NATIONAL AGRICULTURAL DEVELOPMENT PROGRAMME (NADP)

DISTRICT AGRICULTURE PLAN

KANCHEEPURAM DISTRICT

Centre for Agricultural and Rural Development Studies (CARDS)
Tamil Nadu Agricultural University
Coimbatore – 641 003

2008

NATIONAL AGRICULTURE DEVELOPMENT PROJECT -

DISTRICT AGRICULTURE PLAN

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FOREWORD

Date .....

The National Development Council resolved that Agricultural Development strategies must be reoriented to meet the needs of farmers and called upon the Central and State governments to evolve a strategy to rejuvenate agriculture with a commitment to achieve four per cent annual growth in the agricultural sector during the 11th plan. The council also recommended special Additional Central Assistance Scheme named National Agriculture Development Programme (NADP) be launched. To implement this, formulation of District level action plans is the pre-requisite and thus District Agriculture Plan of various districts in Tamil Nadu has been prepared with the financial assistance of Government of India.

The task of preparing the District Agriculture Plan has been given to Tamil Nadu Agricultural University by Government of Tamil Nadu. Thus 29 Districts level Plans, excluding Chennai and Nilgris, were prepared by the Centre for Agricultural and Rural Development Studies, Tamil Nadu Agricultural University. Several meetings were held at TNAU during the last few months. Steering committee, district planning unit and plan finalizing team were putting their efforts in shaping up the District Agriculture Plans. All the District Collectors representing the 29 districts have actively participated in the sensitizing meeting organized by TNAU and officials of line departments in the respective districts. The plan documents have identified the major thrust areas in agriculture and allied sectors for achieving the envisioned growth in the district and also in Tamil Nadu state. I appreciate the team work of TNAU scientists and the officials from line departments for bringing out the valuable action plans for each district. I am sure that these plans would also lead to more fruitful exercises like formulation of State level plans and project proposals for funding through NADP.

I solicit the cooperation of the line department officials in implementing these action plans and commit to achieve a better growth in agriculture and allied sectors in each and every district of Tamil Nadu during the 11th plan.

(C. RAM AS AMY)

Coimbatore
June 30, 2008

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PREFACE

The District Agriculture Plan is brought out based on the details provided by the line department officials of the respective districts. The District Agriculture Plan thus identifies the problems, needed interventions and the financial requirement for the developments in Agriculture and allied sectors of Agriculture viz. Horticulture, Agricultural Engineering, Animal husbandry, Fisheries, Sericulture, Agricultural marketing and Agricultural business and Public Works Department.. The Government sponsored various on-going schemes and programmes in the development of agriculture have also been dovetailed in the preparation of plan. Besides, the plan would also help in formulating the State Agriculture Plan and the project proposals under Stream I and Stream II to be funded by Government of India for the remaining four year plan periods viz. 2008-2012.

My sincere thanks to District Collectors of the respective districts in Tamil Nadu who have been instrumental in providing the felt needs of the farmers and other stakeholders. The help and full cooperation rendered by the line department officials in each district is highly appreciable. Without their assistances, the formulation of the plan will be a mere academic exercise.

My sincere thanks to Shri. Surjit K. Chaudhary I.A.S., Agricultural Production Commissioner and Principal Secretary to Government of Tamil Nadu who is instrumental in integrating the multi-level functionaries and providing valuable guidance in bringing out this plan document.

My sincere thanks to Dr. C. Ramasamy, Vice-Chancellor, Dr. P. Santhana Krishnan, Registrar of Tamil Nadu Agricultural University, for their full administrative and technical support without which the time schedule in preparing the document could not have been adhered to. Special thanks to Dr.S. Natarajan, Director, Soil and Crop Management Studies and Dr. E. Vadivel, Director of Extension Education, for their sustained support in the preparation of the district plans. All the Principal Investigators of the NADP I Phase projects also provided the needed inputs.

I take this opportunity to express my deep sense of gratitude to Commissioner of Agriculture, Commissioner of Horticulture and Plantation crops, Chief Engineer (Agricultural Engineering), Executive Director, Tamil Nadu Watershed Development Agency, Commissioner of Animal Husbandry and Veterinary Services, Commissioner of Fisheries, Commissioner for Milk Production and Dairy Development, Commissioner of Agricultural Marketing and Agri Business, Director of Seed Certification, and Director of Sericulture for providing constructive support and guidance in preparing the document.

I also place on record my sincere thanks to Vice-Chancellor of TANUVAS and his colleagues for providing the action plans for Animal Husbandry and Fisheries in Tamil Nadu.

Sincere thanks to Deans, Heads of Research Stations/KVK's and scientists of TNAU representing different districts and scientists of Directorate of CARDS for helping in collection of data, organising district level workshops and group meetings with stakeholders and preparation of this document.

Date: 30.06.2008

K. Palanisami
Director, CARDS & Nodal Officer (NADP)

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1.1 A Brief Introduction to the District, its Location, Features etc.

Kancheepuram district is situated on the north East Coast of Tamil Nadu and is adjacent to Bay of Bengal and Chennai city and is bound in the west by Vellore and Thiruvannamalai district, in the north by Thiruvallur district and Chennai district, in the south by Villuppuram district and in the east by Bay of Bengal. It lies between 11° 00' to 12° 00’ North latitudes and 77° 28' to 78° 50' East longitudes. The district has a total geographical area of 4,43,210 hectares and coastline of 57 Kms. Kancheepuram, the temple town is the district headquarters. For administrative reasons, the district has been divided into 3 revenue divisions comprising of 8 taluks with 1214 revenue villages. For development reasons, it is divided into 13 development blocks with 648 Village Panchayats.

According to 2001 census, the District had population of 30.38 lakhs, which is about 6.76% of the total State population. In 1991 census, the total population of the District was 24,15,010 lakhs, in which 12,30,650 were Male & 11,84,360 were Female.

Agriculture is the main occupation of the people with 47 per cent of the population engaged in it. Paddy is the major crop cultivated in this district. Groundnut, Sugarcane, Cereals & Millets and Pulses are the other major crops.

1.2 Main point of SWOT of the district

Strengths

In Kancheepuram district, the agriculture mainly depends on tank irrigation. During North east monsoon, the maximum (700-800 mm) rain is received and the rain water is stored in the tanks. By utilising this tank irrigation, the paddy crop is raised in two seasons successfully and the ground nut crop has been raised both under rainfed and irrigated conditions. The water table in this district is 100-200 feet only. Hence this water is major strength in Agriculture.

Weaknesses

The soil productivity is low. As rainwater is drained from far off places, the salt content of the soil is considerably increased. Due to this, the availability of plant nutrients like Phosphorus, Zinc, Copper and Boron, will be less which will affect the productivity of the soil. Further the topography of the district is also more or less plain, the drainage is a problem in the paddy growing areas. Hence it is very difficult to have upland paddy cultivation. Further the farmers are economically poor to adopt modernization and mechanization in agriculture.

Opportunity

This district has good opportunity to form contract farming in ground nut and pulses. Good marketing facility is available in this district as it is nearer to Chennai.

Threat

The serious problem is the availability of farm labour. Many large scale industries are established in the district and as such the availability of farm labour is very less. This problem must be solved only by mechanizing the farm activities. The salinity of soil is also increasing due to poor application of organic manures. This has to be substituted by various organic products.

Dairy Sector

Strength

- Increased awareness about crossbreeding
- Concept of organic farming is popular
- Best suited for integrated farming system
- Easily accessible information and training centres for dairy farming

Weaknesses

- Lack of storage and processing units for the small scale farmers
- Limited number of veterinary centres for proper health cover. Shortage of fodder seeds / seedlings for propagation

Opportunities

- Constant demand for milk and milk products due to its (Kancheepuram dt) proximity to Chennai metropolitan
- Private dairy industries are coming up
- Export of value added milk products

Challenges

- Shortage of fodder
- Liberalization in the trade (export and import policies)

Sheep and Goat

Strengths

- Additional source of income to the farmers
- Easy marketability
- The district is the main breeding tract for Madras Red sheep
- Consumers' preference towards mutton and chevon is more than any other meat

Weakness

- Exploitation by middlemen
- Unorganised slaughter
- Inadequate grazing land
- No recognized breed of goat in the district
- Unavailability of veterinary services in the vicinity

Opportunities

- Crossbreeding of local goats with high yielding exotic breeds to increase the production.
- Constant increase in the marketing price of the meat

Challenges

- Government policy in preservation of forest area
- Conformity to quality standards

1.3 Areas / Sectors, which need to be addressed in the District

Agricultural and allied sectors such as horticulture, animal husbandry, sericulture, and fisheries are the sectors to be covered under NADP. Besides these, special programmes for water conservation and repair and maintenance of canal, tank and small irrigation structures are also proposed to be taken up under the NADP. The main focus will be on repairing the canal irrigation systems to prevent seepage loss of water, modernization of tanks and a few small irrigation structures and check dams and establishment of low pressure drip irrigation.

1.4 Various on-going Programmes in the District - a Brief Contextual Gist

The Agriculture Department is implementing various schemes to increase the production and productivity of a wide range of crops cultivated in the district. The schemes implemented in the district are Integrated Cereal Production Scheme, National Pulses Development Scheme, Oilseed Production Programme, Intensive Seed Production Scheme, Crop Productivity Competitions, Part II Plan Schemes, Supply of Tarpaulins to Agricultural Extension Centres etc.

In addition, the Department of Horticulture is implementing National Horticulture Mission, Micro irrigation scheme, Precision Farming and Integrated Horticulture Development Scheme.

There is lot of scope to further strengthen these schemes and dovetail them with the schemes under NADP.

1.5 The District Plan at a Glance

The district plan covers a wide range of activities involving crop-specific as well as non-crop-specific development activities. Allied sectors such as horticulture, agricultural engineering, agricultural marketing, animal husbandry, and fisheries are proposed to be developed under the NADP with investments on popularization of latest technologies, strengthening extension support, farmers training as well as through strengthening the required infrastructural facilities needed to spur growth in agricultural and rural sectors. The Agricultural Engineering Department has submitted proposals to conserve water in the district.

The Abstract of the Activities and the Proposed Budgetary Requirements

(Rs. in lakhs)

S.No.	Departments	2008-2009	2009-2010	2010-2011	2011-2012	Total
1	Agriculture	2801.45	2671.18	2654.55	2766.3	10893.48
2	Horticulture	80.86	64.27	64.32	64.47	273.92
3	Animal Husbandry	984.39	250.42	190.14	192.05	1617.00
4	Fisheries	251.75	121.75	123.00	73.50	570.00
5	Agrl. Engineering	406.93	392.21	484.90	518.12	1802.16
6	Agrl. Marketing	31.85	32.29	35.265	38.295	137.70
7	Forestry	0	0	0	0	0
8	Public Works Department	0	0	0	505.00	505.00
	Total	**4557.23**	**3532.12**	**3552.175**	**4157.735**	**15799.26**

CHAPTER – I
INTRODUCTION

District and State Agricultural Plan : Need and Focus

Concerned by the slow growth in the Agriculture and allied sectors, the National Development Council (NDC), resolved that a special Additional Central Assistance Scheme, named National Agriculture Development Programme (NADP/RKVY) be launched. The NDC also felt that Agriculture Development strategies must be reoriented to meet the needs of farmers and called upon the Central and State governments to evolve a strategy to rejuvenate agriculture with a commitment to achieve four per cent annual growth in the agricultural sector during the 11^{th} plan. To implement this, formulation of action plans by means of developing District Agriculture Plans (DAP) is recommended. It is of the view that such plans would also reflect the felt needs of the farmers and stakeholders. Such District Agriculture Plans aim at moving towards projecting the requirements for development of Agriculture and allied sectors of the district including animal husbandry and fishery, minor irrigation projects, rural development works, agricultural marketing schemes and schemes for water harvesting and conservation, etc. keeping in view the natural resources and technological possibilities in each district.. These plans thus, present the vision for Agriculture and allied sectors within the overall development perspective of the district apart from the financial requirement and the sources of financing the agriculture development plans in a comprehensive way.

Once the preparation of District level agriculture planning exercise is completed, the operationalization of such plan is essential. This follows the preparation of a comprehensive State Agricultural Plan (SAP) by integrating the above District level agriculture plans. The DAP therefore could integrate multiple programmes that are in operation in the district concerned, include the resources and activities indicated by the state, combine the resources available from the other programmes and finalize the plan. With this in mind, the District Agriculture Plan for each district of Tamil Nadu is prepared.

Methodology adopted for Preparation of District Agriculture Plan

The preparation of the District Agriculture Plan (DAP) is thus an elaborate, exhaustive and iterative process and therefore every care is taken in ensuring that the DAPs are properly and comprehensively made. The task of preparing such District Agriculture Plan is given to Tamil Nadu Agricultural University, Coimbatore. In Coordination with scientists from TANUVAS and officials from Department of Agriculture, Horticulture, Agricultural Engineering, Marketing, Animal Husbandry and Fisheries, Seed certification PWD etc. the task is fulfilled. In what follows, the procedure adopted to prepare the plan is discussed.

Major areas of focus

(a) Integrated development of major food crops like paddy, coarse cereals, minor millets, pulses, oilseeds;
(b) Agriculture mechanization;
(c) Activities related to enhancement of soil health;
(d) Development of rainfed farming systems in and outside watershed areas, as also Integrated development of watershed areas, wastelands, river valleys;
(e) Integrated Pest Management schemes;
(f) Strengthening of Market Infrastructure and marketing development;
(g) Strengthening of Infrastructure to promote Extension Services;
(h) Activities relating to enhancement of horticultural production and popularization of micro irrigation systems;
(i) Animal husbandry and fisheries development activities;
(j) Study tours of farmers;
(k) Organic and bio-fertilizers;
(l) Innovative schemes.

Collection of data

The preparation of district level plan involved basically collection of base line and bench mark details. So a template is developed to collect these particulars from the different districts (29 districts) of Tamil Nadu. In order to dovetail the ongoing schemes, with the action plans, the current ongoing agriculture programs were listed with their physical and financial performance and finally converged as the plan under National Agriculture Development Programme.

Formulation of District Planning Unit

To facilitate the involvement of local representatives in the preparation of plans, planning units in each district was formulated. The composition of the district planning units is as follows:

a) Deans of other campuses / Heads of Krishi Vigyan Kendra or Research Station in respective district and one scientist from each campus
b) Co-ordinating staff from Directorate of Centre for Agricultural and Rural Development Studies to represent each district
c) Officials of Line Departments from Agriculture, Horticulture, Agricultural Engineering, Marketing, Animal Husbandry and Fisheries, Seed certification, Public Works Department etc. the task are fulfilled.

Sensitization Workshop

A series of Sensitization Workshop was conducted from 4.3.08 to 18.3.08 at TNAU Campus. The TNAU Staff from Krishi Vigyan Kendras and Research Stations, officials from line Departments *viz.,* Agriculture, Horticulture, Agricultural Engineering and Tamilnadu Veterinary and Animal Sciences University attended the workshop. Also several meetings were held in Chennai for the National Agriculture Development Programme under the Chairmanship of Agriculture Production Commissioner and Secretary to Government of Tamil Nadu.

The objectives of National Agriculture Development Programme, preparation of District Agriculture Plans, State Agriculture Plan and Formulation of Project proposals under stream - I and stream - II were discussed in the workshop.

Preparation of draft Action Plan and Presentation in District Collectors Meeting

Based on the baseline information and proposals, draft action plan was prepared and this was presented in the District Collectors Meeting held on 21.052008 under the chairmanship of District Collector. This meeting was attended by the scientists from TNAU, officials from line departments and the representatives of local bodies wide coverage was given in the media also.

Finalisation

The feedback received in the District Collectors Meeting were incorporated before finalization of the District Agriculture Plan. The Strategic Research Extension Plan and Agriculture Technology Management Agency reports were also reviewed and relevant details have been incorporated in the draft report.

CHAPTER II

GENERAL DESCRIPTION OF THE DISTRICT

Fig 1. MAP OF TAMIL NADU SHOWING KANCHIPURAM DISTRICT

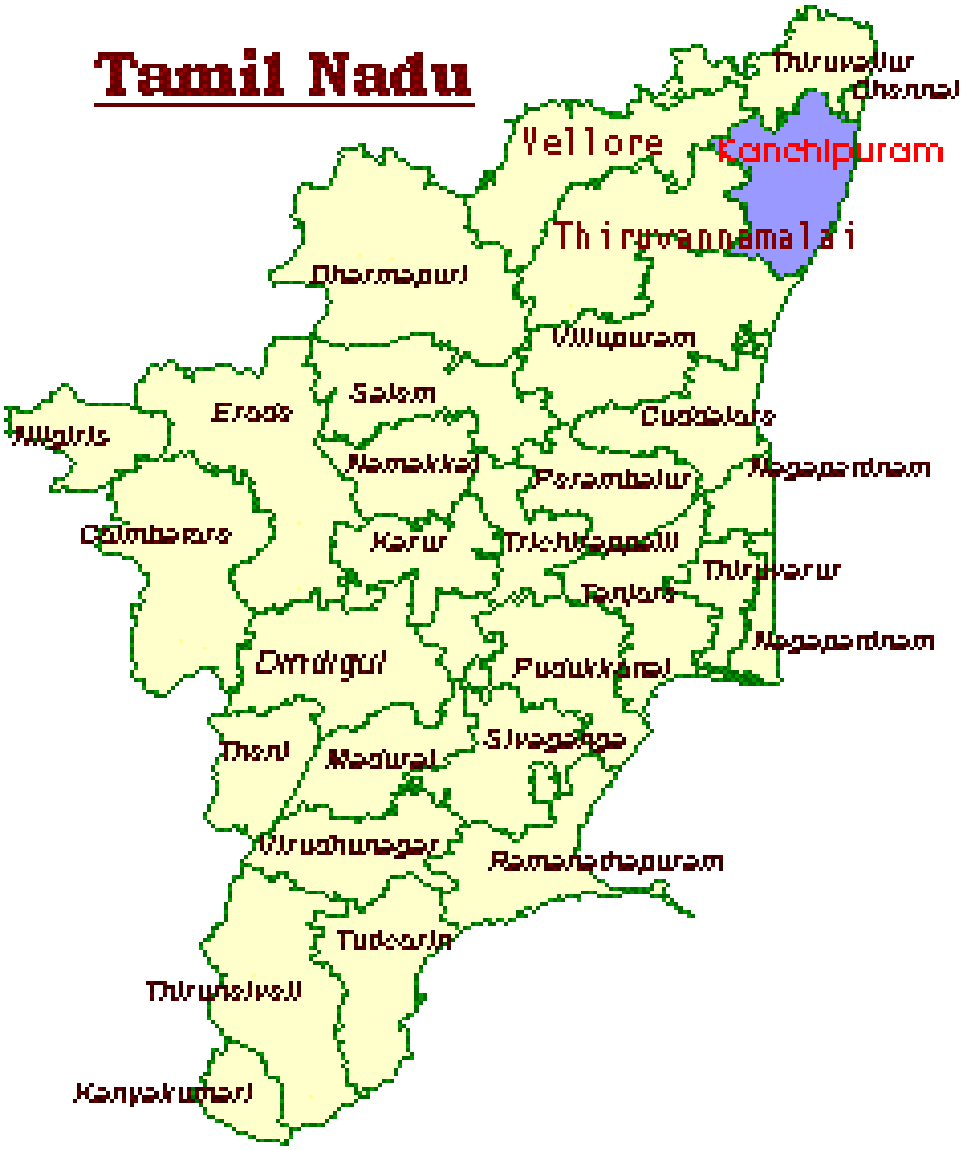


Fig 2. Map of Kancheepuram District- Block Wise

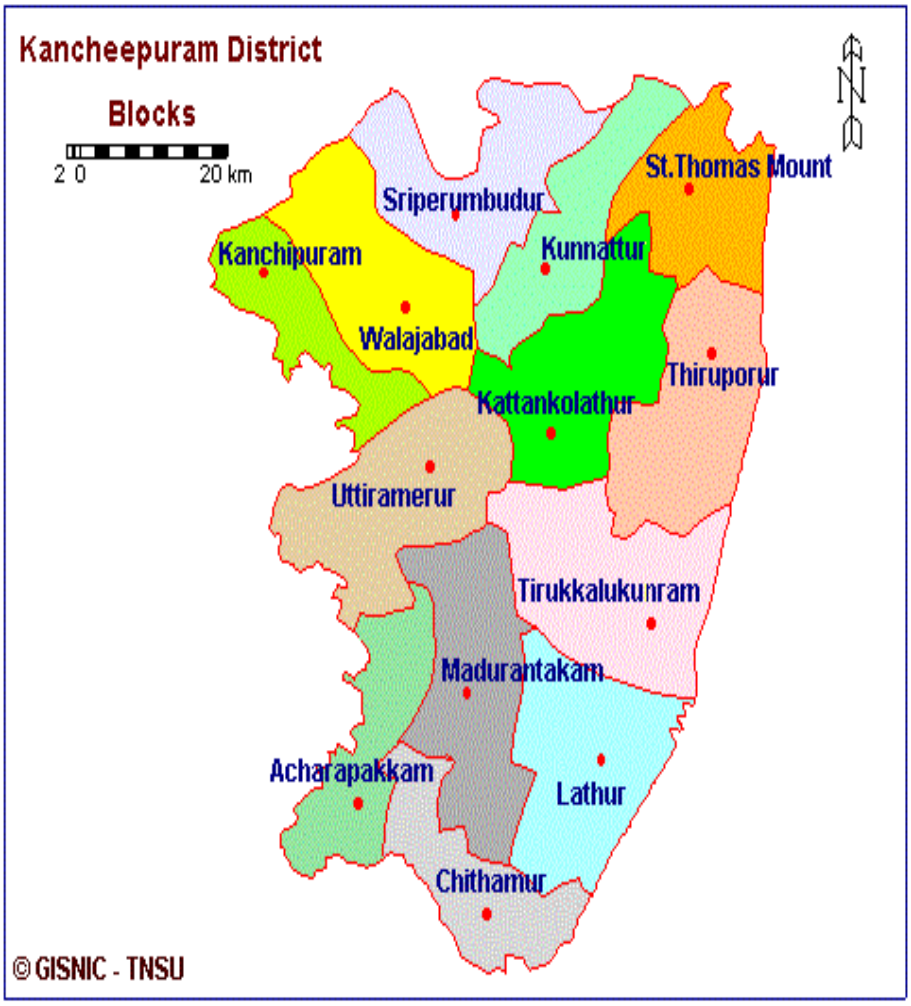
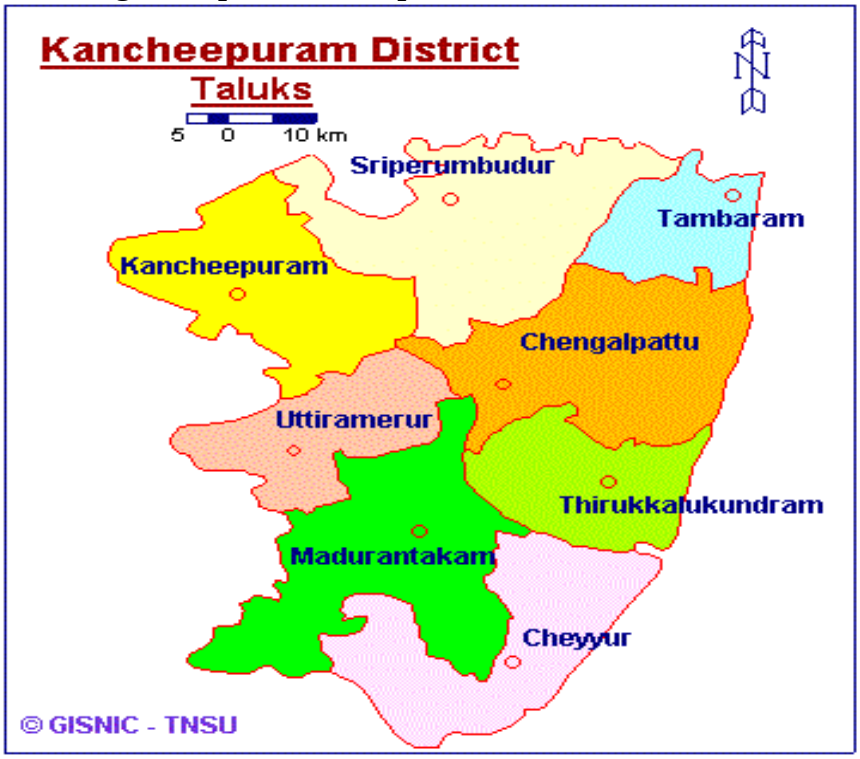


