Ha.)

Crops	2009-10			2010-11 (Estimated)			2011-2012 (Projected)		
	Area	Prod	Pvty.	Area	Prod	Pvty.	Area	Prod	Pvty.
Fruits	3.07	73.74	24.02	3.20	79.65	24.89	3.32	85.35	25.71
Vegetables	2.63	77.65	29.52	2.73	83.87	30.72	2.84	90.52	31.87
Spices & Condiments	1.60	8.70	5.44	1.66	9.39	5.65	1.73	10.87	6.28
Plantation Crops	2.56	10.63	4.16	2.65	11.47	4.32	2.75	11.99	4.36
Flowers	0.30	2.78	9.25	0.31	3.00	9.68	0.32	3.23	10.09
Medicinal & Aromatic Plant	0.10	0.51	5.13	0.11	0.61	5.55	0.12	0.68	5.67
Total	10.26	174.01		10.66	187.99		11.08	202.64	

Hi-Tech cultivation is vital to improve the productivity of Horticultural crops. Use of quality planting materials, high yielding / hybrid varieties, precision farming, protected cultivation, micro irrigation with fertigation, high density planting, rejuvenation of senile orchards, pollination support etc., will be adopted for maximizing the yield of various Horticultural crops.

5. Horticulture Schemes - State Plan

5.1. Integrated Horticulture Development Scheme

Integrated Horticulture Development Scheme is being implemented in 31 districts of Tamil Nadu except Chennai. Area expansion under Horticultural crops with improved varieties is proposed to be taken up. Modern cultivation practices will be disseminated to farmers to enhance productivity. To increase the area under cultivation of vegetables and stabilize their prices, vegetable cultivation will be promoted with elite planting materials, high yielding / hybrid seeds of vegetables and flowers which are proposed to be distributed to farmers at 50% subsidised cost. It is proposed to cover an area of 50,000 ha. with an outlay of ` 1925.00 lakhs during 2011-2012.

5.2. Horticulture Training Centers

Horticulture Training Centers are functioning at Kudumianmalai, Madhavaram, Thally and Ooty. Hi-Tech cultivation is the key to enhance productivity of various horticultural crops. It is proposed to impart training to field functionaries on precision farming, high density planting, canopy management, protected cultivation, micro irrigation & fertigation, etc. with the aim of improving their skills.

During 2011-2012, it is proposed to train 6400 farmers / field level functionaries with an outlay of ` 6.97 lakhs.

5.3. Integrated Tribal Development Programme

Tribal farmers are encouraged to diversify to high value crops to derive regular income under Integrated Tribal Development Programme. Individual fruit orchards are established in tribal holdings with crops like mango, guava, sapota, banana, pepper etc. Short term cultivation of vegetables with high yielding/hybrid varieties will be taken up.

It is proposed to distribute planting materials like Mango, Pepper, Coffee, Tissue culture Banana etc. to the tribal farmers at 75% subsidy and vegetable seeds at 90% subsidized cost. Oil engines and plant protection equipments are proposed to be distributed at 75% subsidy and installation of drip irrigation systems at 100 % subsidy dovetailing with National Mission on Micro Irrigation. Training and exposure visits will be organized to educate the tribal farmers on improved technologies of cultivation.

It is proposed to implement this programme in the tribal areas of Salem, Namakkal, Dharmapuri, Tiruvannamalai, Vellore, Trichy and Villupuram districts. During, 2011-2012 it has been proposed to implement this programme with an outlay of ` 40 lakhs.

5. 4. Western Ghat Development Programme

It is proposed to distribute high yielding / hybrid vegetable seeds and planting materials at 50% subsidy cost to the farmers in Western Ghat Districts. Training on latest technologies will be given to the farmers. During 2011-2012, it has been proposed to implement this scheme with an outlay of ` 171 lakhs.

5.5. Hill Area Development Programme

Crop diversification from perennial crops to annual vegetable crops, value addition and mechanization of harvesting are the objectives of the programme. High yielding / hybrid vegetable seeds, oil engines, agricultural machineries/ implements like sprayer, power tiller, mini tractor etc. are proposed to be distributed under this scheme with a subsidy of 25-50%.