Fig 3. Map of Kancheepuram District - taluk wise



2.1 ii) General Statistics

1.	**Name of the District**	**:**	**KANCHEEPURAM**
2.	Number of Taluks	:	8 (eight)
	1. Kancheepuram		
	2. Uthiramerur		
	3. Chengalpattu		
	4. Kattankulathur		
	5. Madurantagam		
	6. Cheyyur		
	7. Sriperumbudur		
	8. Tambaram		
3.	Number of Blocks	:	13 (thirteen)
	1. Sirukaveripakkam		
	2. Walajabad		
	3. Uthiramerur		
	4. Kattankulathur		
	5. Thirukalukundram		
	6. Thiruporur		
	7. Madurantagam		
	8. Acharapakkam		
	9. Pavinjur		
	10. Chithamoor		
	11. Sriperumbudur		
	12. Padappai		
	13. Chitlapakkam		

Table 1. Agricultural Divisions

S.No.	Agricultural Divisions	Blocks
1.	Kancheepuram	Sirukaveripakkam Walajabad
2.	Uthiramerur	Uthiramerur
3.	Chengalpattu	Kattankulathur Thirukalukundram Thiruporur
4.	Madurantagam	Madurantagam Acharapakkam
5.	Cheyyur	Pavinjur , Chithamoor
6.	Sriperumbudur	Sriperumbudur, Padappai
		Chitlapakkam

Source: National Informatics Centre, Chennai

Table 2. Rainfall Data (Last five Years) Season-wise

in mm

S. No.	Month	Normal Rainfall	2003	2004	2005	2006	2007
I.	**WINTER SEASON:**						
	1. January	18.1	-	-	-	8.8	-
	2. February	11.4	-	-	-	-	-
	TOTAL	**29.5**	**-**	**-**	**-**	**8.8**	**-**
II.	**SUMMER SEASON:**						
	3. March	6.9	11.9	2.7	4.1	10.6	-
	4. April	11.2	17.5	9.9	105.5	6.1	3.4
	5. May	37.6	13.4	319.0	25.5	27.1	20.9
	TOTAL	**55.7**	**42.8**	**331.6**	**134.1**	**43.8**	**24.3**
III.	**S.W.MONSOON:**						
	6. June	49.6	45.5	19.6	28.4	76.2	68.0
	7. July	110.8	196.5	16.6	73.9	69.8	136.9
	8. August	158.3	235.4	12.0	92.2	17.7	216.5
	9.September	159.6	161.0	215.7	103.6	122.3	161.0
	TOTAL	**478.3**	**638.4**	**263.9**	**298.1**	**286.0**	**582.4**
IV.	**N.E.MONSOON**						
	10. October	184.4	210.3	247.4	480.6	388.8	270.5
	11.November	283.9	118.7	221.8	565.4	196.2	31.3
	12.December	129.2	24.2	--	392.5	83.2	
	Total	597.5	353.2	469.2	1438.5	668.2	301.8
	District Annual	1161.0	1034.4	1064.7	1870.7	1006.0	908.5

Source: National Informatics Centre, Chennai

2.2 District a Glance

2.2.1 Location and Geographical Unit

Kancheepuram district is situated on the north East Coast of Tamil Nadu and is adjacent to Bay of Bengal and Chennai city and is bounded in the west by Vellore and Thiruvannamalai district, in the north by Thiruvallur district and Chennai district, in the south by Villuppuram district in the east by Bay of Bangal. It lies between 11° 00' to 12° 00’ North latitudes and 77° 28' to 78° 50' East longitudes. The district has a total geographical area of 4,43,210 hectares and coastline of 57 Kms. Kancheepuram, the temple town is the district headquarters. For administrative reasons, the district has been divided into 3 revenue divisions comprising of 8 taluks with 1214 revenue villages. For development reasons, it is divided into 13 development blocks with 648 Village Panchayats**.**

2.2.2 Demographic profile

According to 2001 census, the District had population of 28.77 lakh, which is about 6.76 percent of the total State population. In 1991 census the total population of the District was 24,15,010 Lakhs, in which 12,30,650 were Male & 11,84,360 were Female. In rural 14,29,610 & in Urban it was 9,85,400.

Table 3. Population Details

1.	Total Population	:	28,77,468
	(a) Men	:	14,57,242
	(b) Women	:	14,20,226
2	(1) Rural Population	:	13,42,502
	(2) Urban Population	:	15,34,966
3.	Literacy Rates	:	53%
	Male	:	56%
	Female	:	48%
	SC/ST population	:	49%
	Others	:	10%

Source: National Informatics Centre, Chennai

2.2.3 Agro climatic characteristics

Table 4. Agro climatic characteristics

Season	Maximum	Minimum
Summer	36.6° C	21.1° C
Winter	28.7° C	19.8° C

Source: National Informatics Centre, Chennai

2.4 Soil Classification and Land Holdings

Agriculture is the main occupation of the people with 47 percent of the population engaged in it. Paddy is the major crop cultivated in this district. Groundnut, Sugarcane, Cereals & Millets and Pulses are the other major crops.

Table 5. Types of Soil

Type of Soil	Places in District
Read Loam	Kancheepuram, Uthiramerur Blocks
Lateritic Soil	Pleatus in the district
Black Soil	Spread in all Blocks
Sandy Coastal Alluviam	Some Places Thirukazhukundram,Thiruporur, St.ThomasMount.
Red Sandy Soil	Kancheepuram, Urban Blocks

Source: National Informatics Centre, Chennai

Table. 6 Description of Soils in Kancheepuram District

Soil Description	Area (ha)
Deep, fine, mixed, Inceptisols	43208.92
Moderately deep, fine loamy, mixed, Alfisols	36601.01
Deep, fine, mixed, Alfisols	34150.96
Moderately deep, fine loamy, mixed, Inceptisols	33858.80
Moderately deep, clayey skeletal, mixed, Alfisols	23561.40
Very deep, fine loamy, mixed, Inceptisols	19865.99
Deep, fine, montmorillonitic, Vertisols	16174.33
Shallow, clayey, mixed, Inceptisols	14540.26
Moderately deep, fine, mixed, Inceptisols	14476.53
Deep, coarse loamy, mixed, Inceptisols	12200.74
Deep, sandy, mixed, Entisols	12143.95
Very deep, coarse loamy, mixed, Inceptisols	10922.95
Moderately deep, coarse loamy, mixed, Inceptisols	9528.87
Moderately shallow, fine, mixed, Inceptisols	8885.48
Deep, fine, montmorillonitic, Inceptisols	8131.34
Deep, fine loamy, mixed, Inceptisols	7609.65
Shallow, loamy skeletal, mixed, Entisols	6866.92
Moderately shallow, coarse loamy, mixed, Entisols	6198.91
Moderately shallow, fine, mixed, Alfisols	5861.93
Moderately shallow, clayey skeletal, mixed, Inceptisols	5802.83
Shallow, clayey, mixed, Entisols	4914.96
Very deep, fine loamy, mixed, Alfisols	4753.00
Very deep, clayey skeletal, kaolinitic, Alfisols	3961.74
Deep, fine loamy, mixed, Alfisols	1953.07
Very shallow, loamy, mixed, Entisols	1827.24
Deep, contrasting particle size, mixed, Entisols	1420.22
Moderately shallow, fine loamy, mixed, Inceptisols	1312.97
Moderately deep, fine, montmorillonitic, Inceptisols	1153.07
Moderately deep, fine, mixed, Alfisols	1146.54
Deep, coarse loamy, mixed, Entisols	839.26
Moderately shallow, fine loamy, mixed, Alfisols	795.55
Shallow, clayey skeletal, mixed, Inceptisols	746.59
Very deep, fine, kaolinitic, Alfisols	693.38
Shallow, clayey skeletal, mixed, Alfisols	656.12
Very deep, fine silty, mixed, Entisols	526.37
Shallow, loamy, mixed, Entisols	424.77
Deep, contrasting particle size, mixed, Inceptisols	160.66
Shallow, clayey, mixed, Alfisols	140.42
Shallow, loamy, mixed, Alfisols	83.16
Very deep, sandy, mixed, Entisols	57.81

Table 7. Classification of Cropped Area

Classification	Area in(Hectares)
Total Cropped Area	198543
Nett Area Sown	160090
Area sown more than once	38453

Source: National Informatics Centre, Chennai

Table 8. Area Under Principal Crops

Area Under Principal Crops (Ha)	
Rice	145966
Millets and Cereals	1217

Source: National Informatics Centre, Chennai

Table 9. Land Use Pattern

Sl.No.	Category	2004-05	2005-06	2006-07
1.	Forests	23856	23856	23856
2.	Barren and unculturable land	10948	10948	10948
3.	Land put to non agricultural uses	145619	144712	145619
4.	Culturable Waste	10132	10773	10132
5.	Permananet pastures and other grazing lands	18328	18328	18328
6.	Miscellaneous tree crops and groves not included in the net area sown	16682	16682	16682
7.	Current fallow	8686	10343	8686
8.	Other fallow	87597	79158	87597
9.	Net area sown	121362	128410	121362
	Total Geographical area	**443210**	**443210**	**443210**
	Area sown more than once	**34005**	**33031**	**34005**
	Gross Area sown	**155637**	**161441**	**155637**

Source: Office of the Joint Director of Agriculture ,Kancheepuram

2.2.5 Irrigation and Groundwater

Table 10. Source-wise Net Area Irrigated

(in ha.)

S. No.	Source	2004-05	2005-06	2006-07
1.	Canal	525	515	510
2.	By Tanks	54180	54125	54075
3.	By Wells	41928	40728	40700
4.	Other sources	485	485	480

Source: National Informatics Centre, Chennai

Table 11. Source-wise Gross Irrigated Area

(in ha.)

Sl. No.	Source	2004-05	2005-06	2006-07
1.	Canal	555	550	550
2.	Tank	64863	60732	64870
3.	Wells	59135	41810	46648
4.	Others, if any	485	485	465

Source: National Informatics Centre, Chennai

CHAPTER III
SWOT ANALYSIS

Strength

In Kancheepuram district Agriculture mainly depends on tank irrigation. During North east monsoon, the maximum (700-800 mm) rain is received and the rain water is stored in the tanks. By utilisining this tank irrigation the paddy crop is raised in two seasons successfully and the ground nut crop has been raised both rainfed and irrigated The water table in this district is 100-200 feet only. Hence this water is major strength in Agriculture.

Weakness

The soil productivity is low. As rainwater is drained from far off Places the salt content of the soil is considerably increased. Due to this the availability of plant nutrients like Phosphorus, Zinc, Copper, Boron, will be less which will affect the productivity of the soil. Further the topography of the district also more or less plain, the drainage is a problem in the paddy growing areas. Hence it is *very* difficult to have upland paddy cultivation. Further the farmers are economically poor to adopt modernization and mechanization in agriculture

Opportunity

This district has good opportunity to form contract farming in ground nut and pulses. Good marketing facility is available on this district as it is nearer to Chennai.

Threat

The serious problem is the availability of farm labour. Many large scale industries are established in the district, the availability of farm labour is very less. This problem must be solved only by mechanizing the farm activities. The salinity of soil is also increasing due to poor application of organic manures. This has to be substituted by various organic products.

Dairy Sector

SWOT Analysis (Strengths, Weakness, Opportunities, Challenges)

Strength

- Increased awareness about crossbreeding
- Concept of organic farming is popular
- Best suited for integrated farming system
- Easily accessible information and training centres for dairy farming

Weakness

- Lack of storage and processing units for the small scale farmers
- Limited number of veterinary centres for proper health covers. Shortage of fodder seeds / seedlings for propagation

Opportunities

- Constant demand for milk and milk products due to its (Kancheepuram District) proximity to the Chennai metropolitan
- Private dairy industries are coming up
- Export of value added milk products

Challenges

- Shortage of fodder
- Liberalization in the trade (export and import policies)

Small Ruminant Sector

Strengths

- Additional source of income to the farmers
- Easy marketability
- The district is the main breeding tract for Madras Red sheep
- Consumers' preference towards mutton and chevon is more than any other meat

Weakness

- Exploitation by middlemen
- Unorganised slaughter
- Inadequate grazing land
- No recognized breed of goat in the district
- Unavailability of veterinary service in the near vicinity
- Pricing of sheep and goat at the production centre is based on subjective assessment

Opportunities

- Crossbreeding of local goats with high yielding exotic breeds to increase the production
- Constant increase in the marketing price of the meat

Challenges

- Government policy in preservation of forest area
- Conformity to quality standards

Intervention Required Areas

- Shrinkage of agricultural / grazing land as a result of industrialization / urbanization
- Shortage of fodder seeds / seedlings for propagation
- Remarkable decline in buffalo population leading to negative growth rate in buffalo milk production
- Limited number of veterinary centres for proper health covers
- No recognized breed of goat in the district
- Huge demand for pork and Inadequate availability of Large White Yorkshire parent stock
- Scope for backyard poultry, Japanese quails and turkeys
- Updation of latest technical know-how in livestock farming systems and value addition of livestock products

Animal Husbandry Sector

Base Line Information

Livestock Population (2004)

Cattle	364813
Buffalo	115650
Sheep	131183
Goats	173304
Poultry	353844

Livestock / Poultry Population (1998-2007)

Species	Percent change
Cattle	-12.65
Draught animals	-40.72
Female exotic / crossbred cattle	141.18
Female indigenous / native pure cattle	-28.36
Buffalo	-31.04
She Buffalo	-25.62
Sheep	-39.72
Goat s	-17.20
Poultry	-42.77

Productivity

Species	Percent change
Indigenous cow	2.78
Crossbred cow	0.20
Buffalo	- 0.53
Desi layer	21.17
Improved layers	18.57

SWOT Analysis (Strengths, Weakness, Opportunities, Challenges)

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Fisheries Sector

Baseline information

Marine

- Coastal length : 87.2 km
- Total Fisher folk population : 27100
- Active Fishermen : 9537
- Active Fisherwomen : 4803
- No. of Cooperative Societies : 50 (Fisherman) ; 34 (Fisherwomen)
- Total Brackish WSA (ha) : 852

Inland

- Total Inland WSA (ha) : 77759.3
- Long seasonal tanks WSA (ha) : 55884.22
- Short seasonal tank WSA (ha) : 21875.8
- FFDA tanks and others WSA (ha) : 35
- Total Fish Production : 2584 tonnes
- Total Fish seed demand : 111.5 lakhs
- Total fisher folk population : 8270
- Total No. of Cooperative Societies : 22 (Fisherman); 4 (Fisherwomen) (Fisherwomen)
- Coastal length – 87.2 km
- Marine fishing villages – 44, Inland fishing villages – 22
- Marine fish production is 15905 tonnes against the potential of 20000 tonnes.
- Mechanized boats – 8, Motorized FRP boats – 2339; Traditional crafts – 1200, 352.49 ha brackish water resources available
- Cooperative societies – 22 (Fisherman) and 2 (Fisherwomen)
- Scope for development of Inland fish farming and brackish water shrimp farming.
- 163 private shrimp farms (water spread area of 352.49 ha)
- 48 shrimp hatcheries (2500 million per annum of PL 15 stage)

* Regional Centre (Aquaculture), MPEDA & Fisheries Training and Research Centre of TANUVAS available
* Total fish seed demand 111.50 lakhs against present production 5.0 lakhs
* Two whole sale fish markets - Tambaram, Saidapet

Gaps Identified

* Non-availability of infrastructure facilities for seed production, fish landing & marketing
* District requires a total of 111.5 lakhs seed depends on adjacent district for fish seed.
* Average present fish production - 2584.4 tonnes against potential 7580 tonnes
* Fish culture in natural small water system - practiced by stock and harvest system and not scientifically.
* Non-availability of alternate species for shrimp aquaculture.
* Over fishing pressure for limited inshore coastal resources
* Lack of post harvest facility like cold storage fish processing unit in the shore.

Intervention Required Areas

* Infrastructure development to attain self sufficiency in seed production through private and Government.
* Expansion of fish culture in unutilized water bodies.
* Mariculture activities such as culture of fin fishes and seaweed.
* Development of integrated model for coastal aquaculture
* Infrastructure development to modernize the existing marketing facilities in key areas
* Infrastructure development for developing capacity building

Composite Index of Agricultural Development of Kancheepuram District

Agricultural Development of a district is a comprehensive multidimensional process involving large number of related indicators. Hence, it can be well represented by composite indices which are used as yardsticks not only to gauge the development of each district but also to compare its performance in relation to other districts. These indices help to classify the sub-regions based on a set of large multivariate data. The information contained in the large set is transformed into a small set of indices which would provide a convenient method for classification. There are many methods of classification based on multivariate data. Among them, one method which is statistically sound is that developed by Iyengar and Sudarshan (1982). This method is simple and easy to apply and it helps to classify the districts into various stages of development, viz, 'highly developed', 'developed', 'developing', 'backward' and 'very backward'. In this method for each district a 'composite index' is constructed. The index lies between 0 and 1 with 1 representing 100% development and 0 representing no development at all.

It is assumed that there are n districts and m development indicators and that X_{id} is the observed value of i^{th} development indicator for the d^{th} district (i = 1,2,3 … m, d = 1,2,3…n). First these values of development indicators for each district is to be standardized. When the observed values are related positively to the development(as in the case of cropping intensity), the standardization is achieved by employing the formula

$$y_{id} = (X_{id} - Min\ X_{id}) / (Max\ \ X_{id} - Min\ X_{id})$$

where $Min\ X_{id}$ and $Max\ X_{id}$ are the minimum and maximum of $(X_{i1}, X_{i2}, ...X_{in})$ respectively. When the values of X_{id} are negatively related to the development as in the case of area under wastelands, problem soils etc., the standardized values will be computed by the formula

$$y_{id} = (Max\ X_{id} - X_{id}) / (Max\ X_{id} - Min\ X_{id})$$

Obviously these standardized indices lie between 0 and 1. These indices are then used to determine the weights of individual variable and then they are subjected to further statistical analysis by fitting suitable probability distribution to determine the cut-off points for classification of the districts into five categories as mentioned above. The detailed methodology can be found in Iyengar and Sudarshan (1982).

The data base for the current study on Kancheepuram district is taken from various government publications like Season and Crops Report and Economic Appraisal of Tamil Nadu for the 4 periods 1990-91, 1995-96, 2000-01 and 2005-06. In all, 25 indicators of agricultural development as given in Table 11 were used for estimating the composite index of development for the district. The 25 indicators were grouped into 6 different 'components': i) Crop-Area-Variables (10) ii) Irrigation (7) iii) Livestock (3) iv) Fisheries(1) v) Fertilizer (3) and vi) Cultivators-Labourers (2).

The analysis showed that Kancheepuram district which was classified as 'highly developed' in agricultural development during all the periods considered in the study. In terms of overall agricultural development its rank among the 29 districts of Tamil Nadu varied from 1 to 4 during the 1990-91 to 2005-06. As far as the individual components of agricultural development are concerned, its ranks in the above periods are summarized in the following Table 12. The table shows that except in cultivators and labourers, all other components its performance in the period of study is good. For example, in irrigation its ranks is varies between 1 and 2 in all the 4 periods. Similarly in crop area variables also it occupied ranks between 1st and 4th ranks.

Table 12. Selected Indicators of Agricultural Development for Kancheepuram District

Component	Indicators	No. of Indicators
Crop-Area-Variables	Cropping Intensity	**10**
	% of Gross Cropped Area to Total geographical area	
	% Share of foodgrains to Gross Cropped Area	
	% Share of foodcrops to Gross Cropped Area	
	% Share non foodcrops to Gross Cropped Area	
	% Share of cultivable waste to total geographical area	
	% Area under High Yielding Variety-PADDY	
	% Area under High Yielding Variety-CHOLAM	
	% Area under High Yielding Variety-CUMBU	
	% Area under High Yielding Variety-RAGI	
Irrigation	Irrigation Intensity	**7**
	% of Gross Irrigated Area to Gross Cropped Area	
	% of Net Irrigated Area to net area sown	
	% Area under Canal Irrigation to Gross Irrigated Area	
	% Area under Tank Irrigation to Gross Irrigated Area	
	% Area under Well Irrigation to Gross Irrigated Area	
	% Area under other sources Irrigation to Gross Irrigated Area	
Livestock	Milk production (lakh tons)	**2**
	Egg production (lakhs)	
Fisheries	Inland + Marine fish production in tons	**1**
Fertilizer	Consumption of Nitrogen per hectare of Gross Cropped Area (tonnes)	**3**
	Consumption of Phosphorus per hectare of Gross Cropped Area (tonnes)	
	Consumption of Potassium per hectare of Gross Cropped Area (tonnes)	
Cultivators-Labourers	% of Cultivators to total population	**2**
	% of Agri.labourers to total workers	
	TOTAL	**25**

Table 13. Rank of Kancheepuram District in terms of Agricultural Development Among other Districts of Tamil Nadu during 1990-91 to 2005-06

Component of Composite Index		Crop-Area-Variables	Irrigation	Livestock	Fisheries	Fertilizer	Cultivators -Labourers	Overall
Period	**1990-91**	3	1	4	-	-	24	1
	1995-96	1	1	6	9	7	25	3
	2000-01	4	1	8	7	10	23	4
	2005-06	4	2	20	6	4	25	1

CHAPTER IV

DEVELOPMENT OF AGRICULTURE

4.1 Land use Pattern

Agriculture is the main occupation of the people in Kancheepuram with 47 per cent of the population engaged in it. It has a total cropped of 1.99 lakh hectares. Principal crops grown are Paddy, Groundnut, Sugarcane, Millets and pulses. Tanks and canals are the main sources of irrigation. The soil productivity is low and the farmers are economically poor to adopt modernization and mechanisation in agriculture. Nearly 50000 hectares falls under the category of problem soils. Several on-going programmes like Seed minikit, Integrated cereal development programme, ISOPOM, Organic Framing are in operation. These programmes help in e introducing new crop varieties, increasing production of paddy, Millets, Pulses, Oilseeds and Maize and capacity building of farmers' knowledge and skill by organization of training programmes and exposure visits. To improve the organic matter content of the soil introduction of green manure crops and use of cowdung and compost will be encouraged. Application of indiscriminate use of chemical pesticides and chemical pesticides is proposed to be reduced by increase use of biocides and biofertilizers.

4.2 Soil Health

Table 14. Soil Types of Kancheepuram District

(Area in ha.)

Soil Type	Extent	
	Area	%
1. Mangalathupattu	95,357	21.52
2. Vanapatti	40,467	9.13
3. Ammapet	32,952	7.43
4. Vadamadurai	29,605	6.68
5. Mangadu	25,209	5.68
6. Suramangalam	25,188	5.68
7. Arasanatham	25,104	5.66
8. Samanthapuram	18,105	4.08
9. Mahabalipuram	16,469	3.73
10. Chickarasapalayam	9,750	2.13
11. Vallam	3,730	0.84
12. Kurumbalur	2,485	0.56
13. Pallipalayam	1,920	0.43

Source: Office of the Joint Director of Agriculture, Kancheepuram

Table 15. Area under Different Problem Soil Categories - Alkaline Soils

Sl.No.	Block	Area (in Ha.)
1.	Madurantagam	8000
2.	Thiruporur	5000
3.	Pavinjur	13000
4.	Chithamoor	12000
5.	Uthiramerur	12000

Source: Office of the Joint Director of Agriculture, Kancheepuram

4.3 Water resource management

Table 16. Ground Water Potential (Block- wise)

Over Exploited (100%)	Critical (85-100%)	Semi Critical (60-85%)
Sriperumbudur	Kancheepuram	Uthiramerur
Padappai	Walajabad	Achirapakkam
Kattankulathur	Thirukalukundram	Madurantagam
Chitlapakkam	Thiruporur	

Source: Office of the Joint Director of Agriculture, Kancheepuram

Table 17. Net Area Irrigated (Ha)

S. No.	Source	2004-05	2005-06	2006-07
1.	Canal	525	515	510
2.	By Tanks	54180	54125	54075
3.	By Wells	41928	40728	40700
4.	Other sources	485	485	480

Source: Office of the Joint Director of Agriculture ,Kancheepuram

Table 18. Gross Irrigated Area (in ha.)

Sl. No.	Source	2004-05	2005-06	2006-07
1.	Canal	555	550	550
2.	Tank	64863	60732	64870
3.	Wells	59135	41810	46648
4.	Others, if any	485	485	465

Source: Office of the Joint Director of Agriculture, Kancheepuram

4.4 Major crop and varieties in the district

Table 19. High Yielding Varieties – Paddy : ADT.43, ADT.45, ADT.39

S. No	Name of the Input	Paddy Irrigated
1.	Seed (Kg.)	40 Kg/ha.
2.	Fertiliser (Kg.)	
	N	150
	P	50
	K	50
3.	Pesticides (Litres) Neem based	1 Lit.
4.	Weedicides (Kg./Lit.)	--
5.	FYM	12.5 MT
6.	Micro Nutrient deficiencies identified if any	25 Kg.

Source: Office of the Joint Director of Agriculture ,Kancheepuram

Table 20. Groundnut – TMV.7, TMV.2, VRI.2, JL. 24

S. No	Name of the Input	Groundnut Irrigated
1.	Seed (Kg.)	200
2.	Fertiliser (Kg.)	
	N	17.5
	P	35
	K	52.5
3.	Pesticides (Litres) Neem based	1 lit
4.	Weedicides (Kg./Lit.)	--
5.	FYM	12.5 MT
6.	Micro Nutrient deficiencies identified if any	12.5 Kg.

Source: Office of the Joint Director of Agriculture, Kancheepuram

Table 21. Pulses –Blackgram - VBN.3, VBN.4, T.9, TMV.1, Greengram – Co(GG)1, VRMGG1, Cowpea – Co (CP) 7

S. No	Name of the Input	Pulses Irrigated
1.	Seed (Kg.)	20
2.	Fertiliser (Kg.)	
	N	25
	P	50
	K	0
3.	Pesticides (Litres) Neem based	1 lit
4.	Weedicides (Kg./Lit.)	--
5.	FYM	12.5 Tonnes
6.	Micro Nutrient deficiencies identified if any	5 Kg.

Source: Office of the Joint Director of Agriculture, Kancheepuram

4.5 Farm mechanization/ farm equipments

Table 22. Strength of Machinery Available in Kancheepuram District

Sl. No.	Name of the Machinery.	Sub Divisions			
		Nandanam	Kancheepuram	Maduranthagam	Total
I.	**Land Development Machinery**				
1.	Bull Dozers	4	1	2	7
2.	Tractors	2	2	3	7
3.	Combine Harvester.	1	-	-	1
II.	**Minor Irrigation Machinery**				
1.	Rotary Drills	1	1	-	2
2.	Percussion Drills	1	-	-	1
3.	Hand boring sets	4	5		9
4.	Rock blasting units.	1		1	2

4.6 On going Special Projects / Programmes in the District

Implementation of Development schemes

a. Seed Minikit

To introduce a new variety initially in small area. After studying the performance of the variety mass scale adoption will be recommended.

b. Integrated Cereal Development Programme

To increase the production of Paddy and Millet by way of subsidy assistance to inputs and capacity building by imparting training to farmers.

c. ISOPOM

To increase the production of Pulses, Oilseeds and Maize by way of subsidy assistance to inputs and capacity building by imparting training to farmers.

d. Organic Farming

Eor increasing the market value of produce and also protecting the natural resources.

1. Area under SRI Paddy - 51,000 Ha.
2. Area under INM/IPM/ Organic Farming - 1,90,000 Ha.
3. Area covered by precision farming - 55,000 Ha.
4. Adoption of improved technologies particularly in Rice other than SRI - 1,10,000 Ha.
5. Level of technology adoption @ farmers levels - 95%

4.7 Constraint Analysis

Assessing the extent of yield gap and identify the strategies to fill this yield gap in the next four years

a. Due to continuous cultivation since green revolution application of Chemical fertilizer deteriorated the soil structure and texture. It is imperative to restructure the soil by way of adding Organic manure. Now a days it is very difficult to get required quantity of organic manure like cowdung, compost, etc. So it is proposed to grow green manure crops, such as sunhemp, daincha on a large scale thereby the yield gap will be minimised.

b. Top three technologies mostly adopted

1. Increased quantity of seed rate
2. Application of increased quantity of chemical fertilizers
3. Application of indiscriminate quantity of pesticides

Top 2 technologies least adopted

1. Application of Biocides
2. Usage of Bio-fertilisers

CHAPTER V
ALLIED SECTORS

5.1 Introduction

Horticulture Scenario

There is tremendous scope for the export of horticultural crops afresh as well as processed foods from this District since it is very near to the city.

Organic farming is gaining importance among the farmers. It relies on large scale application of animal waste compost, crop rotation, crop residues, green manure, Vermi Compost, bio fertilizer, VAM, bio pesticides and biological control.

High density planting is the current concept by which productivity of fruit crops can be enhanced per unit area. Reduced by labour cost and labour involvement towards weeding and desuckering, efficient utilization of land, water, fertilizer and solar radiation cost of production per unit area could be reduced considerably.

Hi-Tech Horticulture ie growing cutflowers under poly green house, growing hybrid Vegetables and Cole crops under shade net is gaining importance.

In Sriperumbudur Taluk Cut flowers are grown under poly green house with drip irrigation. In Cheyyur taluk a Orchid cut flower unit is being run by self help group in Puthirankottai village. Shade net cultivation is now implemented in Thatehur village. Maduranthangam taluk, Melmaruvathur in Cheyyur taluk, Minnal Chittanoor in Maduranthangam taluk, Avalur village and Valathottam in Kancheepuram taluk.

5.2 Horticulture Development

In Kanchirpuam district Integrated Horticulture Development Scheme is under operation, since 1989. Distribution of quality seed materials of vegetables, spices and fruit crops are carried out. This distribution is under 50 per cent subsidies to (the max of

0.5 hectares for vegetables and 1 hectare, for fruits) per beneficiary farmer during 2007 - 2008 in this district 351 hectares have been covered with an outlay of Rs. 10.463 lakhs During 2008 – 09 it is proposed to cover 400 hectare area with 11 lakhs outlay. The area of concentration is mainly quality seed and seedling distribution to certain and specific number of farmers, every year.

Apart from this, 5 State Horticulture farms are functioning in Melottivakkam, Melkadhirpur, Vitchandangal, Pitchivakkam and Athur village in this district with a total area of 150 hectaresunder fruits. Production of flowers and fruit seedlings are carried out apart from maintenance of existing orchard crops. Every year it has been programmed to propagate 25000 No's of mango graft, 40, 000 No's of guava layers, 1, 00, 000 No's of economic plants like curry leaf, Aonla and three lakh numbers of avenue plants like Delonix regia, Ponganaia, Neem, Teak etc, with an out lay of Rs. 15.00 lakhs.

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- Infrastructure development for developing capacity building.

.6+CHAPTER - VI
DISTRICT PLAN

6.1 Development of Agriculture and Interventions

It has been proposed to introduce interventions pertaining to use of improved seeds, INM, IPM, use of new Agricultural machineries, Training and extension activities for important crops *viz*., Paddy, Maize, Pulses, Groundnut and Gingelly. To expose the farmers to new and emerging technologies, it is proposed to organize interstate and intra state visits. Training the farmers in FTC's and organizing exhibitions will also be taken up. In addition, special projects to monitor soil health through establishment of Soil testing laboratories and agri-clinics, enhancing soil organic matter by application of green manure, polythene mulching for groundnut, SRI method of paddy cultivation, providing agricultural implements to overcome labour problems will also be undertaken. The Components wise details with budget presented in Table 6.1 through 6.8.

Table. 25 Crop-wise / Component-wise Project Cost

(Rs. in lakhs)

Sl. No	Crop	Name of the Component	2008-2009		2009-2010		2010-2011		2011-2012		Total	
			No.of Units	Total Cost	No.of Units	Total Cost	No.of Units	Total Cost	No.of Units	Total Cost	No.of Units	Total Cost
I	Paddy (I)	1. Seed	0	226.90	0.00	235.50	0.00	259.50	0.00	279.75	0.00	1001.65
		2. Integrated Nutrient Management	0	182.30	0.00	190.00	0.00	190.00	0.00	193.00	0.00	755.30
		3.Integrated Pest Management	0	24.92	0	24.92	0	24.92	0	24.92	0	99.68
		4. Machinaries & Equipments	0	30.01	0	45.01	0	45.01	0	45.01	0	165.02
		5. Technologies	0	10.00	0.00	10.00	0.00	10.00	0.00	10.00	0.00	40.00
		6. Others	0	56.00	0.00	56.00	0.00	56.00	0.00	56.00	0.00	224.00
	Total			**530.13**		**561.43**		**585.43**		**688.43**		**2365.40**
II	Maize	1. Seed	0	3.75	0.00	3.75	0.00	3.75	0.00	3.75	0.00	15.00
	Total			**3.75**	**0.00**	**3.75**	**0.00**	**3.75**	**0.00**	**3.75**	**0.00**	**15.00**
III	Pulses	1. Seed	0	44.1	0	39.6	0	39.6	0	39.6	0	162.9
		2. Integrated Nutrient Management	0	133.35	0	133.35	0	133.35	0	133.35	0	533.4
		3.Integrated Pest Management	0	76.361	0	76.361	0	76.361	0	76.361	0	305.444
		4. Machinaries & Equipments	0	7.5	0	7.5	0	7.5	0	7.5	0	30
		5. Technologies	0	68.4	0	68.4	0	68.4	0	68.4	0	273.6
		6. 2% DAP Spray(Ha)	1600	3.20	0	0	0	0	0	0	0	3.20
		7. Others	0	0.6	0	0.6	0	0.6	0	0.6	0	2.4
	Total			**333.51**	**0.00**	**325.81**	**0.00**	**325.81**	**0.00**	**325.81**	**0.00**	**1310.94**

Table.25 contd…

Sl. No	Crop	Name of the Component	2008-2009		2009-2010		2010-2011		2011-2012		Total	
			No.of Units	Total Cost	No.of Units	Total Cost	No.of Units	Total Cost	No.of Units	Total Cost	No.of Units	Total Cost
IV	Ground-nut (R.F)	1. Seed	0	2.4	0	2.4	0	2.4	0	2.4	0	9.6
		2. Integrated Nutrient Management	0	3.5	0	3.5	0	3.5	0	3.5	0	14
	Total			**5.90**	**0.00**	**5.90**	**0.00**	**5.90**	**0.00**	**5.90**	**0.00**	**23.60**
V	Ground-nut (I)	1. Seed	0	252.4	0	252.9	0	252.9	0	252.9	0	1011.1
		2. Integrated Nutrient Management	0	47.85	0	47.85	0	47.85	0	47.85	0	191.4
		3.Integrated Pest Management	0	1.361	0	1.361	0	1.361	0	1.361	0	5.444
		4. Machineries & Equipments	0	15	0	15	0	15	0	15	0	60
		5. Technologies	0	26.4	0	26.4	0	26.4	0	26.4	0	105.6
		6. Others	0	82.5	0	2.5	0	2.5	0	2.5	0	90
	Total			**425.51**	**0.00**	**346.01**	**0.00**	**346.01**	**0.00**	**346.01**	**0.00**	**1463.54**
VI	Gin-Gelly	1. Seed	0	1.1	0	1.1	0	1.1	0	1.1	0	4.4
		2. Integrated Nutrient Management	0	0.2	0	0.2	0	0.2	0	0.2	0	0.8
		Total		**1.30**	**0.00**	**1.30**	**0.00**	**1.30**	**0.00**	**1.30**	**0.00**	**5.20**
		Grand Total		**1296.90**	**0.00**	**1244.20**	**0.00**	**1268.20**	**0.00**	**1371.20**	**0.00**	**5180.49**

Table. 26 Project Cost for Extension Activities

(Unit cost in lakhs)

Sl. No	Name of the Component	Unit	2008-2009		2009-2010		2010-2011		2011-2012		Total	
			No.of Units	Total Cost	No.of Units	Total Cost	No.of Units	Total Cost	No.of Units	Total Cost	No.of Units	Total Cost
1	Formation of FIG @ Rs.12500/- group for training and office automation, ID Card, District level meeting, etc	No.	200	25.00	325	40.63	0	0.00	0	0.00	525	65.63
2	Establishment of Agriclinic & Agri.Business by unemployed agri. Graduates 25% subsidy @ Rs.2.5 Lakh each	No.	12	30.00	0	0.00	0	0.00	0	0.00	12	30.00
3	Exposure visit Inter state @ 30 farmers/tour, 10 days @ Rs.600/day/ farmer (Rs.1.8 lakh)	L.Rs.	2	3.60	2	3.60	2	3.60	2	3.60	8	14.40
4	Exposure visit within state @ 50 farmers/tour, 5 days @ Rs.300/day/ farmer (Rs.0.75 lakh)	L.Rs.	2	1.50	2	1.50	2	1.50	2	1.50	8	6.00
5	District level exhibition/ Kissan mela @ Rs.2.0 lakh/ District	L.Rs.	1	2.00	1	2.00	1	2.00	1	2.00	4	8.00
6	Farmers Training through FTC@ 40 Training (2days) /year@ 50 farmers/ training Rs.20000/training	L.Rs.	40	8.00	40	8.00	40	8.00	40	8.00	160	32.00
	Total			**70.10**		**55.73**		**15.10**		**15.10**		**156.03**

Table.27 Project Cost for Paddy (Irrigated)

(Unit cost in Lakhs)

Sl. No	Name of the Component	Unit	2008-2009		2009-2010		2010-2011		2011-2012		Total	
			No.of Units	Total Cost	No.of Units	Total Cost	No.of Units	Total Cost	No.of Units	Total Cost	No.of Units	Total Cost
I	**Seed**											
1	One time grant to TANWABE/ FIG to take certified seed production and distribution @ Rs.50000/- per group (30 MT/ Annum)	No.	7	3.50	0	0.00	0	0.00	0	0.00	7	3.50
2	Incentive for seed production to Self Help Groups @ Rs.3/Kg. TANWABE Groups	MT	300	9.00	300	9.00	450	13.50	450	13.50	1500	45.00
3	Seed distribution subsidy for the seeds produced by Self Help Groups @ Rs.5/Kg.	MT	300	15.00	300	15.00	450	22.50	450	22.50	1500	75.00
4	Supply of Quality Certified seeds at nominal cost to enhance the SRR (Depot & Private) Rs.5/ Kg.	MT	3700	185.00	3700	185.00	3700	185.00	3700	185.00	14800	740.00
5	Seed Minikit of new HYV @ Rs.100/ Minikit	Nos.	2400	2.40	2500	2.50	2500	2.50	2750	2.75	10150	10.15
6	Hybrid Rice seed prodn. subsidy @ Rs.20/Kg. FIG/ TANWABE Groups @ 10 Ac/group (4 MTs) (100 groups)	MT	10	2.00	20	4.00	30	6.00	30	6.00	90	18.00
7	Hybrid Rice Seed Distribution subsidy 75% cost or Rs.100/ whichever is less	MT	10	10.00	20	20.00	30	30.00	50	50.00	110	110.00
	Total			**226.90**		**235.50**		**259.50**		**359.50**		**1081.40**

Table.27 contd…

(Unit cost in lakhs)

Sl. No	Name of the Component	Unit	2008-2009		2009-2010		2010-2011		2011-2012		Total	
			No.of Units	Total Cost	No.of Units	Total Cost	No.of Units	Total Cost	No.of Units	Total Cost	No.of Units	Total Cost
II	**Integrated Nutrient Management**											
1	Distribution of Green Manure Seeds @ 75% subsidy of Rs.15/Kg.	MT	10	1.50	60	9.00	60	9.00	80	12.00	210	31.50
2	Distribution of Soil Health @ RS.100/- per card (soil + water testing)	L.Nos	0.40	40.00	0.40	40.00	0.40	40.00	0.40	40.00	1.6	160.00
3	Assistance to start vermi compost production unit @ Rs,10000 per unit (Self help group women farmers)	No.	8	0.80	10	1.00	10	1.00	10	1.00	38	3.80
4	Distribution of Micro Nutrient Mixture @ Rs.500 /Ha. Or 50% subsidy	L.Ha.	0.25	125.00	0.25	125.00	0.25	125.00	0.25	125.00	1	500.00
5	Gypsum @ 500/Ha. (Cost of gypsum 50% & transport 100% for 500 Kgs.)	L.Ha.	0.03	15.00	0.03	15.00	0.03	15.00	0.03	15.00	0.12	60.00
	Total			**182.30**		**190.00**		**190.00**		**193.00**	**0**	**755.30**
III	**Integrated Pest Mgt.**											
1	Farmers field School @ 17000/ No.	Nos.	26	4.42	26	4.42	26	4.42	26	4.42	104	17.68
2	Massive Rate control campaign in village @ Rs.5000/ village	No.	400	20.00	400	20.00	400	20.00	400	20.00	1600	80.00
3	Publicity & Training @ Rs.50000/- per dist.	Nos.	1	0.50	1	0.50	1	0.50	1	0.50	4	2.00
	Total			**24.92**		**24.92**		**24.92**		**24.92**	**0**	**99.68**

Table. 27 contd…

(Unit cost in lakhs)

Sl. No	Name of the Component	Unit	2008-2009		2009-2010		2010-2011		2011-2012		Total	
			No.of Units	Total Cost	No.of Units	Total Cost	No.of Units	Total Cost	No.of Units	Total Cost	No.of Units	Total Cost
IV	**Machineries and Equipments**											
1	Promotion of SRI distn. of Marker, Conoweeder and other items @ Rs.3000/Ha.	Ha.	15	0.45	15	0.45	15	0.45	15	0.45	60	1.80
2	Transplanter to TANWABE / FIG/Farmers @Rs.75000 each or 50% subsidy	No.	10	7.500	10	7.5	10	7.5	10	7.5	40	30.00
3	Power tiller with accessories @Rs.75000 each or 50% subsidy	No.	30	22.500	50	37.5	50	37.5	50	37.5	180	135.00
	Total			**30.005**		**45.005**		**45.005**		**45.005**		**165.02**
V	**Technologies**											
1	Demonstration on SRI/ Hybrid Rice @ 1 demn./ 100 Ha. @ Rs.3000/Ha.(or)50% Sub.	No.	150	4.50	150	4.50	150	4.50	150	4.50	600	18.00
2	Village campaigns- Kharif/ Rabi @ Rs.1000/per campaign	No.	300	3.00	300	3.00	300	3.00	300	3.00	1200	12.00
3	Production ofshort film on New technologies each Rs.2.5 lakhs	No.	1	2.50	1	2.50	1	2.50	1	2.50	4	10.00
	Total			**10.00**		**10.00**		**10.00**		**10.00**	**0**	**40.00**
VI	**Others**											
1	Tarpaulin @ Rs.5000/No.	Nos.	150	7.50	150	7.50	150	7.50	150	7.50	600	30.00
2	Biofertiliser @ Rs.3 per No.	L.No.	2.5	7.50	2.5	7.50	2.5	7.50	2.5	7.50	10	30.00
3	Publicity/POL & Hireing of vehicle @ Rs.100000/ per district	Nos.	1	1.00	1	1.00	1	1.00	1	1.00	4	4.00
4	Thrashing floor @ Rs.20000/ per No.	No.	20	40.00	20	40.00	20	40.00	20	40.00	80	160.00
	Total			**56.00**		**56.00**		**56.00**		**56.00**		**224.00**
	Grand Total			**530.13**		**561.43**		**585.43**		**688.43**		**2365.40**

Table. 28 Project Cost for Maize (Irrigated)

(Rs. in lakhs)

Sl. No	Name of the Component	Unit	2008-2009		2009-2010		2010-2011		2011-2012		Total	
			No.of Units	Total Cost	No.of Units	Total Cost	No.of Units	Total Cost	No.of Units	Total Cost	No.of Units	Total Cost
I	**Seed**											
1	Hybrid seed distribution @ 50% subsidy limited to Rs.75/ Kg.	Tonnes	5	3.75	5	3.75	5	3.75	5	3.75	20	15.00
	Total			**3.75**		**3.75**		**3.75**		**3.75**		**15.00**

Table.29 Project Cost for Crop : Gingelly

Unit cost in lakhs

Sl. No	Name of the Component	Unit	2008-2009		2009-2010		2010-2011		2011-2012		Total	
			No.of Units	Total Cost	No.of Units	Total Cost	No.of Units	Total Cost	No.of Units	Total Cost	No.of Units	Total Cost
I	**Seed**											
1	Seed production subsidy @ Rs.10000/tonnes	Tonees	5	0.50	5	0.50	5	0.50	5	0.50	20	2.00
2	Seed Distribution @ Rs.12000/ tonnes	Tonees	5	0.60	5	0.60	6	0.60	6	0.60	22	2.40
	Total			**1.10**		**1.10**		**1.10**		**1.10**		**4.40**
II	**Integrated Nutrient Management**											
1	Distn. Of Mn So4 subsidy @ 50% subsidy limited to Rs.100/ ha	Ha.	200	0.20	200	0.20	200	0.20	200	0.20	800	0.80
	Total			**0.20**		**0.20**		**0.20**		**0.20**	**0**	**0.80**
	Grand Total			**1.30**		**1.30**		**1.30**		**1.30**		**5.20**

Table. 30 Project Cost for Pulses

Unit cost in Lakhs

Sl. No	Name of the Component	Unit	2008-2009		2009-2010		2010-2011		2011-2012		Total	
			No.of Units	Total Cost	No.of Units	Total Cost	No.of Units	Total Cost	No.of Units	Total Cost	No.of Units	Total Cost
I	**Seed**											
1	Seed Production subsidy @ Rs.10/ Kg.	Tonnes	90	9.00	90	9.00	90	9.00	90	9.00	360	36.00
2	Seed Production through FIG/ TANWABE one time grant @ Rs.50000/group (10 MT/Group/year)	No.	9	4.50	0	0.00	0	0.00	0	0.00	9	4.50
3	Seed Production subsidy @ Rs.10/ Kg. Shared by seed producing groups/ grower @ 25:75	Tonnes	90	9.00	90	9.00	90	9.00	90	9.00	360	36.00
4	Seed Distribution subsidy @ Rs.12/ Kg. Through Dept/ Private/ TANWABE and FIG	Tonnes	180	21.60	180	21.60	180	21.60	180	21.60	720	86.40
	TOTAL			**44.10**		**39.60**		**39.60**		**39.60**		**162.90**
II	**Integrated Nutrient Management**											
1	M.N.Mixture Distn. @ 50% cost limited to Rs.500/Ha.	Ha.	870	4.35	870	4.35	870	4.35	870	4.35	3480	17.40
2	Foliar Nutrient application subsidy @ 50% cost limited to Rs.200/ Ha.	Ha.	2000	4.00	2000	4.00	2000	4.00	2000	4.00	8000	16.00
3		L.Ha.	0.1	125.00	0.1	125.00	0.1	125.00	0.1	125.00	0.4	500.00
	Total			**133.35**		**133.35**		**133.35**		**133.35**	**0**	**533.40**