During, 2011-2012 it has been proposed to implement the scheme with an outlay of ` 358.15 lakhs.

5.6. City Vegetable Development Scheme

Establishment of home and kitchen gardens will be promoted in Chennai and other cities. It is proposed to distribute planting materials, seeds, fertilizers and plant protection chemicals at full cost to establish home and kitchen gardens. Training and technical advice will be provided to the residents to maintain their home and kitchen gardens. During 2011-2012 it is proposed to implement this scheme with an outlay of ` 3.50 lakhs.

5.7 National Agriculture Development Programme

With the objective to increase productivity of important crops through focussed interventions and maximising returns to farmers, the National Agricultural Development Programme is being implemented with 100% Central assistance during 11th Five-year Plan. During 2011-2012 it is proposed to implement the scheme including Precision farming component with an outlay of ` 10814.75 lakhs.

5.7.1. Precision Farming

Increase in productivity by 30 to 50%, uniformly high quality produce and extended harvest periods are the special attributes of this technology. Precision farming techniques include chisel ploughing, use of seedlings raised in protrays under shade net, soil and water analysis, micro irrigation with fertigation and adoption of scientific crop cultivation practices. It is proposed to provide high yielding/ hybrid seed materials and inputs to farmers under this scheme.

It is proposed to implement this scheme with an outlay of ` 1050.00 lakhs to cover an area of 5000 ha. during the year 2011-2012.

5.8. National Agriculture Insurance Scheme

National Agriculture Insurance Scheme provides insurance coverage to notified Horticultural crops Viz. Banana, Onion, Potato, Tapioca, Pineapple and Ginger etc for the Kharif and Rabi seasons.

The major feature of the scheme is to provide insurance coverage and financial support to farmers in the event of natural calamities, pest and diseases adversely affecting the notified Horticultural crops and to help farmers stabilize their farm income during disaster years.

Both loanee and non-loanee farmers are covered under this scheme. 50% premium subsidy is extended to the farmers. During the year 2011-2012, it has been proposed to implement this scheme with an outlay of ` 950 lakhs to cover 24000 acres.

5.9. Weather Based Crop Insurance Scheme (WBCIS)

The objective of the scheme is to mitigate the hardships faced by farmers due to financial loss on account of adverse weather conditions especially deficit and excess rainfall, high levels of relative humidity that enhance pest and diseases attack. This is implemented on a pilot basis in eleven districts of Tamil Nadu for loanee farmers. The non loanee farmers can either opt for National Agriculture Insurance Scheme or WBCIS. During 2011-2012 it has been proposed to implement this scheme with an outlay of ` 52.50 lakhs to cover 4200 acres.

Scheme Performance during 2010-2011 and Proposals for the year 2011-2012.

The financial allocation and the expenditure incurred for the year 2010-2011 and the proposed outlay for the year 2011-2012 for the State Plan Schemes are furnished below.

State Plan Schemes

Financial: Rs. in lakhs

Name of the Scheme	Unit	2010-2011				2011-2012 (Proposed)	
		Physical		Financial		Phy.	Fin.
		Tar.	Achmt	Tar.	Achmt.	Tar.	Tar.
Integrated Horticulture Development Scheme - Area Expansion	Ha.	22584	22642	266.88	266.88	50000	1925.00
Horticulture Training Centre	Nos.	6400	6400	6.97	6.97	6400	6.97
City Vegetable Development Scheme	Ha.	200	200	3.50	3.50	200	3.50
Integrated Tribal Development Programme	Ha.	904	904	40.00	40.00	904	40.00
Western Ghat Development Programme		3 No	3 No	91.55	91.55	4200 Ha.	171.00
Hill Area Development Programme	Ha.	4000	4000	126.25	126.25	4000	358.15
National Agriculture Development Programme	Ha.	14570	8081	4075.13	1461.86	29733	10814.75
National Agricultural Insurance Scheme	Acre	24008	24008	950.00	452.25	24000	950.00
Weather-Based Crop Insurance Scheme	Acre	4132	4132	50.00	43.28	4200	52.50
Total				5610.28	2492.54		14321.87