Table.30 contd… **(Unit cost in Lakhs)**

Sl. No	Name of the Component	Unit	2008-2009		2009-2010		2010-2011		2011-2012		Total	
			No.of Units	Total Cost	No.of Units	Total Cost	No.of Units	Total Cost	No.of Units	Total Cost	No.of Units	Total Cost
III	**Integrated Pest Management**											
1	Farmers field School @ 22680/ No.	Nos.	6	1.361	6	1.361	6	1.361	6	1.361	24	5.444
2	IPM @ subsidy of Rs.750/ha.	L.Ha.	0.1	75.00	0.1	75.00	0.1	75.00	0.1	75.00	0.4	300.00
	Total			**76.361**		**76.36**		**76.361**		**76.36**	**0**	**305.44**
IV	**Machineries and Equipments**											
1	Pipes carrying water from source to field @ 50% subsidy limited to Rs.15000 max. of 800 Mts.	No.	50	7.50	50	7.50	50	7.50	50	7.50	200	30.00
	Total			**7.500**		**7.500**		**7.500**		**7.500**		**30.00**
V	**Technologies**										**0**	**0.00**
1	Precision farming by sprinkler @ 90% subsidy limited to Rs.15000/ha.	Ha.	450	67.50	450	67.50	450	67.50	450	67.50	1800	270.00
2	Farmers Training 50 farmers for 2 days/ Rs.15000/ training	No.	6	0.90	6	0.90	6	0.90	6	0.90	24	3.60
	Total			**68.400**		**68.40**		**68.40**		**68.40**	**0**	**273.60**
VI	**Others**										**0**	**0.00**
1	Distribution of Bio.fertiliser @ 50% subsidy Rs.3/ No.	L.No.	0.2	0.60	0.2	0.60	0.2	0.60	0.2	0.60	0.8	2.40
	Total			**0.600**		**0.60**		**0.60**		**0.60**		**2.40**
	Grand Total			**333.51**		**325.81**		**325.81**		**325.81**		**1310.94**

Table.31 Project Cost for Groundnut (Rainfed)

(Unit cost in lakhs)

Sl. No	Name of the Component	Unit	2008-2009		2009-2010		2010-2011		2011-2012		Total	
			No.of Units	Total Cost	No.of Units	Total Cost	No.of Units	Total Cost	No.of Units	Total Cost	No.of Units	Total Cost
I	**Seed**											
1	Seed distribution @ 50% subsidy limited to Rs.12/ Kg.	MT	20	2.40	20	2.40	20	2.40	20	2.40	80	9.60
	Total			**2.40**		**2.40**		**2.40**		**2.40**		**9.60**
II	**Integrated Nutrient Management**											
1	Distribution of Gypsum subsidy @ 50% cost + TC limited to Rs.750/- Ha.	Ha.	280	2.10	280	2.10	280	2.10	280	2.10	1120	8.40
2	M.N.Mixture Distribution @ 50% cost limited to Rs.500 Ha.	Ha.	280	1.40	280	1.40	280	1.40	280	1.40	1120	5.60
	Total			**3.50**		**3.50**		**3.50**		**3.50**		**14.00**
	Grand Total			**5.90**		**5.90**		**5.90**		**5.90**		**23.60**

Table.32 Project Cost for Groundnut (Irrigated)

Unit cost in lakhs

Sl. No	Name of the Component	Unit	2008-2009		2009-2010		2010-2011		2011-2012		Total	
			No.of Units	Total Cost	No.of Units	Total Cost	No.of Units	Total Cost	No.of Units	Total Cost	No.of Units	Total Cost
I	**Seed**											
1	Seed production subsidy @ Rs.10/ Kg.	Tonnes	870	87.00	870	87.00	870	87.00	870	87.00	3480	348.00
2	Seed Distribution @ 50% subsidy limited to Rs.12/ Kg.	Tonnes	870	104.40	870	104.40	870	104.40	870	104.40	3480	417.60
3	Purchase and distribution of Breeder seeds @ Rs.50/ Kg.	MT	2	1.00	3	1.50	3	1.50	3	1.50	11	5.50
4	Seed Village scheme - seed distribution @ 50% cost limited to Rs.20/ Kg.	Tonnes	300	60.00	300	60.00	300	60.00	300	60.00	1200	240.00
	Total			**252.40**		**252.90**		**252.90**		**252.90**		**1011.10**
II	**Integrated Nutrient Management**											
1	Distn. Of Gypsum subsidy @ 50% cost + TC limited to Rs.750/ Ha.	Ha.	5800	43.50	5800	43.50	5800	43.50	5800	43.50	23200	174.00
2	M.N.Mixture Distn.@ 50% cost limited to Rs.500/Ha.	Ha.	870	4.35	870	4.35	870	4.35	870	4.35	3480	17.40
				47.85		**47.85**		**47.85**		**47.85**	**0**	**191.40**
III	**Integrated Pest Management**											
1	Farmers field School @ 22680/ No.	Nos.	6	1.361	6	1.361	6	1.361	6	1.361	24	5.444
	TOTAL			**1.361**		**1.361**		**1.361**		**1.361**	**0**	**5.44**
IV	**Machinaries and Equipments**											
1	Pipes carrying water from source to field @ 50% subsidy limited to Rs.15000	No.	100	15.00	100	15.00	100	15.00	100	15.00	400	60.00
	Total			**15.000**		**15.000**		**15.000**		**15.000**		**60.00**

Table.32 contd…

(Unit cost in lakhs)

Sl. No	Name of the Component	Unit	2008-2009		2009-2010		2010-2011		2011-2012		Total	
			No.of Units	Total Cost	No.of Units	Total Cost	No.of Units	Total Cost	No.of Units	Total Cost	No.of Units	Total Cost
V	**Technologies**										**0**	**0.00**
1	Precision farming (Drip fertigation) 10 Ha. Cluster subsidy @ 90% subsidy limited to Rs.8 lakhs/cluster	No.	3	24.00	3	24.00	3	24.00	3	24.00	12	96.00
2	Farmers Training 50 farmers/training 2 days Rs.20000/ training	No.	12	2.40	12	2.40	12	2.40	12	2.40	48	9.60
	Total			**26.40**		**26.40**		**26.40**		**26.40**	**0**	**105.60**
VI	**Others**										**0**	**0.00**
1	Biofertiliser distn. Subsidy @ Rs.3 per No.	L.No.	0.5	1.50	0.5	1.50	0.5	1.50	0.5	1.50	2	6.00
2	Publicity/POL & Hireing of vehicle @ Rs.100000/ per district	No.	1	1.00	1	1.00	1	1.00	1	1.00	4	4.00
3	Construction of Rural godowns and marketing centre to stock and distribute seeds and other inputs for TANWABE/ FIG @ Rs.10 Lakhs/ each	Nos.	8	80.00	0	0.00	0	0.00	0	0.00	8	80.00
	Total			**82.50**		**2.50**		**2.50**		**2.50**		**90.00**
	Grand Total			**425.51**		**346.01**		**346.01**		**346.01**		**1463.54**

6.1.1. Establishment of Agriculture Clinic cum Mini Soil Testing Laboratories

Background

The average productivity of the major crops grown in Tamil Nadu is only 60 per cent of the potential yield. The yield gap is mainly attributed to decline in soil health, water deficiency, unfavourable climatic conditions, poor adoption of agro technology etc., Deterioration of soil health is primarily due to decline in soil fertility and soil organic matter.

The organic matter status of Kancheepuram district soils registered a steep decline from 1.2% in 1970s to 0.68% in 2002. Soils in general, are low in available nitrogen, medium in available phosphorus and medium to high in available potassium. Sulphur deficiency is prevalent in 23 per cent of the soils. Micronutrient removal due to high yielding varieties and intensive agriculture is also higher which necessitates regular application of micronutrients in order to match their depletion from the native soil reserve.

Agri Clinic Centres

It has been assessed that over 70 percent of the farmers lack awareness on the best farming practices due to inadequate advisory services at their reach. The extent of adoption of crop production technologies was found to be as low as 5 per cent. Hence, there is an urgent need to strength the advisory services at block levels for effective dissemination of the technologies. The Agri Clinics can provide paid consultancy services for enhancement of agriculture production and income of farmers. The centres will advise farmers on crop selection, best farm practices, post-harvest value addition options, key agricultural information like internet-based weather forecast, price trends, market news, risk mitigation and crop insurance, credit and input access, for the benefit of the farmers. The centre will also act as a knowledge provider, enabling the farmers to get access with the latest technologies in the filed of agriculture, horticulture and farm forestry.

Mini Soil Testing Laboratories

There is one soil testing laboratory having the capacity to analyse only 33,000 soil samples per annum. There are 3,05,000 farm holdings in Kancheepuram. Regular soil testing done at least once every 3 years is the best way to ensure that soil remains healthy and productive, maximizing benefits to the farmers. It is possible to analyse 99,000 Nos. soil samples in a period of 3 years by the existing soil testing laboratory. Nearly 2,06,000 lakh samples will remain untested for soil health parameters which can be done by the newly proposed mini soil testing laboratories at block level.

Project Strategy

The unemployed graduates of B.Sc (Agriculture / Horticulture / Forestry / Agricultural Engineering) will be considered for the setting up the agri clinic cum mini soil testing laboratories. The identified candidates will be counseled and selection will be made based on their aptitude for advisory service and the financial back up for the repayment of the loan. The selected candidates will be supported to set up the agri clinic cum mini soil testing laboratories at a cost of Rs.6.0 lakhs per unit through bank loan tie up with 50 percent back ended subsidy of Rs.3.0 lakhs.

To start with, it is proposed to establish 5 Agri clinic cum mini Soil Testing Laboratories (129 numbers in the selected 5 blocks *viz.*, Acharapakkam, Madurantagam, Kattankulathur, Thirukalukundram and Thiruporur.

These laboratories will have the analytical capacity of 6,000 samples per lab per year. The mini soil testing laboratories will function under the supervision of District Soil Testing Laboratories. The existing soil testing laboratories at District Headquarters will serve as coordinating and quality ensuring centres, apart from taking up the micronutrient analysis of soil samples.

4 Project Goals

- Advising of farmers on precision farming, use of quality inputs, custom hiring of machineries and facilitation of marketing of agricultural produce.
- Soil and crop specific fertilizer recommendations to the farmers.
- Reclamation of problem soils of farmers.
- Management of poor quality irrigation waters.
- Facilitation of the farmers for midterm nutrient correction and plant protection measures.

5 Project Components

The main components of the project are i) Agri-clinics and ii) Mini soil testing laboratories. The technical details of the components of the project are as follows :

a Purpose

- To offer advisory service and act as knowledge providing centre for the Agricultural Technologies and Soil health care.

b Objective

- Advisory service on crop production and marketing.
- Balanced fertilization through soil test based fertilizer recommendation and reclamation of problem soils and potential use of poor quality irrigation water.

c Outputs

- Enhanced crop productivity through effective technology transfer.
- Increased profit through best marketing options.
- Soil test based balanced fertilizer recommendations for crops.
- Reclamation measures for problem soils.
- Mid term correction of the nutrient deficiency disorders of crops through visual diagnostic kit software.
- Soil suitability for different crops.
- Sustenance of soil health.

d Performance targets

- Number of advisory services offered on best management practices , agricultural inputs, market information etc.,
- Assistance provided for preparing project proposals for bank loans /credit access
- Number of field visits and on spot problems solved
- Mid term corrections for the nutrient deficiency disorders using visual diagnostic kit (VDK) soft ware
- Number of soil and irrigation water samples tested and recommendations given.

e Activities

Agri-clinic Centres

- Advisory service
  - Crop selection
  - Agricultural inputs
  - Best farming practices
  - Value addition options
  - Project proposals for bank loan
  - Marketing of farm produce
  - Crop insurance and credit access
- Diagnosis of nutrient disorders and remediation through
  - visual diagnostic kit
  - Rapid tissue testing
- Facilitating custom hiring of farm machineries
- Field visits & On spot farm advisory service
- Mini soil testing labs
- Soil testing for pH, EC and soil nutrients
- Quality testing of irrigation water
- Issue of Soil Health Cards
- Soil-Crop based recommendation for integrated nutrient management
- Advisory on reclamation of problem soils
- Advisory on management of poor quality water

f	**Inputs**	**Infrastructure Facilities Including** • Furnished own/rental building with a spacing of about 500 sq.ft. • Laboratory equipments • Soil and water storage cabinets, work tables, glasswares and chemicals, Electricity, water and gas supply • Computer & accessories with internet connectivity • Rapid tissue test kit, dissection microscope, hand refractometer etc., • Soil health and Visual Diagnostic softwares.
g	**Implementation arrangements**	**Department of Agriculture** • Selection of unemployed agricultural graduates. • Approval of the bank loan – tie up with commercial banks • Monitoring of the establishment of the centre and periodical reporting on the activities • Release of back ended subsidy to the entrepreneurs • Periodical visits and monitoring by Tamil Nadu Agricultural University. • Tamil Nadu Agricultural University will also offer Guidelines with specifications for the setting up of the agriclinic and mini STLs and • Training on analytical techniques and interpretation of the results • And Issue of guidelines for monitoring.
h	**Data sources, Monitoring and evaluation**	Based on the performance targets, the activities of the agriclinic cum mini STL will be evaluated by the Department of Agriculture with the guidance from TNAU.

6 Project Cost and Financing **Rs. in lakhs**

a) Establishment cost of five Agri clinic cum Mini STLs in Kancheepuram district	50.00
b) Monitoring - Agriclinic cum Mini STLs	5.00
c) Training	5.00
Grand Total	60.00

6.1.2. Improving Soil Health of the Kancheepuram District Soils

1. Abstract

Mini Soil Testing Laboratory and Agri clinic for every block with a cost of Rs.10 lakhs/unit.

2. Background for Problem Focused

In Kancheepuram District, the major soil orders are inceptisol and intisol. The intisol soils are very low in available nutrients. In inceptional soils, due to heavy clay lexture, the drainage is poor. The availability of nitrogen to plant is very low. The availability of micronutrients like zinc, manganese and boron are also below the critical level.

3. Project Rationale

Detailed and comprehensive soil survey and testing, covering all holdings in all the villages is not in practice. Due to less productivity of the soil, the yield has been reduced. The soil health must be improved by adding of available nutrients in various forms.

4. Project Strategy

For improving the soil productivity, soils of every farm holding is to be analysed before sowing. The soil health cards must be obtained for the recommendation of balanced fertilizers. For this, to establish mini agriclinic cum mini STLs. at every block in a phased manner by utilizing the unemployed agricultural graduates is proposed.

5. Project Goal

Improve the soil productivity so that the yield has to be increased in every farm holdings by application of recommended balanced fertilizer and management of poor quality of irrigation water.

6. Project Components

A Mini Soil Testing Laboratory will be opened at every block so that all the farmers in the block will get their soil analysed within a short span of time and also it act as a knowledge providing centre for agricultural technologies.

7. Project Cost and Financing

Minimum of 10 laklhs to be needed for starting a mini soil testing laboratory and this may be functioned by any graduate with agricultural knowledge.

Table. 33 Cost of the Project for Improving Soil Health

Cost of the Project	2008-09		2009-10		2010		2011	
	No.of units	Cost	No.of units	Cost	No.of units	Cost	No.of units	Cost
Mini Soil Testing Laboratory cum Agriclinic 10lakhs/unit with 50 % subsidy	3 blocks	15	3	15	3	15	3	15

8. Reporting

The soil analysis with soil health cards may be reported to the concerned block Assistant Director of Agriculture.

The district soil testing officials may evaluate this clinic once in 6 months.

9. Budget

- Mini Soil Testing Laboratory.
- Unit cost 10 lakhs/unit with 50% subsidy.
- Minimum 3 per year with allocation of 30 lakhs for the year 2008-2009.

6.1.3. Enhancing the Soil Organic Matter by Green Manure *Insitu*

1. Abstract

To Improve and sustain the productivity of the soil by increasing the organic matter content of the soil. For this green manure has to be raised and ploughed insitu.

2. Background for Problem Focused

Soil productivity will be improved by increasing the humus content of the soil. In Kancheepuram District, the humus content is below1%. By adding organic manure soil humus can be increased. Due to less availability of cattles compost or poultry drops, the only source to increase the organic matter is by adding green manures into the soil.

3. Project Rationale

To increase the organic matter content of the soil, by growing green manure crops and ploughing insitu. By increasing the organic matter content, the drainage and aeration will be improved.

4. Project Strategy

By introducing green manure crops in the cropping pattern.

5. Project Goal

Improve the soil productivity of the soil to get sustainable yield.

6. Project Component

Growing Dhaincha or sunnhemp plant in the field itself and it can be ploughed insitu after 60 days and it will be decomposed before transplanting of paddy seedling.

7. Project Cost and Financing

All the blocks of this district should be covered by distributing green manure seeds with 50% subsidy. The seed requirement is 70kg. /ha.

Table.34 Project Cost for Enhancing the Soil Organic Matter

Rs. in lakhs

Project Cost	2008-09	2009-10	2010-11	2011-12
Area(ha.)	1500	1500	1500	2000
Seed requirement 70kg/ha. Tonnes	1.05	1.05	1.05	1.40
Cost Rs.25/kg.	26.25	26.25	26.25	35.0

8. Reporting

The distribution and raising of green manure in the farmers field is recorded by the Assistant Agricultural Officers and the area will be reconciled in the district figure by Assistant Director of Agriculture in the block concerned.

9. Budget During 2008-09

Area covered is : 1500 ha.

Amt. needed to distribute of green manure seeds : 26.25 Lakhs.

6.1.4. Increasing Groundnut Productivity through Polythene Mulching

1. Abstract

To increase the yield of groundnut crop by adopting moisture conservation technique by providing Polythene mulch to the groundnut growing farmers.

2. Background for Problem Focused

In Kancheepuram District, groundnut crop is cultivated to an extent of 6000ha. under rainfed and 38,000 ha in irrigated condition. The productivity is mainly affected by non availability of required moisture during growth period and weed menace.

3. Project Rationale

Due to non availability of moisture and weed menace, the yield of groundnut is reduced. These must be prevented by adopting polythene mulching technique.

4. Project Strategy

By adopting polythene mulching technique, the soil moisture can be saved, besides that the soil temperature is maintained. The weed growth is completely arrested during early stage of the crop.

5. Project Goal

By conserving soil moisture, the yield of the groundnut will be increased above 20 to 25%.

6. Project Component

Polythene sheets will be provided to every groundnut growing farmers with 60% subsidy in Kharif and Rabi season.

Table.35 Cost of Project for Increasing Groundnut Productivity through Polythene Mulching

(Rs. in lakhs)

Project Cost	**2008-09**	**2009-10**	**2010**	**2011**
Polythene mulching (ha.)	5000	5000	5000	5000
Finance	750	750	750	750

7. Reporting

The action taken will be reported to the district Joint Director of Agriculture by concerned block Assistant Director of Agriculture.

8. Budget During 2008-09

Area covered under polythene mulch is	:	5000ha.
The cost required to purchase the polythene mulch is	:	Rs. 750 lakhs.

6.1.5. Cultivation of Paddy Under SRI Method

1. Abstract

To increase the yield of Paddy by adopting SRI techniques. Financial assistance will be given to the farmer for demonstration conoweeder etc.

2. Background for Problem Focused

The yield obtained in paddy is lower in Kancheepuram district due to transplanting more number of aged seedlings. Due to poor aeration, the productive tillers will be less.

3. Project Rationale

To adopt uniform spacing and get more productive tillers, the SRI technique must be adopted.

4. Project Strategy

For adopting SRI technique, financial assistance will be provided to the paddy farmers for purchasing marker, conoweeder and other inputs.

5. Project Goal

To get 10 tons. /ha. paddy yield in all the farm holdings.

6. Project Component

To adopt SRI technique in large scale, providing financial assistance in the form of tools such as markers, conoweeder and wooden frame with 80% subsidy.

7. Project Cost and Financing

Table 36 Cost of Project for SRI Paddy

Project Cost	2008-09	2009-10	2010-11	2011-12
No.of holding to adopt SRI (ha.)	20000	20000	20000	20000
Finance Rs. 2500/ha 80 Percentage subsidy	400	400	400	400

8. Reporting

The laid out demonstration and results will be reported to the district Joint Director of Agriculture in turn to Commissioner of Agriculture.

9. Budget

Rupees 400 lakhs is needed for demonstrating SRI technique during 2008-09 in 20000 ha.

6.1.6. Providing Agricultural Machineries to Overcome Labour Problem

1. Abstract

To overcome labour problem during harvest in paddy, combined harvester may be provided in every block.

2. Background for Problem Focused

Nowadays getting agricultural labour is very difficult for all farm operations. Hence the farmers hesitate to cultivate the annual crops. One is labour shortage and other is high demand for wages for even simple operation.

3. Project Rationale

Hence, it is necessary to mechanise the farm operations wherever it is possible at least during transplanting and harvesting stage.

4. Project Strategy

A combined harvester is needed for paddy harvest during the harvest season.

5. Project Goal

To meet out the high labour cost during harvest by providing combined harvester at reasonable hire charges.

6. Project Component

10 Nos. of combined harvester will be provided in each block in phased manner.

7. Project Cost and Financing

A combined harvester cost Rs.10 Lakhs. This amount may be provided through bank loan to unemployed graduate with 50% subsidy or to the farmers who are able to finance initially.

Table 37 Cost of Project for Providing Agricultural Machineries to Overcome Labour Problem

Rs. in lakhs

	2008-09	**2009-10**	**2010**	**2011**
Combined harvester(No.)	10	10	10	10
Finance Rs. (10 lakhs/unit).	100	100	100	100

8. Reporting

The beneficiary will report the usage of farm machineries to the concerned block Assistant Director of Agriculture.

9. Budget

10 Nos. of combined harvester will be purchased during 2008-09.

The cost of the machineries will be Rs. 100 Lakhs with 50% subsidy to the beneficiary.

Table.38 Special Projects - Budget Estimates

(Rs in lakhs)

S.No	Projects	2008-09	2009-10	2010-11	2011-12	Total
1	Establishment of Agri clinic	60				60
2	Soil testing lab	15	15	15	15	60
3	Enhancing soil organic matter	26.25	26.25	26.25	35	113.75
4	Increasing groundnut productivity	750	750	750	750	3000
5	Paddy SRI method	400	400	400	400	1600
6	Provision of agricultural machinery	100	100	100	100	400
7	**Total**	**1351.25**	**1291.25**	**1291.25**	**1300**	**5233.75**

6.2. Horticulture Development

Next to Agriculture, Horticulture crops like fruits and vegetables occupy important place in developing Agriculture. But the production and productivity of fruits and vegetables are low due to non adoption of new and improved horticulture technologies pertain to crop varieties, crop production, crop protection, handling processing and storage of fruits and vegetables. To give a fillip to horticulture in the district, it is proposed to introduce several interventions like use of hybrids, tissue-cultured planting materials, high density plantings, use of net houses for vegetable seed production, use of new gadgets on technology transfer through exposure visits. The budget requirements for the proposed interventions are given in Table 39.

Table.39 Project Cost for Horticulture Development in Kancheepuram District

(Rs. in lakhs)

Sl. No	Activities	Unit	2008 -2009		2009 -2010		2010 – 2011		2011 – 12	
			Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin
1.	Net house Structure	Rs. 1.00 lakh 300 sqm	1500 sqm	2.50	1500	2.50	1500	2.50	1500	2.50
2.	Nursery & vegetable production	Rs. 1.00 lakh 300 spm	1500 sqm	2.50	1500	2.50	1500	2.50	1500	2.50
3.	Pandal for vegetable production	1 lakh / ha	20	10.00	20	10.00	20	10.00	20	10.00
4.	Package for plant protection	Rs. 3000 / ha.	50	0.750	50	0.75	40	0.60	50	0.75
5.	Plastic crates for vegetables, fruits handling	Rs. 250 / crates	500	0.625	500	0.625	500	0.625	500	0.625
6.	Farm waste shedder / vegetable waste shedder	Rs. 40, 000 / no	1	0.20	2	0.40	3	0.60	3	0.60
7.	Cashew high density planting	Rs. 9000 / ha.	10	0.45	10	0.45	10	0.45	10	0.45
8.	Banana Bunch cover	Rs. 10 / no	20, 000	2.00	20, 000	2.00	20, 000	2.00	20, 000	2.00

Table.39 contd…

9.	Humic acid / effective e - microbes	Rs. 400 / litre	15	0.03	20	0.04	20	0.04	20	0.04
10.	Erection of net for production of disease free planting materials.	Rs. 1 lakh / 300 sqm	300 sqm	0.50	600 sqm	1.00	600 sqm	1.00	600 sqm	1.00
11.	Support system for crop									
	Banana	1.5 lakh / ha.	5	3.75	5	3.75	5	3.75	5	3.75
12.	Banana corm injector	Rs. 300/ no.	20	0.03	20	0.03	20	0.03	20	0.03
13.	Mango harvester	Rs. 500/ no.	50	0.125	50	0.125	50	0.125	50	0.125
14.	Sales / out let points in district	Rs. 2.60 / no.	1	1.30	-	-	-	-	-	-
15.	District level farmers workshop	Rs. 400 / farmer / day	200	0.80	200	0.80	200	0.80	200	0.80
16.	Interstate exposure visit	Rs. 5000 / farmers	20	1.00	20	1.00	20	1.00	20	1.00
17.	10 ha. Mega domo plot for the district	Rs. 25 lakhs	1	25.00	1	25.00	1	25.00	1	25.00
18.	Enterprising farmers association	Rs. 25 lakhs	1	25.00	-	-	-	-	-	-

Table.39 contd…

19.	Community fencing	Rs. 0.50 / ha.	-	-	20	10	20	10	20	10
20.	Support for betel vine	Rs. 40, 000 for 20 cents	1	1.00	-	-	-	-	-	-
21.	Hybrid vegetable cultivation									
A.	Seed material	Rs. 7000 / ha.	50	1.75	50	1.75	50	1.75	50	1.75
B.	T. C. Banana plantlets	Rs. 10/ plant	20000	1.00	20000	1.00	20000	1.00	20000	1.00
22.	Support system to vegetable growers / Hand operated sprayers	Rs. 1500 / no.	20	0.15	20	0.15	20	0.15	20	0.15
23.	Support system to perennial tree growers / Foot operated sprayers	Rs. 4000/ no	20	0.40	20	0.40	20	0.40	20	0.40
	Total			**80.86**		**59.77**		**59.32**		**64.47**

Budget Abstract (Rs. in lakhs)

2008 – 09 = 80.86
2009 – 10 = 63.28
2010 – 11 = 64.32
2011 – 12 = 64.47

Total = Rs,272.93 lakhs

6.2. 1. Net House Structure

Kanchipuram district lies in tropical climate. Hence control of sun light andmaintaining shade for specific crops is necessary for improved cultivation to increase the productivity and to obtain the produces throughout year. Hence erection of Net House is much important in this district. Net House installation is a new technology currently introduced by this department in the state Horticulture farms in this district. The farmers under precision farming project also use this technology for seedling production and distribution to other farmers.

Net House structure ensures more crop yield and quality; hence there is a substantial increase in productivity and production. Therefore increase in the percapita income leads to increase in the standard of living of farmers.

Table.40 Project Cost for Net House Structure

(Rs in lakhs)

S. No	Implementing Year	Project Outlay	
		Physical (ha)	Finance
1	2008-2009	1500 sqm	2.50
2	2009-2010	1500 sqm	2.50
3	2010-2011	1500 sqm	2.50
4	2011-2012	1500 sqm	2.50
	Total	**6000 sqm**	**10.00**

Project Components

- Erection of structure.
- Clearing the land area.
- Purchase of Iron poles / nylon nets
- Purchase of filling materials / house.

6.2. 2. Pandal for Vegetable Production

It finds meager area among vegetable crops though the need for gourds which require pandal are increasing substantially in Kancheepuram District. The production is also not appreciable due to lack of improved technology. Type of pandal which persists for longer duration is important since erection of pandal is a major component in gourds cultivation.

Table.41 Pandal for Vegetable Production

(Rs in lakhs)

S.N o	Implementing Year	Project Outlay	
		Physical (ha)	Finance
1	2008-2009	20	10.00
2	2009-2010	20	10.00
3	2010-2011	20	10.00
4	2011-2012	20	10.00
	Total	**80**	**40.00**

Project Components

Pitting.

Erection of poles or planting live materials.

Spreading Criss cross strings.

Seeding.

Shade net 50% and 35%.

6.2. 3. Package of Plant Protection

Prevention is better than cure. Pre treatment of Seed materials / seedlings with fungicides ensures protection against diseases; this results in good yield. Also application of PP chemicals during the crop period ensures minimum crop loss.

Table.42 Project Cost Package for Plant Protection

(Rs in lakhs)

S. No	Implementing Year	Project outlay	
		Physical (ha)	Finance
1	2008-2009	50	0.75
2	2009-2010	50	0.75
3	2010-2011	40	0.60
4	2011-2012	50	0.75
	Total	**190**	**2.85**

Project Components

- Fungicides & Pesticides
- Spraying mode.

Table.43 Plastic Crates for Vegetable Handling and Transport

(Rs in lakhs)

S.No	Implementing Year	Project outlay	
		Physical (ha)	Finance
1	2008-2009	500	0.625
2	2009-2010	500	0.625
3	2010-2011	500	0.625
4	2011-2012	500	0.625
	Total	**2000**	**2.500**

Table.44 District Level Farmers Workshop

(Rs in lakhs)

S.No	Implementing Year	Project outlay	
		Physical (ha)	Finance
1	2008-2009	200	0.80
2	2009-2010	200	0.80
3	2010-2011	200	0.80
4	2011-2012	200	0.80
	Total	**800**	**3.20**

Table.45 Project Cost for Inter State Exposure Visit

(Rs in lakhs)

S.No	Implementing Year	Project outlay	
		Physical (ha)	Finance
1	2008-2009	20	1.00
2	2009-2010	20	1.00
3	2010-2011	20	1.00
4	2011-2012	20	1.00
	Total	**80**	**4.00**

6.2. .7 Banana / Vegetables in Noon Meal Scheme (TANHOPE)

Vegetable growing under precision farming is catching up now in Kancheepuram district and also vegetables like capsicum, paprika and beans are taken up in precision farming. Marketing of these vegetables directly to consumer is the special effort taken up by the government through Uzhavar Santhais. Likewise, precision Farming farmers can also market the vegetable products to the Uznavar Santhais. Self help groups in the peripherals can be a liaison group to hand over the vegetables to the concerned noon meal centre.

In this district, procurement of vegetables from farmers and distributing through Uzhavar Santhai by SHGs for noon meal centre can be a productive scheme.

6.2. 8. Ten Hectares Mango Demo Plot for the District

This will be a model demo plot comprising specific variety of important fruits flowers, vegetables, and spices and condiments, medicinal and aromatics and plantation crops.

Table.46 Project Cost for Ten Hectares Mango Demo Plot for the Districts

(Rs in lakhs)

S.No	Implementing Year	Project outlay	
		Physical (ha)	Finance
1	2008-2009	1	25.00
2	2009-2010	1	25.00
3	2010-2011	1	25.00
4	2011-2012	1	25.00
	Total	**4**	**100.00**

Project Components

- Planting materials
- MI system and fertigation
- Fencing.
- Field labels and boards.
- PP chemicals and bio fertilizers.
- Water soluble fertilizers

6.2. 9. Enterprising Farmers Associations

It has been programmed to form at least three farmers groups in up coming years.

Table.47 Project Cost for Enterprising Farmers Associations

(Rs in lakhs)

S.No	Implementing Year	Project outlay	
		Physical (ha)	Finance
1	2008-2009	1	25.00
2	2009-2010	-	-
3	2010-2011	-	-
4	2011-2012	-	-
	Total	**1**	**25.00**

6.2. 10. Community Fencing

To encourage the farmers, community fencing will be provided at least for 10 ha. / unit.

Table.48 Project Cost for Community Fencing

(Rs in lakhs)

S.No	Implementing Year	Project outlay	
		Physical (ha)	Finance
1	2008-2009	-	-
2	2009-2010	10	5.00
3	2010-2011	10	5.00
4	2011-2012	10	5.00
	Total	**30**	**15.00**

Project Components

- Stone pillars and framed wires.
- Solar cables.

6.2. 11. Support for Betelvine

In this district, betelvine is cultivated in about 20 ha. for the past 30 years. At present the area is reduced to five ha. The betel vine farmers should be provided / assisted with supply of plant protection chemicals and fencing, so that the area could be increased.

Table.49 Project Cost for Support for Betelvine

(Rs in lakhs)

S.No	Implementing Year	Project outlay	
		Physical (ha)	Finance
1	2008-2009	1	1.00
2	2009-2010	-	-
3	2010-2011	-	-
4	2011-2012	-	-
	Total	**1**	**1.00**

Project Components

- Quality planting materials and PP Chemicals, bio fertilizers and bio agents.
- Shade net.

6.2. 12. Supply of seeds / seedling / planting materials

1. Back ground/ Problem Focused

Water melon / musk melon crop cultivation is picking up now in this district since it is fetching attractive prices to the farmers. The area is increasing from 20-30% every year. The normal area is 2000 ha. Hence cultivation should be increased and improved by supply of quality planting material like high yielding and hybrid seeds.

2. Project Rationale

Ensuring high income in unit area in stipulated time with the provision of quality and high yielding hybrid seeds.

3. Project Strategy

Supplying seeds in the requisite sowing period and providing technological support regarding package of practices and post harvest technology to the beneficiaries whenever required.

4. Project Goals

Hybrid seed distribution will result in increased area, high yield and improved production and productivity.

5. Project Components

Hybrid and high yielding seeds distribution (Rs 7000/ ha)

6. Project Cost

The average project cost will be Rs 7000(seven thousand) per hectare. It has been programmed to cover at least 500 ha. every year.

7. Implementation

- Assessing the requirement
- Identifying beneficiaries
- Supplying seeds
- Providing technical support

8. Reporting

Periodical reporting to the nodal officers

9. Abstract

To cater to the increased need for the watermelon, supply of quality hybrid seeds will fetch more prices and thereby increasing the income of the farmer.

10. Budget

Table.50 Project Cost for Supply of Seeds / Seedling / Planting Materials

(Rs in lakhs)

S. No	Implementing Year	Project outlay	
		Physical (ha)	Finance
1	2008-2009	50	1.75
2	2009-2010	50	1.75
3	2010-2011	50	1.75
4	2011-2012	50	1.75
	Total	**200**	**7.00**

6.2. 13. Farm Waste Shredder / Vegetable Waste Shredder

1. Background/ Problem Focused

The disposals of farm wastes is not proper, rather it can be used economically. Since Kanchipuram district is rich in cultivation of paddy, groundnut, sugarcane followed by vegetables, the stubbles can be recycled as manure instead of burning for further crop cultivation. If the farm waste can be composted with specific fungal or bacterial cultures and if it is shredded, soil fertility can be improved organically and indirectly it reduces the inorganic input requirement.

2. Project Rationale

By adding crop wastes, the soil health can be maintained and agriculture can be sustained with the help of farm waste shredder or vegetable waste shredder.

3. Project Strategy

Along with sufficient technical training and skill demonstration, the beneficiaries are provided with farm waste shredder/ vegetable shredder.

4. Project Goals

Composting the available farm wastes and applying in the field will improve soil fertility which increases the subsequent crop yield.

5. Project Components

(i). Cutter (ii) Compost materials and (iii) Shredder

6. Project Cost

One unit of machinery costs Rs 40,000/. one farmer will be identified for current year.

7. Implementation

- Identifying beneficiary
- Technical training with skill demonstration
- Providing shredder
- Inspecting the composting process periodically
- Reporting about the utility.

8. Report

Utility of the machinery is evaluated and reported.

9. Abstract

The wastes are disposed usefully by composting wastes and stubbles which in turn provide both good crop yield and improved soil fertility.

10. Budget

Table.51 Project Cost for Farm Waste Shredder / Vegetable Waste Shredder
(Rs in lakhs)

S.No	Implementing Year	Project outlay	
		Physical (No)	Finance
1	2008-2009	1	0.20
2	2009-2010	2	0.40
3	2010-2011	3	0.60
4	2011-2012	3	0.60
	Total	**9**	**1.80**

6.2. 14. Cashew High Density Planting

1. Background/ Problem Focused

Cashewnut is cultivated in 278 ha.area in Kanchipuram district. Importance is to be given for cultivation since it is a plantation and cash crop which fetches good and attractive price in the market. High density planting will increase the number of plants/ unit area which will increase the yield substantially. Supplying quality high yielding seedlings to the farmers will increase the area and production quality. High yielding planting material is the need of the hour.

2. Project Rationale

Ensuring the production and productivity and high income per unit area and also provision of high yielding and quality seedling for dense planting is assured.

3. Project Strategy

Supply of quality planting materials for dense planting, technical guidance, good package of practices, post harvest technology and marketing strategy to the beneficiaries as input.

4. Project Goal

Dense planting leads to increased production and productivity which would proportionately increase the farmer’s economy.

5. Project Components

Supply of planting materials @ Rs 9000/ ha at 50% subsidy.

6. Project Cost

The average project cost will be Rs.9000/ha. It is programmed to cover 10 ha every year.

7. Implementation

- Selection of farmers
- Supply of quality seedlings
- Providing technical support

8. Reporting

Periodical reporting to concerned official

9. Abstract

Supplying quality seedlings for dense planting which will increase the yield per unit area. This results in substantial increase in income to the farmers.

10. Budget

Table.52 Project Cost for Cashew High Density Planting

(Rs in lakhs)

S.No	Implementing year	Project outlay	
		Physical (ha)	Finance
1	2008-2009	10	0.45
2	2009-2010	10	0.45
3	2010-2011	10	0.45
4	2011-2012	10	0.45
	Total	**40**	**1.80**

6.2. 15. Banana Bunch Covers

1. Background/ Problem Focused

In Kanchipuram district, banana cultivation has more scope since marketing is easier since this district is near to the Chennai city. During 2006-07 in 388 ha banana was cultivated and the trend is increasing yearly. Also ensuring quality fetches more price with high class consumers.

2. Project Rationale

By supplying the banana bunch cover materials good quality of fruits to the consumer is ensured.

3. Project Strategy

Disease and pest infestation free bunches are ensured by supplying banana bunch cover.

4. Project Goal

Bunch cover will increase the quality of fruits which will fetch good and attractive price in the market and preferred by consumers.

5. Project Components

Bunch covers @ Rs.10/ no.

6. Project Cost

The average project will be Rs.2.00 lakhs. It has been programmed to cover 20,000 nos. every years.

7. Implementation

- Assessing requirement
- Identifying beneficiary
- Supply of cover materials

8. Reporting

Reporting about the utility to the officer concerned.

9. Abstract

By supplying the banana bunch covers, quality of the fruits are enhanced would which in turn increase the price of the produce for substantial increase in income.

10. Budget

Table.53 Project cost for Banana Bunch covers

(Rs in lakhs)

S.No	Implementing year	Project outlay	
		Physical (ha)	**Finance**
1	2008-2009	20, 000	2.00
2	2009-2010	20, 000	2.00
3	2010-2011	20, 000	2.00
4	2011-2012	20, 000	2.00
	Total	**80, 000**	**8.00**

6.2. 16. Erection of Net for Production of Disease Free Planting Materials.

1. Background/ Problem Focused

Tropical vegetable cultivation like brinjal, bhendi, gourds and chillies is common in Kanchipuram district. Pests like fruit borers, white flies and few virus diseases are persisting problem. Since disease free planting materials gives good crop stand in the field, protection of these planting materials under controlled environment reduces crop loss or plant protection measures later.

2. Project Rationale

Production of disease free planting material ensures good crop stand and good yield.

3. Project Strategy

Erection of net for production of planting materials with suitable technical support is ensured.

4. Project Goal

Production of disease free planting materials can provide more yield in unit area and by increase the income.

5. Project Component

Erection materials/ poles

Net materials

6. Project Cost

For the 1st year, for an area of 300 sq.m 1 lakh Rs. is budgeted at 50% subsidized cost. For rest of the three years 600 sq.m is programmed respectively.

7. Implementation

- Assessing the need
- Supplying materials
- Erection of net house
- Collecting contribution

8. Reporting

After completion of installation, reporting is done.

9. Abstract

Supplying net erection materials for creating disease free planting materials gives good crop stand and more yield.

10. Budget

Table. 54 Project Cost for Erection of Net for Production of Disease Free Planting Materials

(Rs in lakhs)

S.No	Implementing year	Project outlay	
		Physical (ha)	Finance
1	2008-2009	300 sqm	0.50
2	2009-2010	600 sqm	1.00
3	2010-2011	600 sqm	1.00
4	2011-2012	600 sqm	1.00
	Total	**2100 sqm**	**3.50**

6.2.17 (a) Banana - Erection of poles

1. Background/ Problem Focused

TC Banana cultivation is improved method adopted in this district in 100 hectares every year since 2006 and the farmers are getting more income by adopting MI with Fertigation. There is lot of scope to bring more area under TC Banana cultivation. Since this district lies in the coastal area, more wind is experienced often. Hence Banana farmers should be supported with providing wooden poles and stay wires to prevent the damage to the crop due to high velocity of winds.

2. Project Rationale

To ensure the quality product of banana fruits, the support system by erecting poles is important to get quality fruits and good marketability.

3. Project Strategy

Supplying erection materials and ensure quality products to fetch good rate in the market.

4. Project Goal

Erection of poles will ensure increased production and productivity of banana and in turn farmer’s economy will increase.

5. Project Component

- Staking and supporting poles
- Stay wires.

6. Project Cost

The average project cost is Rs 1.5 lakhs / ha.

7. Implementation

- Supplying support material
- Providing technical training

8. Reporting

The utility report will be submitted.

9. Abstract

To ensure the marketability and good price of the product, the support systems to banana is important and by that the economy of farmers will improve.

10. Budget

Table.55 Project Cost for Banana - Erection of Poles

(Rs in lakhs)

S.No	Implementing Year	Project Outlay	
		Physical (no)	**Finance**
1	2008-2009	5	3.75
2	2009-2010	5	3.75
3	2010-2011	5	3.75
4	2011-2012	5	3.75
	Total	**20**	**15.00**

6.2. 18. Humic acid / Effective e-Microbes

1. Background/ Problem Focused

In Kanchipuram district, horticultural crops have been cultivated in about 10, 000 hectares. Out of 10, 000 hectares, fruits are grown in 3,500 hectares, vegetables in 5,000 hectares, flowers in 500 ha. and spices in 400 hectares. Plantation crops like cashew and betel vine are grown in 550 hectares and medicinal and aromatic plants in 50 hectares.

For the past 10 years, farmers have made an attempt to cultivate organic fruits, and vegetables in about 100 hectares. If they are enthused with the assistance of bio-materials like humic acid / effective E-microbes, more area could be brought under organic horticulture.

2. Project Rationale

If organic stimulant like humic acid / effective e-microbes area supplied to the farmers more area could be brought under organic horticulture and the production and productively will definitely be increased.

3. Project Strategy

Supply of quality inputs, providing technical guidance and good package of practices will attract more farmers in use of these bio-stimulants and thereby good environmental conditions will exist.

4. Project Goal

These bio stimulants will be much useful in organic horticulture farming and there by good export possibilities will arise. The farmers will get good net income and their standard of living will be raised.

5. Project Components

Supply of quality Humic acid / effective E microbes @ Rs. 400 / litre.

6. Project Cost

The average project cost will be Rs. 4000 / 10 hectares and it has been programmed to cover 75 hectares during the project period. The materials will be supplied to the farmers @ 50% subsidy cost.

7. Implementation Chart

- Selection / identification of beneficiary farmers.
- Supply of quality materials @ one litre / hectare
- Providing technical support.

8. Reporting

Periodical reporting to the nodal officer.

9. Abstract

Bio-stimulants will definitely improve the productivity of the crops to 40% and per hectare yield will be uniformly increased. The per capita income of the farmer will also be increased.

10. Budget

Table.56 Project cost for Humic acid / Effective E Microbes

(Rs in lakhs)

S.No	Implementing year	Project outlay		
		Physical (ha)	Total cost	50% subsidy cost
1	2008-2009	15	0.06	0.03
2	2009-2010	20	0.08	0.04
3	2010-2011	20	0.08	0.04
4	2011-2012	20	0.08	0.04
	Total	**75**	**0.30**	**0.15**

6.2. 19. Banana Corm Injector

1. Background/ Problem Focused

In this district, Banana is cultivated in 200 ha, every year. The farmers are to be provided with corm injector to prevent the infestation of banana aphid which spreads diseases like bunchy top and also to control corm weevil.

2. Project Rationale

In order to stabilize the bumper yield of banana, the plant should be injected to increase yield and to fetch good value in the market.

3. Project Strategy

Awareness campaigns will be conducted at field level regarding the usage of corm injector. Technical guidance will be given to the farmers.

4. Project Goals

By supplying corm injector to the banana growers, disease free high quality bumper yield is assured.

5. Project Components

- Supply of corm injector.
- Antiseptic liquids like savlon and dettol to sterilize corm injector after each application.

6. Project Cost

20 nos @Rs.300/no is programmed for every year at 50% subsidy.

7. Implementation

- Identification of farmers
- Procurement of injector
- Supply of corm injector
- Collection of farmer’s contribution.

8. Reporting

Periodical reporting to the concerned officers.

9. Abstract

Since banana is staple fruit, supply of disease free good quality fruits in the market is important. This can be assured by providing corm injector so that consumer will be confident of taking high quality banana fruits.

10. Budget

Table.57 Project Cost for Banana Corm Injector

(Rs in lakhs)

S.No	Implementing year	Project outlay	
		Physical (ha)	Finance (Rs)
1	2008-2009	20	0.03
2	2009-2010	20	0.03
3	2010-2011	20	0.03
4	2011-2012	20	0.03
	Total	80	0.12

6.2. 20. Mango Harvester

1. Background/ Problem focused

In this district, Mango is cultivated in about 2000 hectares, and Bangalora, Rumani, Sendura, Alphonso and Banganapallee are the major varieties grown. While harvesting the fruits, the farmers are facing problems like cracking damages and diseases infected fruits, since the fruits fall in the soil. Hence providing the mango harvester is very important.

2. Project Rationale

To ensure the high income from mango fruits attractive, produces are to be supplied without cracks and spots. This can be ensured by providing mango harvester to the mango growers.

3. Project Strategy

Since mango is the king of fruits, it is preferred by everybody. The quality mango fruits can be harvested by specially designed harvester and providing post harvest technology to the farmers. So that the producer's economy is improved and the consumers can obtain quality fruits.

4. Project Goals

By providing fruit harvester to the farmers, good quality fruits are ensured in the market by which farmer's economy will be improved.

5. Project Components

- Mango harvester with nylon nets.

6. Project Cost

Mango harvester with nylon nets will be supplied to the farmers @ Rs 500/ farmer with 50 % subsidy.

7. Implementation

- ❖ Identification of beneficiary
- ❖ Purchasing harvester
- ❖ Supply of mango harvester to the farmers.

8. Reporting

The utility will be submitted to the officer concerned

9. Abstract

For ensuring damage less quality fruits while harvesting, supply of mango harvester is necessary.

10. Budget

Table.58 Project Cost for Mango Harvester

(Rs in lakhs)

S.No	Implementing year	Project outlay	
		Physical (no)	Finance
1	2008-2009	50	0.125
2	2009-2010	50	0.125
3	2010-2011	50	0.125
4	2011-2012	50	0.125
	Total	**200**	**0.500**

6.2. 21. Sales / Outlet Point in the District

1. Back ground/ Problem Focused

Kancheepuram district is located near Chennai city as well as it lies in the coastal area and 212, 400 hectares of lands are under cultivation and 30, 5004 land holders are there. Horticultural crops are cultivated in normal area of 10, 000 hectares. The farmers are in need of hybrid fruit plants, vegetables and spices seed and there is a great demand for good quality planting materials.

In Kanchipuram district, there are five state Horticultural farms functioning under the control of this department. Main activity of these farms are producing quality planting materials like High yielding & Hybrid Mango, Sapota, Aonla graft, guava layers and also the saplings of commercial flowering plants like jasmine varieties, roses, crossandra besides the propagation of seeds of avenue trees like pongam, neem, delonix regia, teak etc. About five lakhs plant saplings of various elite kinds are being propagated through these farms situated in Athur, Vitchanthangal, Melkadirpur, Melvottivakkam & Pitchivakkam village. Since these farms are situated in remote villages the farmers could not approach these farms to procure the plants required by them. Hence it is essential to open a sales out point in this district.

2. Project Rationale

In order to sell the Horticultural inputs like seeds and plants and also bio-fertilizers and bio-control agents to the farmers, sales out let point is essential.

3. Project Strategy

Wide publicity will be given through media like daily news papers, magazine and television about function of this sales out let point.

4. Project Goal

By distribution of seeds and plant and other required inputs besides, advocating the technical know-how to farmers, through this sales point more area will be brought under horticultural crops cultivation. There by the per capita income of the farmers will be increased.

5. Project Component

- Rented building @ Rs. 5000 / P. M. maintenance charge.
- Seating arrangement
- PH & EC meters
- Microscope and accessories
- Booklets and bulletin.

The Hybrid seeds will be received from the Agricultural Extension centers and the plant saplings will be received from the SHFs and the same will be sold to the needy farmers and also to the home / kitchen gardens through this out let point.

6. Project Cost and Financing

The total cost of the project will be Rs. 2. 30 lakhs. 50% assistance is Rs. 1.30 lakhs will be given to agril. / Horti. graduates entrepreneur to establish the sales / out let points The entrepreneur should deposit Rs. 5 lakhs with the department to procure the plants saplings from SHFS & he should regularly re-pay the cost of the plants to the department after selling the plants saplings through the sales outlet points.

7. Implementation of the Project

1. Selection of the entrepreneur – Agri. / Horti. graduates
2. Selection of the site / building in the head quarters of the revenue division.
3. Collection of deposit amount Rs. 5. 00 lakhs
4. Procurement of plants / seeds from SHFS / AEC'S
5. Commencement of sales to the farmers / Home dwellers and public.

8. Reporting

The monthly periodical report should be sent to the concerned block ADH.

9. Abstract

By sale of quality planting materials and rendering on the spot technical advice, the farmers / city, town dwellers as well as the public will be benefitted and their per capita income will be increased and also vegetables and ornamental plants will also be raised in vacant places and also in terraces. Hence the public will also get fresh vegetables and flowers for their own use.

10. Budget

Table.59 Project Cost for Sales / Outlet Point in District

(Rs.in lakhs)

S. No	Implementing year	Project outlay		
		Physical (ha)	Total cost	50% subsidy cost
1	2008-2009	1	2.60	1.30
2	2009-2010	1	0.60	0.30 (Rent)
3	2010-2011	1	0.60	0.30 (Rent)
4	2011-2012	1	0.60	0.30 (Rent)
	Total	**4**	**4.40**	**2.20**

6.2. 22. Community Fencing

1. Back ground / Problem Faced

In Kancheepuram district, about 10, 000 hectares of Horticultural crops like fruits, vegetables, Flowers, Spices and condiments, plantation crops and medicinal and aromatic plants are being cultivated in 13 blocks. It amounts to 7 % of total cropped area (15330.5 ha.) of the district. There is lot of scope to increase the area under Horticultural crops. Since these crops are high value crops, proper protection is necessary. Hence provision of wire fencing and solar fencing are quiet essential.

2. Project Rationale

In order to get stabilized and standard net income from Horticultural crops, farmers may be provided with wire fencing on compact basis. Hence community fencing is very essential.

3. Project Strategy

Farmers clubs, farmers associations and village president will be contacted to organize community fencing since, this will be much useful to farmers' community, to cultivate high value crops like Aonla, etc to prevent cattle tress pass and also to avoid pilferage.

4. Project Goals

By providing community fencing, more area will be brought under Horticultural crops and the productivity will also be considerably increased.

5. Project Components

1. Stone pillars
2. Framed iron wires
3. Solar cables

@ 50, 000 / hectare.

6. Project Cost and Financing

The farmers will be organized to construct fencing jointly and they will be provided 100 % assistance @ Rs. 0.50 lakhs per hectare and the funds could be provided through bank loan and the payment will be made through bank. The 100 % grant will be received from NADP funds, for this item of work.

7. Implementation Chart of the Project

- Identification of farmers
- Arranging financial assistance from lead banks.
- Laying of wire fencing though selected / approved firm with solar cables, through banks.
- Releasing funds from NADP to banks.

8. Reporting

The periodical report should be submitted to the concerned officers once in 15 days.

9. Abstract

Community fencing will be laid on a cluster basis @ 20 ha. / year and 60 hectares will be covered during the project period & the total project cost would be Rs. 30.00 lakhs.

10. Budget

Table .60 Project cost for Community Fencing

(Rs in lakhs)

S. No	Implementing year	Project outlay		
		Physical (ha)	Full cost	Subsidy
1	2008-2009	-	-	-
2	2009-2010	20	10.00	10.00
3	2010-2011	20	10.00	10.00
4	2011-2012	20	10.00	10.00
	Total	**60**	**30.00**	**-**

6.2. 23. Improving T. C. Banana Cultivation Area

1. Back ground/ problem focused

In Kanchipuram district fruits, are cultivated in 3500 hectares. Normal area under banana is 350 hectares. T. C. banana cultivation is introduced in this district since 2005 – 06, starting with 30 hectares and using Micro Irrigation with fertigation unit. More yield was obtained, than normal and traditional cultivation method and 30-40% yield increase was noticed and pest and disease incidence was also very less. Hence more farmers have come forward to go for T. C. banana cultivation. The variety G. 9 performed well.

Hence there is good scope to increase the area under T. C. banana cultivation, provided the farmers are assisted with supply of good quality planting materials.

2. Project Rationale

Ensuring the production and productivity and high income from per unit area, supply of quality T. C. banana plantlet is essential.

3. Project Strategy

Providing good technical support, supply of quality planting materials, good package of practices, post harvest technology and providing good marketing channel to the beneficiary farmers.

4. Project Goal

To increase the (district level) productivity from the present level of 42 metric tonnes / ha. to 65 m. t. / ha. and also to provide good agricultural practices.

5. Project Components

Supply of quality T. C. banana plantlets @ 2500 No's / ha. for Rs. 25, 000 / ha. (@ Rs. 10 / plantlet) and the beneficiary farmer's 50% contribution will be Rs. 1250 / ha. (Rs. 5 / plantlet.)

6. Project Cost

The average project cost per ha. would be Rs. 1250 / ha. (50% assistance) and it has been programmed to cover 32 hectares during the project period from 2008 – 09 to 2001 – 12.

7. Implementation Chart

- Identification / selection of beneficiary farmers.
- Supply of quality planting materials i.e., 2500 No's of T. C. banana (G. 9) plant let per farmer.
- Providing periodical technical support.

8. Reporting

Periodical reporting to the nodal officer.

9. Abstract

The T. C. banana cultivation will definitely increase the productions. to 45% and the net income of the farmers will rise from Rs. 0.50 lakhs to Rs. 1.50 lakhs and hence per capita income of the farmers will definitely increase.

10. Budget

Table.61 Project Cost for improving T. C. Banana Cultivation

(Rs. in lakhs)

S.No	Implementing year	Project outlay		
		Physical (ha)	Total cost	50% subsidy cost
1	2008-2009	8	2	1
2	2009-2010	8	2	1
3	2010-2011	8	2	1
4	2011-2012	8	2	1
	Total	**32**	**8**	**4**

6.2. 23. Support System to Vegetable Growers Hand Operated Sprayers.

1. Back ground / problem focused

In Kanchipuram district vegetables are cultivated tin normal area of 3000 hectares. There is more possibility to bring additional 30% area under vegetables by providing assistance to the vegetable growers. Hence P. P. equipments like hand operated sprayers should be supplied to the vegetable growers to ease their cultural operations.

2. Project Rationale

Ensuring the higher productivity and higher income, pest and diseases would be controlled up to ETL level. Hence provisions of hand operated sprayers are must.

3. Project Strategy

Local farmers clubs and farmers association will be intimated about this project.

4. Project Goals

By assisting the growers with hand operated sprayers, the pest and disease incidence will be reduced. Hence productivity will increase there by the per capita income of the farmers will also increase.

5. Project Components

Distribution of Hand operated sprayer's @Rs. 1, 500/- (50% subsidy assistance is Rs. 750 %.)

6. Project Cost and Financing

Plant protection equipments will be distributed to the growers @ Rs. 750 / sprayer. The 50 % subsidy will be availed from NADP and 50% assistance will be received from the state government.

7. Implementation of the Project

- Identification of growers.
- Procurement of P. P. equipments and Distribution to the identified growers.

8. Reporting

Block level officers should send the completion report to the District level officers.

9. Abstract

By distribution of P.P. equipments to the vegetable growers, the pest & diseases will be much reduced and thereby productivity will be increased from 30 to 40% and the yield will be increased there by per capita income will also be increased.

10. Budget

Table.62 Project Cost for Support System to Vegetable Growers Hand Operated sprayer

(Rs in lakhs)

S.No	Implementing year	Project outlay		
		Physical (ha)	Total cost	50% subsidy cost
1	2008-2009	20	0.30	0.15
2	2009-2010	20	0.30	0.15
3	2010-2011	20	0.30	0.15
4	2011-2012	20	0.30	0.15
	Total	**80**	**1.20**	**0.60**

Animal Husbandry Sector

Table. 63 Budget Estimates of Animal Husbandry Sector

(Rs. in Lakhs)

Sl. No.	Project Title	Unit Cost	2008-2009		2009-10		2010-11		2011-12		Grand Total	
			Units	Cost	Units	Cost	Units	Cost	Units	Cost	Total Units	Total Cost
	Cattle and Buffalo											
I	**Feed And Fodder Development**											
1	Augmentation of fodder production (Co-3) through SHGs/women entrepreneurs, Rs. 0.235 Lakh/acre, 10 acres / Block /year, 13 blocks, for 4 years, 130 acres /year, 520 acres / 4 years (DAH)	0.235	130	30.55	130	30.55	130	30.55	130	30.55	520	122.2
2	Strengthening of fodder seed production farm, Padappai (DAH)			37.35						0	0	37.35
3	Supply of mineral mixture to dairy cows @ Rs.600/cow/year, 1 kg / cow / month @ Rs.50/kg,12 kg/year, 1300 cows/year, 5,200 cows/years- 4 Blocks (DAH)	0.006	1300	7.8	1300	7.8	1300	7.8	1300	7.8	5200	31.2
4	Supply of hand operated chaff cutters to SHG farmers @ Rs.0.20 Lakh /unit, 50% subsidy, 1 unit / block/year, 13 blocks, for 4 years, 52 units totally, 50 % subsidy (DAH)	0.1	13	1.3	13	1.3	13	1.3	13	1.3	52	5.2
5	Fodder development in Kattupakkam Poultry Farm (DAH)		1	5.8							1	5.8
II	**GENETIC UPGRADATION**											
1	Identification and traceability of breedable bovines @ Rs.20/animal, for 1,68,900 animals (DAH and Dairy Devpt. Dept.)	0.0002	168900	33.78						0	168900	33.78

Table. 63 contd…

III	**Improvement of Livestock Health**											
1	Establishment of mobile veterinary clinics @ Rs.5,832 Lakhs/unit, one unit/taluk, 8 taluks, 8 units, (DAH)	5.832	7	40.824						0	7	40.824
2	Institutional Development-Strengthening of veterinary institutions with basic facilities like fencing, bore-wells, water troughs, minor repairs etc. @ Rs.5.0 Lakh /Institution, for 24 units (DAH)	5	24	120						0	24	120
3	Control of parasitic diseases through treatment to enhance vaccine response @ Rs.1/sheep or goat and Rs.3/calf, 4 times per year, Rs. 14.70 Lakhs/year, for 4 years (DAH)			14.7		14.7		14.7		14.7	0	58.8
4	Mobile Veterinary diagnostic laboratory (DAH)	12	1	12						0	1	12
	Sheep and Goat											
I	**Genetic Upgradation**											
1	Supply of Cross bred bucks (40 no.s) and Madras Red rams (40 no.s) to women SHG farmers @ Rs.4000/buck or ram (DAH)	0.04	20	0.8	20	0.8	20	0.8	20	0.8	80	3.2
II	**Others**											
1	Supply of stall-fed goat units (20+1 unit) to SHGs @ Rs.0.42 Lakhs/unit, one unit/block/year, 13 blocks, 4 years, 52 units (DAH)	0.42	13	5.46	13	5.46	13	5.46	13	5.46	52	21.84
2	Popularizing technology on backyard poultry farming (9+1 unit) 200 Nos./ block total 260 batches for 4 years @ Rs. 1000 / batch (DAH)	0.01	65	0.65	65	0.65	65	0.65	65	0.65	260	2.6

Table. 63 contd…

3	Health care for existing desi birds @ Rs. 1 / bird for 4.25 lakhs brids (DAH)	0.00001	125000	1.25	100000	1	100000	1	100000	1	425000	4.25
4	Strengthening of Poultry farm at Kattupakkam (DAH)		1	209.47							1	209.47
	DAH – Total			**521.734**		**62.26**		**62.26**		**62.26**		**708.514**
1	Programmed breeding indigenous cattle & buffalo to increase conception rate (DDD)	0.007	2800	19.60	2800	19.60	2800	19.60	2800	19.60	11200	78.40
2	Buffalo calf development programme (100 calves / year) (DDD)	0.148	100	14.80	100	14.80	100	14.80	100	14.80	400	59.20
3	Supply of mineral mixture to the milch animals at subsidised cost (50%) @ 18 kg/ year (DDD)	0.005	1000	5.00	1000	5.00	1000	5.00	1000	5.00	4000	20.00
4	Supply of by-pass protein feed to the milch animals (360kgs/ year/animal @ 50% subsidised cost of Rs.9/- per kg.) (DDD)	0.033	175	5.78	175	5.78	175	5.78	175	5.78	700	23.10
5	Portable milking machines for farmers (DDD)	0.18	7	1.26	6.00	1.08	6.00	1.08	6.00	1.08	25	4.50
6	Chaff cutters for elite farmers (small type) @Rs.20,000 as 100% grant (DDD)	0.20	4	0.80	2.00	0.40	2.00	0.40	2.00	0.40	10	2.00
7	Bulk milk cooler (DDD)	30.00	1	30.00	1.00	30.00					2	60.00
8	Walk-in coolers (DDD)	30.00	1	30.00	1.00	30.00					2	60.00
9	Revival of dormant MPCS (DDD)	1.00	10	10.00	10	10.00	10	10.00	10	10.00	40	40.00
10	Fodder development activities (for production of fodder seed/ slips in dairy or chilling centres & land of DDD) 22 acres (DDD)	2.10	22	46.20							22	46.20
11	Fodder development activities (50 acres in IDF villages (DDD)	0.235	13	3.06	13	3.06	12	2.82	12	2.82	50	11.75

Table. 63 contd…

12	Manufacturing facilities for milk khoa (DDD)	0.77	2	1.54	1	0.77	1	0.77	1	0.77	5	3.85
13	Manufacturing facilities for panneer (DDD)	1.02	3	3.06	3	3.06	2	2.04	2	2.04	10	10.20
14	Manufacturing facilities for ice cream (DDD)	1.12	1	1.12	1.00	1.12					2	2.24
15	Milk weighing machine for Milk Producers Co-Op.Societies (DDD)	0.17	8	1.36	8	1.36	7	1.19	7	1.19	30	5.10
16	P.C.based automatic milk collection stations to IDF villages milk producers cooperative societies (DDD)	1.75	2	3.50					0.00	0.00	2	3.50
17	Farmers study tour @ Rs.5000/- per farmer (DDD)	0.05	40	2.00	40	2.00	40	2.00	30	1.50	150	7.50
18	Skill development for technical staff (DDD)	0.05	46	2.30	46.00	2.30	46.00	2.30	46.00	2.30	184	9.20
19	Orientation training / workshop for milk producers at society level (DDD)	0.20	4	0.80	4.00	0.80	4.00	0.80	4.00	0.80	16	3.20
	DDD-TOTAL			**182.18**		**131.13**		**68.58**		**68.08**		**449.97**
1	Strengthening of buffalo breeding farm (TANUVAS)			165.00		30.35		31.76		33.26		260.37
2	Strengthening of FTC, TANUVAS Centre at Kancheepuram with a mobile disease investigation cum training unit @ Rs.10.00 Lakhs/unit, one unit, Van (Rs. 7 Lakhs) , Microscope (0.2 Lakhs), LCD Projector (Rs.2.5 Lakhs) and AV Aids (Rs.0.3 Lakhs) (TANUVAS)	10.00	1.00	10.00						0.00	1.00	10.00
3	Empowerment of SHG women through skill based livestock and poultry training for income generation (TANUVAS)		5.00	5.85	5.00	2.60	5.00	2.60	5.00	2.60	20.00	13.65

Table. 63 contd…

4	Strengthening of goat breeding farm (TANUVAS)			40.55		6.25		6.35		6.45		59.60
5	Strengthening of Pig breeding farm (TANUVAS)			59.08		17.83		18.59		19.40		114.90
	TANUVAS - Total			**280.48**		**57.03**		**59.30**		**61.71**		**458.52**
	Grand Total			**984.39**		**250.42**		**190.14**		**192.05**		**1617.00**

6.. Intensive Fodder Production, Supplementation of By-pass Protein Feed and Micronutrients to Dairy Cows and Goats and Enhancement of Nutrient Utilization

1. Abstract

Augmentation of fodder production activity will be taken up by the Department of Animal Husbandry, Kancheepuram, covering a total area of 520 acres at the rate of 10 acres/block/year in all the 13 blocks of the district for a total period of 4 years through Self Help Groups and women entrepreneurs at a total cost of Rs. 122.20 Lakhs. Strengthening of fodder seed production farm at padappai with total cost of 37.35 lakhs.Fodder development in kattupakkam poultry farm is proposed at a cost of 5.80 lakhs. The Aavin, Kancheepuram, will also take up fodder development activity (for production of fodder seed / slips in dairy or chilling centres and land of DDD) in 22 acres at a total cost of 46.20 lakhs. Fodder development activities in the proposed 100 Integrated Dairy Farm (IDF) villages at 5 acres / IDFV (500 acres totally for 2 years) and additional 1850 acres in farmers field.

Mineral mixture will be supplied to the dairy cows through the Department of Animal Husbandry, Kancheepuram to the small farmers at Rs.600/- per cow per year (One kg/animal/month, 12 kg for one year, @ Rs.50/kg) at subsidized rate @ 5000 farmers per year, for 4 years. A total of 5,200 cows comprising 1300 cows from each block (Totally 4 blocks) will be supplemented with mineral mixture at a total cost of Rs.31.20 Lakhs. The Aavin, Kancheepuram will supply mineral mixture to the milch animals of the society members at subsidized cost (50 % subsidy) @ Rs. 500/- for 18 kg per year/cow, A total number of 4000 animals will be benefited at a total cost of Rs. 20.00 Lakhs. Improvement in milk yield and fertility rates is expected from these 9,200 cows benefited.

Hand operated chaff cutters will be supplied by the Department of Animal Husbandry, Kancheepuram to the SHG farmers at Rs.20,000/- per unit (50% subsidy) , one unit per block per year, 13 units per year, 52 units in a total period of 4 years at a total cost of Rs. 5.2 Lakhs. The Aavin, Kancheepuram will supply 10 numbers of hand operated chaff cutters @ Rs.0.20 Lakh/unit will be supplied to the elite members at one unit/farmer at a total cost of Rs. 2.00 Lakhs.

The Aavin, Kancheepuram will supply by-pass protein feed to the milch animals of the members of the society (360 kg/animal/year) for 700 cows @ 50% subsidy of Rs.9/- per kg. The total cost will be Rs. 23.10 Lakhs.

2. Budget

(Rs. in lakhs)

Sl. No.	Particulars	Amount
1.	Augmentation of fodder production (CO-3) through SHG/women entrepreneurs, Rs. 0.235 Lakhs/acre, 10 acres/block/year, 13 blocks, for 4 years, 520 acres totally (DAH)	122.20
2.	Strengthening of fodder seed production farm at padappai	37.35
3.	Fodder development in kattupakkam poultry farm	5.80
4.	Fodder development activity (for production of fodder seed / slips in dairy or chilling centres and land of DDD) in 22 acres	46.20
5.	Fodder production at 100 IDF Villages, @ Rs.0.235 Lakhs/acre, 5 acres/IDFV, totally 500 acres for two years and 1850 acres in farmers field (DDD)	11.75
6.	Supply of mineral mixture to dairy cows @ Rs.600/cow/year, for 5,200 cows (DAH)	31.20
7.	Supply of mineral mixture at 50 % subsidy @ Rs. 500/- for 18 kg (one year supply) for 4000 animals (DDD)	20.00
8.	Supply of hand operated chaff cutters to SHG farmers @ Rs.0.20 Lakhs/unit, 50% subsidy, 1 unit/block/year, 13 blocks, 52 units for 4 years (DAH)	5.20
9.	Provision of hand operated chaff cutters to elite farmers @ Rs.0.20 Lakh/unit, one unit/farmer, 10 units totally for 10 farmers (DDD)	2.00
10.	Supply of by-pass protein feed to the milch animals (360 kg/animal/year) @ 50 % subsidy, Rs.9/kg, Rs.3,300/- per animal /year, for 700 cows in a period of 4 years	23.10
	Total	**304.80**

3. Background/ Problem Focus

With shrinkage of pasture lands, rapid urbanization and conversion of agricultural lands in to residential sites, Kancheepuram district is facing a severe shortage of fodder. The district is 85.30% deficit in green fodder . Many farmers do not supplement minerals in the feed of dairy cattle due to lack of awareness. Supplementation of minerals in dairy cows will improve milk production and reduce infertility problems. Supplementation of micronutrients in small ruminants is not a common practice among the poor farmers. In ruminants, decreasing the particle size of fodder will enhance the utilization of nutrients and improve the production. Most of the dairy farmers are unaware of this technology. By-pass protein feeding is a newer technology in dairy nutrition. It enhances milk production and nutrient utilization with an overall improvement in production and productivity in dairy cows. Conventional feeding although is cheaper does not provide a complete feed to the dairy cows leading to nutritional deficiencies and decreased production and productivity.

4. Project Rationale

There is an acute shortage of fodder and the farmers find it difficult to maintain high producing dairy cows owing to the huge demand for green and dry fodder. Hence intensive fodder production activity has to be taken up to meet this heavy demand.Supplementation of micronutrients and by-pass protein feed to dairy cows and micronutrients to goats is not a common practice and sensitization of the farmers through supply of mineral mixture for their cows and goats for one year will help them to realize their importance. Chopping of fodder will help in the effective utilization of nutrients. Further, ensiling of sugarcane tops during surplus production will help in the availability of fresh fodder to the animals during periods of non-availability. Thus ensiled sugarcane tops will retain the freshness and nutrients including vitamins and enhance the assimilation leading to overall improvement in production and productivity.

5. Project Strategy

1. Self Help Groups and interested women entrepreneurs will be selected from each block. Augmentation in quality and quantity of fodder from common property resources through group approach is proposed. Fodder slips will be procured from

State Agricultural University and members who have water source alone will be selected. 10 acres of Co-3 fodder will be produced per block involving the SHGs and interested women entrepreneurs. They will be supplied with all inputs for fodder production. Training on scientific fodder production will be given to the SHGs @ Rs.0.035 Lakh/SHG. Inputs for fodder production will be provided @ Rs.0.20 Lakhs/acre. A total number of 13 Groups will be involved in fodder production in all the 13 blocks @ 10 acres/block/year for a period of 4 years. The project will be implemented by the Department of Animal Husbandry, Kancheepuram.

2. Fodder production through dairy or chilling centres and land of DDD for 22 acres costing Rs. 46.20 lakhs. It will also be taken up by Aavin, Kancheepuram in all the proposed 100 IDF Villages @ Rs.0.235 Lakhs/acre, 5 acres/IDFV, 500 acres totally and additional 1850 acres of fodder will be produced at the members' fields. The cost of production of fodder per acre will be Rs.0.235 Lakhs and the total cost of fodder production for 50 acres will be Rs.11.75 Lakhs.

3. There are 13 blocks in the district with a total cross-bred cattle population of about 0.5 lakhs numbers. Infertility is the major problem and deficiency of minerals in the feed of cattle is common since most of the farmers do not provide a complete feed to their cows. Hence supply of 40 grams of mineral mixture per cow per day for one year will largely help to augment milk production and to improve the fertility rate in the cows. The cost of a kg of mineral mixture is Rs.50/- and is sufficient to feed a cow for one month. A total of Rs.600/- is necessary to provide 40 grams of mineral mixture per day per cow for one year. A total of 5200 cows will be supplied with mineral mixture. Improvement in milk yield and fertility rates is expected from the 5200 cows benefited. This project will be taken up by the Department of Animal Husbandry, Kancheepuram. Mineral mixture will also be supplied to the milch animals of the members of the society at subsidized cost (50%), @ 18 kg/year/cow @ Rs.500/cow/year. A total number of 4000 cows will be benefited at a total cost of Rs. 20.00Lakhs.

4. Hand operated chaff cutters will be supplied by the Department of Animal Husbandry, Kancheepuram to the SHG farmers at Rs.20,000/- per unit (50% subsidy) , one unit per block per year, 13 units per year, 52 units in a total period of 4 years at a total cost of Rs. 5.2 Lakhs.

5. Hand operated chaff cutters will be supplied to elite farmers @ Rs.0.20 Lakh/unit at one unit/farmer as 100% subsidy, for 10 farmers totally at a cost of Rs.2.00 Lakhs.. This project will be implemented by Aavin, Kancheepuram.

6. The Aavin, Kancheepuram will supply by-pass protein feed to the milch animals of the members of the society (360 kg/animal/year) for 700 cows @ 50% subsidy of Rs.9/- per kg. The total cost will be Rs. 23.10 Lakhs.

6. Project Goals

1. Augmentation of fodder production to meet the fodder shortage (570 acres totally)
2. Supplementation of micronutrients in the feed of dairy cows and goats to enhance production and fertility.
3. Enhancement of nutrient utilization in fodder by use of hand-operated and mechanized chaff cutters to enhance the nutrient utilization.
4. Supply of by-pass protein to 700 milch animals to enhance production.
5. Production of fodder seeds and slips to augment fodder production (22 acres totally)

7. Project Components

1. Fodder production – 570 acres
2. Fodder seeds and slips production – 22 acres
3. Mineral mixture supply to 9,200 cows
4. Provision of hand operated chaff cutters to elite farmers – 62 units
5. Supply of by-pass protein feed to 700 milch animals.

8.Project Cost and Financing

I. Fodder Production

1. Fodder Production by the Department of Animal Husbandry and DDD, Kancheepuram -- Rs. 0.235 Lakhs/Acre

(in Rs.)

S.No.	Name of Operation	Amount
1.	**Fodder Cultivation of Fodder (Co-3) per Acre**	
1 a)	Bush clearance and land reclamation	2,600.00
1.b)	Cost of ploughing	1,600.00
2.	Formation of ridges and furrows/beds and irrigation channels	500.00
3.a)	Cost of fym 10 mt. @ Rs.300/mt.	3,000.00
3.b)	Labour cost for transportation and application, loading and unloading	1,000.00
4.a)	Cost of slips 16,000 numbers @ Rs.0.25 /slip	4,000.00
4.b)	Planting cost	840.00
5.a)	Cost of chemical fertilizers N 150 Kg @ Rs.5.48/kg – 822.00 P 50 Kg @ Rs.10.88/kg – 544.00 K 40 Kg @ Rs.3.85/Kg - 154.00	1,520.00
5. b)	Cost of labour for application	200.00
6.	After cultivation weeding	840.00
7.	Cleaning the channels	500.00
8.	Irrigation charges	800.00
9.	Harvesting charges and transportation	1,600.00
10.	Miscellaneous expenses	800.00
	Total Cost Required Per Acre	**20,000.00**
2.	**Training Cost**	
1.	Incentive @ Rs.100/person/day, for 2 days, for 15 members	3,000.00
2.	Refreshment expenses @ Rs.10/day/person, for 2 days, 15 persons	300.00

3.	Study materials including scribbling pad, pen etc.@ Rs.15/person, for 15 members	225.00
	Total training cost per SHG	3,525.00
1.	Cost of fodder cultivation	0.200
2.	Cost of training	0.035
	Total Requirement	0.235
	Total requirement for 13 blocks @ 10 Acres /Block/year for 4 years, 520 acres totally	**122.20**
1.	Cost of fodder cultivation	0.200
2.	Cost of training	0.035
	Total Requirement	0.235
	Total requirement for 50 Acres /Block/year for 4 years	**11.75**

1.a. Strengthening of Fodder seed Production Farm, Padappai

Sl.No	**Item of expenditure**	**2008-09**
Non-Recurring		
a	Solar electric fencing	10,00,000
b	Digging of bore-wells	10,00,000
c	Power tiller with trailers – 4 Nos	2,50,000
d	Farm equipments	60,000
e	Winnowing machine	2,50,000
f	Repair and electrical fitting	3,00,000
g	**Sub-total**	**28,60,000**
Recurring		
a	Fodder plot maintenance	7,40,000
b	Electricity	50,000
c	Others	85,000
	Sub-total	**8,75,000**
	TOTAL (a+b+c)	**37,35,000**

1.b. Fodder development in Kattupakkam Poultry Farm

Rs. 0.20 lakhs / acre ; For 29 acres – 5.80 lakhs Totally for 29 acres – Rs. 5.80 lakhs

2. Fodder Seeds and Slips Production through DDD, Kancheepuram

(Rs. in Lakhs)

Sl.No	Particulars	Amount
I	**Capital Investment**	
1.	Demarcation of boundary and fencing	0.60
2.	Land development	0.10
3.	Farm sheds for equipments, seeds manure etc.,	0.20
4.	Purchase of agricultural implements	0.10
5.	Creation of irrigation facilities (wells, pumps, powerline, water tanks, pump room, pipeline etc.,)	0.50
	Sub –Total (I)	**1.50**
II	**Recurring Expenditure**	
1.	Wages of supervising staff	0.20
2.	Sedds, fertilizers / manure and insecticides	0.20
3.	Cultivation charges	0.05
4.	Irrigation charges	0.05
5.	Maintenance of store / dead stock	0.05
6.	Miscellaneous	0.05
	Sub-Total (II)	**0.60**
	Grand Total (I + II)	**2.10**

Rs. 2.1 lakhs/acre for 22 acres. Totally for 22 Acres – Rs. 46.20 Lakhs

II. Supplementation of Micronutrients and By-pass Protein Feed to Dairy Cows and Goats

1.	Supply of mineral mixture to dairy cows @ Rs.600/cow/year, for 5,200 cows. The cost of mineral mixture per kg is Rs.50/- The requirement is 1kg/cow/month, 12 kg/cow/year, for 20,000 cows (DAH)	31.20
2.	Supply of mineral mixture to the milch animals of the members of the society at subsidized cost (50%), @ 18 kg/year/cow @ Rs.500/cow/year for a total number of 4000 cows	20.00
3.	Supply by-pass protein feed to the milch animals of the members of the society (360 kg/animal/year) for 700 cows @ 50% subsidy of Rs.9/- per kg.	23.10

III. Supply of Chaff Cutters

1.	Provision of hand operated chaff cutters to elite farmers @ Rs.0.20 Lakh/unit, 10 units, one unit/farmer, totally for 10 farmers, 100% subsidy	2.00
2.	Provision of hand operated chaff cutters to SHG farmers @ Rs.0.20 Lakh/unit, 50 % subsidy, one unit/ block/year, 13 blocks, for 4 years, 52 units totally	5.20

9. Implementation Chart of the Project *

Activity	**2008-2009**	**2009-2010**	**2010-2011**	**2011-2012**
Augmentation of fodder production (CO-3) through SHG/women entrepreneurs, Rs. 0.235 Lakhs/acre, 10 acres/block/year, 13 blocks, for 4 years, 520 acres totally (DAH)	130 acres	130 acres	130 acres	130 acres
Fodder production at IDF Villages, @ Rs.0.235 Lakhs/acre, Total 50 acres (DDD)	13 acres	13 acres	12 acres	12 acres
Fodder slips and seeds production in dairy and chilling centers @ Rs.2.1 Lakhs/acre, 22 acres totally (DDD)	22 acres	-	-	-

Supply of mineral mixture to dairy cows @ Rs.600/cow/year, for 5200 cows (DAH)	1300 cows	1300 cows	1300 cows	1300 cows
Supply of mineral mixture at 50 % subsidy @ Rs. 500/- for 18 kg (one year supply) for 4000 animals (DDD)	1000 cows	1000 cows	1000 cows	1000 cows
Supply of hand operated chaff cutters to SHG farmers @ Rs.0.20 Lakhs/unit, 50% subsidy, 1 unit/block/year, 13 blocks, 52 units for 4 years (DAH)	13 units	13 units	13 units	13 units
Provision of hand operated chaff cutters to elite farmers @ Rs.0.20 Lakh/unit, one unit/farmer, 10 units totally for 10 farmers (DDD)	10 units	-	-	-
Supply of by-pass protein feed to the milch animals (360 kg/animal/year) @ 50 % subsidy, Rs.9/kg, Rs.3,300/- per animal /year, for 700 cows in a period of 4 years	175 cows	175 cows	175 cows	175 cows

***** This may vary from plan to plan

10. Reporting

Fodder and Fodder Seeds and Slips Production

The Regional Joint Director of Animal Husbandry, Kancheepuram and the General Manager, The Kancheepuram District Co-operative Milk Producers Union Limited, Kancheepuram will implement the projects. Monthly progress of the projects will be submitted to the concerned higher authorities.

Supply of Mineral Mixture and by-Pass protein feed to the Dairy cows

The General Manager, The Kancheepuram District Co-operative Milk Producers Union Limited, Kancheepuram and the Regional Joint Director of Animal Husbandry, Kancheepuram, will implement the projects. Monthly progress of the projects will be submitted to the concerned higher authorities.

Provision of Chaff Cutters to IDF Villages and Hand Operated Chaff Cutters to SHGs and Elite Farmers

The General Manager, The Kancheepuram District Co-operative Milk Producers Union Limited, Kancheepuram and the Regional Joint Director of Animal Husbandry, Kancheepuram will implement the projects. Monthly progress of the projects will be submitted to the concerned higher authorities.

6. Genetic Upgradation of Cattle, Buffaloes, Sheep and Goats, Improvement of Livestock Health and Supply of Goat Units to SHG

1. Abstract

a. Tracking the Breedable Bovines in the District

It is estimated that the district has a total number of 1,68,900 breedable bovine population. Tracking the breedable bovines with an ear tag and a passbook at a cost of Rs.20/- per animal is proposed. The total outlay is Rs. 33.78 Lakhs. The project will be jointly implemented by the Department of Animal Husbandry, Kancheepuram and Aavin, Kancheepuram. Programmed breeding indigenous cattle and buffalo to increase conception rate of 11,200 numbers @ 0.007 lakhs per animal and cost totaling Rs. 78.40 lakhs.

b. Genetic upgradation of Sheep and Goats

Supply of crossbred bucks and Madras Red rams to the Self Help Group Women in the district for cross-breeding of the non-descript poorly performing sheep and goats to augment the mutton and chevon production. Each active SHG will be provided with one crossbred buck and one Madras Red ram @ Rs. 4,000/- per ram/buck. A total number of 40 rams and 40 bucks will be supplied at a total cost of Rs. 3.20 Lakhs. The project will be implemented by the Department of Animal Husbandry, Kancheepuram.

c. Establishment of Mobile Veterinary Clinics and Mobile Input Units

Mobile veterinary clinics (7 units) will be established at a total cost of Rs. 40.82 Lakhs @ Rs.5.832 Lakhs/unit under the Department of Animal Husbandry, Kancheepuram for provision of health cover facilities in remote areas in the district. Mobile veterinary diagnostic laboratory will be established under the Department of Animal Husbandry, Kancheepuram at a total cost of Rs. 12.00 Lakhs to provide timely services to the farmers.

d. Strengthening of Veterinary Institutions

A total number of 24 veterinary institutions in the district will be strengthened with basic facilities like fencing, provision of bore-wells, water troughs and minor repair works also will be carried out at a total cost of Rs. 120.00 Lakhs @ Rs.5.00 Lakhs / institution. The project will be implemented by the Department of Animal Husbandry, Kancheepuram.

f. Control of Parasitic Diseases to Enhance Vaccine Response

The sheep, goats and calves below one year of age will be dewormed 4 times in a year before vaccinating them to enhance the vaccine response in them. The cost of the project will be Rs.14.7 Lakhs per year. The total cost will be Rs. 58.8 Lakhs for 4 years. The project will be implemented by the Department of Animal Husbandry, Kancheepuram.

Health care for existing desi birds in the district will be carried out to reduce the mortality. The total cost will be 4.25 lakhs. The project will be implemented by the Department of Animal Husbandry, Kancheepuram.

g. Buffalo Calf Development Programme

The total cost for the supply of feed, vaccines and deworming will be Rs.14,800/-/buffalo calf. A total number of 400 calves will be benefited at a period of 4 years @ 100 calves per year. The total project cost will be Rs.59.20 Lakhs. The project will be implemented by the DDD, Kancheepuram

h. Supply of Stall-fed Goat Units

Goat units (20+1) will be supplied to the self help groups in the district @ Rs.0.42 Lakhs /unit. One unit/block/year, for 4 years, 13 blocks, 52 units totally at a total cost of Rs. 21.84 Lakhs. The project will be implemented by the Department of Animal Husbandry, Kancheepuram.

Popularizing technology on backyard poultry farming with 9 +1 units to 13 blocks and 20 units in each block comprising of 260 batches. The project cost is 2.60 lakhs. The project will be implemented by the Department of Animal Husbandry, Kancheepuram.

I. Strengthening of University Farms

The buffalo population in the district is decreasing over the years. To tackle the situation, a buffalo breeding unit consisting of 300 buffaloes (Murrah breed) is proposed to be established at LRS, Kattupakkam with the financial outlay of Rs.2.60 crores, to supply 100 buffalo calves every year to the needy farmers.

There is an ever increasing demand for chevon and entrepreneurs are opting to venture in to goat farming business. However the farmers are in a piquant situation in obtaining high yielding animals. Hence goat breeding unit is proposed to be established at Livestock Research Station, Kattupakkam. A total of 300 Boer crossbred kids will be produced and the same will be sold to the needy farmers for further development.

The consumption of pork is remarkably increasing in urban and peri-urban areas. Since Kancheepuram district is adjacent to Chennai metropolitan, there is a heavy demand for pork which in turn has created interest among the farmers in venturing in pig enterprise**.** Hence, the existing pig breeding farm at Livestock Research Station, Kattupakkam has to be strengthened to produce 500 Large White Yorkshire piglets exclusively for distribution to the pig farmers and entrepreneurs in Kancheepuram district.

J. Strengthening of poultry farm at Kattupakkam

Though, commercial poultry units are being established in the private sector, the backyard poultry farming is on the decline trend. However the demand for meat and eggs of backyard poultry is increasing day by day. Hence a backyard poultry breeding unit is proposed to be established at Poultry Farm, Kattupakkam with the outlay of Rs.209.47 for supply of chicks to the farming community.

2. Budget

Sl. No.	Particulars	Amount (Rs. in Lakhs)
1.	Tracking the breedable bovine population with an ear tag and a passbook @ Rs.20/- animal, for 1,68,900 animals (DAH and DDD)	33.78
2.	Programmed breeding of cattle buffaloes @ Rs.700/animal, for 11,200 cows and buffaloes (DDD)	78.40
3.	Supply of 40 Madras Red rams and 40 crossbred bucks to the self help groups @ Rs.4,000/- per buck/ram	3.20
4.	Establishment of mobile veterinary clinics @ Rs.5.832 Lakhs/unit, 7 units totally (DAH)	40.82
5.	Establishment of mobile diagnostic laboratory (DAH) – one number	12.00
6.	Strengthening of 24 veterinary institutions with basic facilities like fencing, provision of bore-wells, water troughs and minor repair works @ Rs.5.00 Lakhs/unit (DAH)	120.00
7.	Control of parasitic diseases to enhance vaccine response @ Rs.1/- per sheep or goat and Rs.3/- per calf below one year, 4 times /year, Rs. 14.7Lakhs/year, for 4 years (DAH)	58.80
8.	Health care for existing desi birds @ Rs. 1 / bird for 4.25 lakhs brids (DAH)	4.25
9.	Buffalo calf development programme @ Rs. 14,800/- per calf, 200 calves/year, 400 calves for 4 years (DDD)	59.20

10.	Supply of stall-fed goat units (20+1) to SHG @ Rs.0.42 Lakhs/unit, one unit/block/year, for 4 years, 13 blocks, 52 units totally	21.84
11.	Popularizing technology on backyard poultry farming (9+1 unit) 200 Nos./ block total 260 batches for 4 years @ Rs. 1000 / batch (DAH)	2.60
12.	Strengthening of buffalo breeding farm – one	260.37
13.	Strengthening of goat breeding farm – one	59.60
14.	Strengthening of pig breeding farm – one	114.90
15.	Strengthening of poultry farm at Kattupakkam	209.47
	Total	**1079.23**

3. Background/ Problem Focus

a. Tracking the Breedable Bovines in the District

It is estimated that the district has a total number of 1,68,900 breedable bovine population. Tracking the breedable bovines with an ear tag and a passbook will help to follow the animals and will be the first step in the registration of bovines with accurate details about the animal, its health status etc. In order to improve the conception rate of indigenous cattle and buffalo by programmed breeding is proposed.

b. Synchronized Breeding of Cattle and Buffaloes

Estrus synchronization will be planned in indigenous cattle and buffaloes to increase conception rate. Buffaloes exhibit silent heat and hence become difficult to inseminate them for conception.

c. Genetic Upgradation of Sheep and Goats

The present stock of sheep and goats available with the farmers in the district are inferior in terms of production and performance. Mecheri is a proven mutton sheep breed and Tellicherry goat breed performs well under field conditions. Cross-breeding of the non-descript sheep and goats with such superior germplasm will augment mutton and chevon production in the district.

d. Establishment of Mobile Veterinary Clinics and Mobile Diagnostic Lab

There is a shortfall in the number of veterinary institutions in the district as against the total livestock population. Further, door-to-door timely health cover facilities especially in the remote villages of the district is very essential as these villages have a considerable livestock population and the farmers mainly depend on these animals for their livelihood. Mobile veterinary diagnostic laboratory unit is also proposed with the same background.

e. Strengthening of Veterinary Institutions

A total number of 24 veterinary institutions in the district are not provided with certain basic facilities like fencing, provision of bore-wells, water troughs and minor repair works need to be carried out.

f. Control of Parasitic Diseases to Enhance Vaccine Response

The sheep, goats and calves below one year of age have to be dewormed 4 times in a year before vaccinating them to enhance the vaccine response in them. At present the practice of deworming the sheep, goat and calves before vaccinating them is not in vogue.

Health care for existing desi birds in the district will be carried out to reduce the mortality.

g. Buffalo Calf Development Programme

The district has a total buffalo population of 81398 heads. There is a decline in the production and productivity of buffaloes in the district. There is mortality in the buffalo calves due to under nourishment. The farmers must be encouraged to raise buffaloes through the care and management of buffalo calves to improve the production of buffaloes in the district.

h. Supply of Stall-fed Goat Units

Intensive management with stall-feeding of goats is becoming popular due to decreased availability of grazing lands.

Popularizing technology on backyard poultry farming in Kancheepuram.

I. Strengthening of University Farms

- Negative trend in buffalo population
- No recognized breed of goat in Kancheepuram district
- Inadequate availability of Large White Yorkshire breedable stock

4. Project Rationale

a. Tracking the Breedable Bovines in the District

It is estimated that the district has a total number of 1,68,900 breedable bovine population. Tracking the breedable bovines with an ear tag and a passbook will help to follow the animals and will be the first step in the registration of bovines with accurate details about the animal, its health status etc.

Buffaloes exhibit silent heat and it becomes difficult to provide timely insemination services leading to huge economic losses. Because of this reason, the farmers are reluctant to rear buffaloes. Estrus synchronization will bring all the animals to heat at a specific time and will help to provide timely insemination.

c. Genetic Upgradation of Sheep and Goats

The present stock of sheep and goats available with the farmers in the district are inferior in terms of production and performance. Madras Red is a proven mutton sheep breed and crossbred goat performs well under field conditions. Cross-breeding of the non-descript sheep and goats with such superior germplasm will augment mutton and chevon production in the district.

d. Establishment of Mobile Veterinary Clinics and Mobile Diagnostic Lab

Each mobile veterinary clinic will consist of one VAS and one driver. The staff for the clinic will be sourced from the available staff in the department. The unit will be provided with one vehicle at a cost of Rs. 4.75 Lakhs. The VAS will be in-charge of the vehicle. The vehicle will cover remote and inaccessible villages on a scheduled programme of operation. Medicines will be sourced from the veterinary institutions available in the block itself. Necessary equipment like gags, scalpels, scissors, suture needles, forceps, A.I. guns etc. apart from Liquid Nitrogen containers and sheath will be provided to each unit. Diesel worth Rs.45,000/- will be provided per year to each unit. The unit will prepare a tour programme on 6 days a week basis and the farmers will be intimated well in advance. One mobile veterinary diagnostic laboratory will be established by the DAH to provide timely diagnosis of diseases. The total cost will be Rs.12.00 Lakhs.

e. Strengthening of Veterinary Institutions in the District

A total number of 24 veterinary institutions in the district will be strengthened with basic facilities like fencing, provision of bore-wells, water troughs and minor repair works also will be carried out at a total cost of Rs. 120.00 Lakhs @ Rs.5.00 Lakhs / institution.

f. Control of Parasitic Diseases to Enhance Vaccine Response

The sheep, goats and calves below one year of age will be dewormed 4 times in a year before vaccinating them to enhance the vaccine response in them. The cost of deworming will be Rs.1/- per sheep or goat and Rs. 3 /- for a calf below 1 year of age. The deworming will be done 4 times a year, before vaccination. The total cost of the project will be Rs.14.7 Lakhs per year. The total cost will be Rs. 58.80 Lakhs for 4 years. The project will be implemented by the Department of Animal Husbandry, Kancheepuram.

Health care for existing desi birds in the district will be carried out to reduce the mortality. The total cost will be 4.25 lakhs. The project will be implemented by the Department of Animal Husbandry, Kancheepuram.

g. Buffalo Calf Development Programme

The total cost for the supply of feed, vaccines and deworming will be Rs.14,800/-/buffalo calf. A total number of 400 calves will be benefited at a period of 4 years @ 100 calves per year. The total project cost will be Rs.59.20 Lakhs. The project will be implemented by the DDD, Kancheepuram.

h. Supply of Stall-fed Goat Units to SHGs

Intensive management with stall-feeding of goats is becoming popular due to decreased availability of grazing lands.

Popularizing backyard poultry farming in Kancheepuram district.

I. Strengthening of University Farms

- To supply buffalo calves (Murrah) to the farmers to improve the buffalo milk production in Kancheepuram district
- To upgrade non-descript buffaloes available in the buffalo pockets (Damal, Kalakattur, Narapakkam, Magaral, Thirukalukundrum, Thathalur, Natham, Sogandi, Nallur, *etc.*) in the district.
- To supply Boer crossbred kids to the farmers to improve the meat production in Kancheepuram district
- To establish field piggery units with Large White Yorkshire breed to meet out the demand for increased pork consumption and to increase the pig entrepreneurs in the district.

J. Strengthening of Poultry Farm at Kattupakkam

Diminishing number of backyard poultry units

5. Project Strategy

a. Tracking the Breedable Bovines in the District

It is estimated that the district has a total number of 1,68,900 breedable bovine population. Tracking the breedable bovines with an ear tag and a passbook at a cost of Rs.20/- per animal is proposed. The total outlay is Rs. 33.78 Lakhs.

Buffaloes exhibit silent heat and it becomes difficult to provide timely insemination services leading to huge economic losses. Because of this reason, the farmers are reluctant to rear buffaloes. Estrus synchronization will bring all the animals to heat at a specific time and will help to provide timely insemination.

b. Genetic Upgradation of Sheep and Goats

Madras Red rams and crossbred bucks will be maintained by the Self Help Group Women in the district for cross-breeding of the non-descript poorly performing sheep and goat breeds to augment the mutton and chevon production. Each active SHG will be provided with one Madras Red ram and one crossbred buck @ Rs. 4,000/- per ram or buck.

d. Establishment of Mobile Veterinary Clinics and Mobile Diagnostic Lab

Each mobile veterinary clinic will consist of one VAS and one driver. The staff for the clinic will be sourced from the available staff in the department. The unit will be provided with one vehicle at a cost of Rs. 4.75 Lakhs. The VAS will be in-charge of the vehicle. The vehicle will cover remote and inaccessible villages on a scheduled programme of operation. Medicines will be sourced from the veterinary institutions available in the block itself. Necessary equipment like gags, scalpels, scissors, suture needles, forceps, A.I. guns etc. apart from Liquid Nitrogen containers and sheath will be provided to each unit. Diesel worth Rs.45,000/- will be provided per year to each unit. The unit will prepare a tour programme on 6 days a week basis and the farmers will be intimated well in advance. One mobile veterinary diagnostic laboratory will be established by the DAH, Kancheepuram to provide timely diagnosis of diseases for the farmers. The total cost will be Rs.12.00 Lakhs.

e. Strengthening of Veterinary Institutions in the District

A total number of 24 veterinary institutions in the district will be strengthened with basic facilities like fencing, provision of bore-wells, water troughs and minor repair works also will be carried out at a total cost of Rs. 120.00 Lakhs @ Rs.5.00 Lakhs / institution.

f. Control of Parasitic Diseases to Enhance Vaccine Response

The sheep, goats and calves below one year of age will be dewormed 4 times in a year before vaccinating them to enhance the vaccine response in them. The cost of deworming will be Rs.1/- per sheep or goat and Rs. 3 /- for a calf below 1 year of age. The deworming will be done 4 times a year, before vaccination. The total cost of the project will be Rs.14.70 Lakhs per year. The total cost will be Rs. 58.80 Lakhs for 4 years. The project will be implemented by the Department of Animal Husbandry, Kancheepuram.

Health care of desi birds in this district will be carried out by adopting suitable vaccine to reduce the mortality.

g. Buffalo Calf Development Programme

The total cost for the supply of feed, vaccines and deworming will be Rs.14,800/-/buffalo calf. A total number of 400 calves will be benefited at a period of 4 years @ 100 calves per year. The total project cost will be Rs.59.20 Lakhs. The project will be implemented by the DDD, Kancheepuram.

h. Supply of Stall-fed Goat Units to SHG

Supply of stall-fed goat units (20+1) to SHG @ Rs.0.42 Lakhs/unit, one unit/block/year, for 4 years, 13 blocks, 52 units totally.

Popularizing technology on backyard poultry farming with 9 +1 units to 13 blocks and 20 units in each block comprising of 260 batches. The project cost is 2.60 lakhs.

I. Strengthening of University Farms

The buffalo breeding farm will be established at Livestock Research Station, Kattupakkam by purchasing breedable Murrah buffaloes from the breeding tract. Pure breeding of buffaloes will be carried out and the female buffalo calves will be supplied to the farmers thereby enhancing the buffalo population and milk production in the district. The unit will also act as a Bull mother farm for supply of Murrah bulls from elite dams for upgradation of non descript buffalo population.

The goat breeding unit will be established at Livestock Research Station, Kattupakkam to upgrade the non-descript goat population and to popularize hybrid goats (Boer crossbred) in the district.

Strengthening of existing pig breeding farm at Livestock Research Station, Kattupakkam with 40 sow level to supply 500 Large White Yorkshire breedable pigs to the pig entrepreneurs.

J. Strengthening of Poultry Farm at Kattupakkam

The backyard poultry fetches increased price for both eggs and meat compared to commercial birds. Hence, supply of backyard poultry chicks will enhance the backyard poultry farming in the district and improve the livelihood of the farming community especially for women.

6. Project Goals

- Tracing the breedable bovines in the district.
- Estrus synchronization in selected 11200 cattle and buffaloes
- Upgradation of the existing native non-descript sheep and goats through cross-breeding with Madras Red rams and Crossbred bucks (40 numbers each) to increase the mutton and chevon production.
- Establishment of 7 mobile veterinary clinics and one mobile veterinary diagnostic lab.
- Strengthening of 24 veterinary institutions in the district with basic facilities.

- Control of parasitic diseases in sheep, goats and calves (below one year of age) through deworming to enhance vaccine response.
- Health care of desi bids will be maintained
- To develop 400 buffalo calves through supply of feed.
- To establish 52 stall-fed goat units to promote intensive management of goats.
- Popularizing backyard poultry farming
- Increasing the milch buffalo population
- Increasing the meat production and livelihood of farmers
- To increase the pork production
- Enhancing backyard poultry farming income and employment generation

7. Project Components

a. Tracking the Breedable Bovines in the District

Tracking the breedable bovines with an ear tag and a passbook when the animal comes for A.I.

Estrus synchronization will be carried out in 11200 numbers of cattle and buffaloes at a total cost of Rs. 78.40 Lakhs @ Rs.700/animal. It involves use of hormones, deworming, monitoring etc.

b. Genetic Upgradation of Sheep and Goats

1. Supply of Madras Red rams and Crossbred bucks
2. Maintenance of the animals by women SHGs in the district
3. Cross-breeding of the native non-descript sheep and goats with superior germplasm.

c. Establishment of Mobile Veterinary Clinics and Mobile Diagnostic Lab

Each mobile veterinary clinic will consist of one VAS and one driver. The staff for the clinic will be sourced from the available staff in the department. The unit will be provided with one vehicle at a cost of Rs. 4.75 Lakhs. The VAS will be in-

charge of the vehicle. The vehicle will cover remote and inaccessible villages on a scheduled programme of operation. Medicines will be sourced from the veterinary institutions available in the block itself. Necessary equipment like gags, scalpels, scissors, suture needles, forceps, A.I. guns etc. apart from Liquid Nitrogen containers and sheath will be provided to each unit. Diesel worth Rs.45,000/- will be provided per year to each unit. The unit will prepare a tour programme on 6 days a week basis and the farmers will be intimated well in advance. One mobile veterinary diagnostic laboratory will be established by the DAH, Kancheepuram to provide timely diagnosis of diseases for the benefit of the farmers. The total cost will be Rs.12.00 Lakhs.

e. Strengthening of Veterinary Institutions in the District

A total number of 24 veterinary institutions in the district will be strengthened with basic facilities like fencing, provision of bore-wells, water troughs and minor repair works also will be carried out at a total cost of Rs. 120.00 Lakhs @ Rs.5.00 Lakhs / institution.

f. Control of Parasitic Diseases to Enhance Vaccine Response

The sheep, goats and calves below one year of age will be dewormed 4 times in a year before vaccinating them to enhance the vaccine response in them. The cost of deworming will be Rs.1/- per sheep or goat and Rs. 3 /- for a calf below 1 year of age. The deworming will be done 4 times a year, before vaccination. The total cost of the project will be Rs.14.7Lakhs per year. The total cost will be Rs. 58.80 Lakhs for 4 years. The project will be implemented by the Department of Animal Husbandry, Kancheepuram. Health care for existing desi birds @ Rs. 1 / bird for 4.25 lakhs brids (DAH).

g. Buffalo Calf Development Programme

The total cost for the supply of feed, vaccines and deworming will be Rs.14,800/-/buffalo calf. A total number of 400 calves will be benefited at a period of 4 years @ 100 calves per year. The total project cost will be Rs.59.20 Lakhs. The project will be implemented by the DDD, Kancheepuram.

h. Supply of Stall-fed Goat Units to SHG

- Supply of stall-fed goat units (20+1) to SHG @ Rs.0.42 Lakhs/unit, one unit/block/year, for 4 years, 13 blocks, 52 units totally.
- Popularizing technology on backyard poultry farming (9+1 unit) 200 Nos./ block total 440 batches for 4 years @ Rs. 1000 / batch.

8. Project Cost and Financing

(Amount in Rs. lakhs)

Activity	2008-2009	2009-2010	2010-2011	2011-2012	Total Cost
1. Tracking the breedable bovine population with an ear tag and a passbook @ Rs.20/- animal, for 1,68,900 animals (DAH, DDD)	33.78	-	-	-	33.78
2. Programmed breeding of cattle and buffaloes @ Rs.700/animal, for 11200 animals.(DDD)	19.60	19.60	19.60	19.60	78.40
3. Supply of 40 Madras Red rams and 40 Crossbred bucks to the self help groups @ Rs.4,000/- per buck/ram (DAH)	0.80	0.80	0.80	0.80	3.2
4. Establishment of mobile veterinary clinics @ Rs.5.832 Lakhs/unit, 7 units totally (DAH)	40.82	-	-	-	40.82
5. Establishment of one mobile veterinary diagnostic laboratory (DAH)	12.00	-	-	-	12.00
6. Strengthening of 24 veterinary institutions with basic facilities like fencing, provision of bore-wells, water troughs and minor repair works @ Rs.5.00 Lakhs/unit (DAH)	120.0	-	-	-	120.0

7, Control of parasitic diseases to enhance vaccine response @ Rs.1/- per sheep or goat and Rs.3/- per calf below one year, 4 times /year, Rs. 14.7 Lakhs/year, for 4 years (DAH)	14.7	14.7	14.7	14.7	58.80
8. Health care for existing desi birds @ Rs. 1 / bird for 4.25 lakhs brids (DAH)	1.25	1.00	1.00	1.00	4.25
9. Buffalo calf development programme @ Rs. 14,800/- per calf, The cost includes feed cost, identification, insurance, deworming, vaccination, breeding and health cover, 100 calves/year, 400 calves for 4 years (DDD)	14.80	14.80	14.80	14.80	59.20
9. Supply of stall-fed goat units (20+1) to SHG @ Rs.0.42 Lakhs/unit, one unit/block/year, for 4 years, 13 blocks, 52 units totally (DAH)	5.46	5.46	5.46	5.46	21.84
10. Popularizing technology on backyard poultry farming (9+1 unit) 200 Nos./ block total 440 batches for 4 years @ Rs. 1000 / batch (DAH)	0.65	0.65	0.65	0.65	2.60
11. Strengthening of buffalo breeding farm	165.00	30.35	31.76	33.26	260.37
12. Strengthening of goat breeding farm	40.55	6.25	6.35	6.45	59.60
13. Strengthening of pig breeding farm	59.08	17.83	18.59	19.40	114.90
14. Strengthening of poultry farm at Kattupakkam	209.47	-	-	-	209.47
TOTAL	**492.81**	**109.79**	**112.06**	**114.47**	**829.13**

9. Implementation Chart of the Project

Activity	2008-2009	2009-2010	2010-2011	2011-2012
1. Tracking the breedable bovine population with an ear tag and a passbook	1,68,900 cows	-	-	-
2. Programmed breeding of cattle and buffaloes	2800 animals	2800 animals	2800 animals	2800 animals
3. Supply of 40 Madras Red rams and 40 Crossbred bucks to the self help groups	20	20	20	20
4. Establishment of mobile veterinary clinics, 7 units totally	7	-	-	-
5. Establishment of one mobile veterinary diagnostic laboratory	1	-	-	-
6. Strengthening of 24 veterinary institutions with basic facilities like fencing, provision of bore-wells, water troughs and minor repair works	24	-	-	-
7. Control of parasitic diseases to enhance vaccine response @ Rs.1/- per sheep or goat and Rs.3/- per calf below one year, 4 times /year, Rs. 14.7 Lakhs/year, for 4 years	*	*	*	*
8. Health care for existing desi birds @ Rs. 1 / bird for 4.25 lakhs brids (DAH)	125000	100000	100000	100000
9. Buffalo calf development programme @ Rs. 14,800/- per calf, 100 calves/year, 400 calves for 4 years	100 calves	100 calves	100 calves	100 calves

10. Supply of stall-fed goat units (20+1) to SHG @ Rs.0.42 Lakhs/unit, one unit/block/year, for 4 years, 13 blocks, 52 units totally	13 units	13 units	13 units	13 units
11. Popularizing technology on backyard poultry farming (9+1 unit) 200 Nos./ block total 440 batches for 4 years @ Rs. 1000 / batch (DAH)	65 units	65 units	65 units	65 units
11. Strengthening of buffalo breeding farm	1 unit			
12. Strengthening of goat breeding farm	1 unit			
13. Strengthening of pig breeding farm	1 unit			
14. Strengthening of poultry farm at Kattupakkam	1 unit			

10. Reporting

a. Tracking the Breedable Bovines in the District

The project will be jointly implemented by the Department of Animal Husbandry, Kancheepuram and Aavin, Kancheepuram and will submit periodical monthly reports to the appropriate authorities

The project will be implemented by the DDD, Kancheepuram and will submit periodical monthly reports to the appropriate authorities

b. Genetic Upgradation of Sheep and Goats

The Regional Joint Director of Animal Husbandry, Kancheepuram will implement the Scheme and he will submit periodical monthly reports to the appropriate authorities.

c. Establishment of Mobile Veterinary Clinics

The Regional Joint Director of Animal Husbandry, Kancheepuram will implement the Scheme and he will submit periodical monthly reports to the appropriate authorities

d. Establishment of Mobile Veterinary Diagnostic Laboratory

The project will be implemented by the DAH, Kancheepuram and will submit periodical monthly reports to the appropriate authorities

e. Strengthening of 24 Veterinary Institutions with Basic Facilities like Fencing, Provision of Bore-wells, Water Troughs and Minor Repair Works

The Regional Joint Director of Animal Husbandry, Kancheepuram will implement the Scheme and he will submit periodical monthly reports to the appropriate authorities

f. Control of Parasitic Diseases to Enhance Vaccine Response

The Regional Joint Director of Animal Husbandry, Kancheepuram will implement the Scheme and he will submit periodical monthly reports to the appropriate authorities

g. Buffalo Calf Development Programme

The project will be implemented by the DDD, Kancheepuram and will submit periodical monthly reports to the appropriate authorities.

h. Supply of Stall-fed Goat Units to SHG

The Regional Joint Director of Animal Husbandry, Kancheepuram will implement the Scheme and he will submit periodical monthly reports to the appropriate authorities

I. Strengthening of University Farms

The Vice-Chancellor, Tamil Nadu Veterinary and Animal Sciences University, Madhavarm Milk Colony, Chennai – 51

J . Strengthening of Poultry Farm at Kattupakkam

The Regional Joint Director of Animal Husbandry, Kancheepuram will implement the Scheme and he will submit periodical monthly reports to the appropriate authorities

6. Improvement of Milk Collection, Processing, Value-addition, and Marketing Facilities

1. Abstract

One hundred portable milking machines will be supplied to the members of the society at a total cost of Rs.4.50 Lakhs @ Rs.0.18 Lakhs/unit. Provision of milking machines will help to improve the collection and quality of milk. Two bulk milk coolers will be established to improve the keeping quality of milk unit it is processed. The total cost will be Rs.60.0 Lakhs. Two units of walk-in-cooler will be established at a total cost of Rs. 60.0 Lakhs. A total number of 40 dormant societies will be revived with necessary inputs @ Rs.1.0 Lakh per unit at a total cost of Rs. 40 Lakhs. Five khoa manufacturing units (@ Rs.0.77 Lakhs/unit), ten paneer making units (@ Rs.1.02 Lakhs/unit) and two ice-cream making units (@ Rs. 1.12 Lakhs/unit) will be established at a total cost of Rs. 16.29 Lakhs to promote value-addition of milk. A total of 30 numbers of milk weighing machines will be established at milk producers' co-operative societies for accurate weighment of milk at a total cost of 5.10 Lakhs. Two number of PC-based automatic milk collection stations will be established at IDF villages and milk producers' co-operative societies at a total cost of Rs.3.50 Lakhs @ Rs.1.75 Lakhs/unit.

2. Budget

Sl. No.	Particulars	Amount (Rs. in Lakhs)
1.	Supply of portable milking machines to members of the Society @ Rs. 0.18 Lakhs, 25 Units totally (DDD)	4.50
3.	Provision of bulk milk coolers @ Rs.30.0 Lakhs/unit, 2 units (DDD)	60.00
4.	Provision of a walk-in-cooler @ Rs. 30.0 Lakhs/unit , 2 units(DDD)	60.00
5.	Revival of 40 dormant milk producers' co-operative societies @ Rs.1.0 Lakhs/unit, 25 societies (DDD)	40.00
6.	Establishment of five khoa manufacturing units @ Rs. 0.77 Lakhs/unit (DDD)	3.85
7.	Establishment of ten paneer manufacturing units @ Rs. 1.02 Lakhs/unit (DDD)	10.20
8.	Establishment of two ice-cream manufacturing units @ Rs. 1.12 Lakhs/unit (DDD)	2.24
9.	Supply of 30 milk weighing machines to milk producers' co-operative societies @ Rs. 0.17 Lakhs/unit (DDD)	5.10
10.	Provision of two numbers of PC-based automatic milk collection stations to IDF villages and milk producers' co-operative societies @ Rs. 1.75 Lakhs/unit, 2 units (DDD)	3.50
	Total	**189.39**

3. Background/ Problem Focus

Presently hand-milking is practiced by the farmers. There is shortage of milkmen and problems of mastitis are common in hand milking. Automatic milking machines save time, labour and prevents the occurrence of mastitis in cows. The processing plant at the main dairy of Aavin has a capacity of 2 lakh litres but the present handling is 2.05 lakh litres. The main dairy and chilling centers handle more

than their actual capacities. Further, the chilled milk from the chilling centers are being transported to the Main dairy at Kancheepuram and inturn, packaged milk is being transported from Kancheepuram to chennai for sale at Chennai.

Establishment of a bulk milk coolers and walk-in-coolers will help to maintain the quality of milk until it is processed and marketed. A total number of 40 milk producers' co-operative societies are dormant. This leads to decrease in the quantity of milk procured. They have to be revived with necessary inputs to improve the quantum of milk production in the district.

Facilities for the manufacture of value-added milk products like khoa, paneer and ice-cream have to be strengthened to utilize surplus milk during certain seasons. Also this will meet to the demand for these products by the urban population. Electronic weighing balances are to be provided to small societies to weigh milk.

Further, in societies handling more than 500 litres of milk per day, it is essential to establish PC- based automatic milk collection stations.

4. Project Rationale

Milking machines will save labour, time and prevent the occurrence of mastitis in dairy cows. Bulk milk coolers and walk-in-coolers will help to keep the quality of milk until it is processed and marketed. Revival of dormant milk producers' co-operative societies will boost the milk production. Establishment of manufacturing units for khoa, paneer and ice-cream will help in value-addition of milk. Provision of milk weighing machines to societies will help in the accurate weighment of milk. Automatic PC-based milk collection stations will save time, manpower, provide accurate weighment of milk, stores the milk data for several months and provide confidence among the members of the societies.

5. Project Strategy

Twenty five portable milking machines will be supplied to the members of the society at a total cost of Rs.4.50 Lakhs @ Rs.0.18 Lakhs/unit. Provision of milking machines will help to improve the collection and quality of milk. Two bulk milk coolers will be established to improve the keeping quality of milk unitl it is processed.

The total cost will be Rs.60.0 Lakhs. Two units of walk-in-cooler will be established at a total cost of Rs. 60.0 Lakhs. A total number of 40 dormant societies will be revived with necessary inputs @ Rs.1.0 Lakh per unit at a total cost of Rs. 40 Lakhs. Five khoa manufacturing units (@ Rs.0.77 Lakhs/unit), ten paneer making units (@ Rs.1.02 Lakhs/unit) and two ice-cream making units (@ Rs. 1.12 Lakhs/unit) will be established at a total cost of Rs. 16.29 Lakhs to promote value-addition of milk. A total of 30 numbers of milk weighing machines will be established at milk producers' co-operative societies for accurate weighment of milk at atotal cost of 5.10 Lakhs. Two number of PC-based automatic milk collection stations will be established at IDF villages and milk producers' co-operative societies at a total cost of Rs.3.50 Lakhs @ Rs.1.75 Lakhs/unit.

6. Project Goals

1. Clean milk production, saving labour and time and prevention of mastitis through installation of milking machines.
2. Improvement of the milk quality until processing and marketing through establishment of bulk milk coolers and walk-in-coolers.
3. Augmentation of milk production through revival of dormant societies.
4. Value-addition of milk by establishing khoa, paneer and ice-cream making units.
5. Accurate weighment of milk in societies through supply of weighing machines.
6. Saving time, labour and accurate weighment of milk through establishment of automatic PC-based milk collection stations.

7. Project Components

Twenty five portable milking machines will be supplied to the members of the society at a total cost of Rs.4.50 Lakhs @ Rs.0.18 Lakhs/unit. Provision of milking machines will help to improve the collection and quality of milk. Two bulk milk coolers will be established to improve the keeping quality of milk unitl it is processed. The total cost will be Rs.60.0 Lakhs. Two units of walk-in-cooler will be established at a total cost of Rs. 60.0 Lakhs. A total number of 40 dormant societies will be revived with necessary inputs @ Rs.1.0 Lakh per unit at a total cost of Rs. 40 Lakhs.

Five khoa manufacturing units (@ Rs.0.77 Lakhs/unit), ten paneer making units (@ Rs.1.02 Lakhs/unit) and two ice-cream making units (@ Rs. 1.12 Lakhs/unit) will be established at a total cost of Rs. 16.29 Lakhs to promote value-addition of milk. A total of 30 numbers of milk weighing machines will be established at milk producers' co-operative societies for accurate weighment of milk at atotal cost of 5.10 Lakhs. Two number of PC-based automatic milk collection stations will be established at IDF villages and milk producers' co-operative societies at a total cost of Rs.3.50 Lakhs @ Rs.1.75 Lakhs/unit.

8. Project Cost and Financing

(Rs. in Lakhs)

S. No.	Project	2008 -09	2009 -10	2010 -11	2011 -12	Total Cost
1.	Supply of portable milking machines to members of the Society @ Rs. 0.18 Lakhs, 25 Units totally (DDD)	1.26	1.08	1.08	1.08	4.50
2.	Provision of bulk milk coolers @ Rs.30.0 Lakhs/unit, 2 units (DDD)	30.0	30.0	-	-	60.0
3.	Provision of a walk-in-cooler @ Rs. 30.0 Lakhs/unit, 2 units (DDD)	30.0	30.00	-	-	60.0
4.	Revival of 40 dormant milk producers' co-operative societies @ Rs.1.0 Lakhs/unit, 25 societies (DDD)	10.0	10.0	10.0	10.0	40.0
5.	Establishment of five khoa manufacturing units @ Rs. 0.77 Lakhs/unit (DDD)	1.54	0.77	0.77	0.77	3.85
6.	Establishment of ten paneer manufacturing units @ Rs. 1.02 Lakhs/unit (DDD)	3.06	3.06	2.04	2.04	10.20
7.	Establishment of two ice-cream manufacturing units @ Rs. 1.12 Lakhs/unit (DDD)	1.12	1.12	-	-	2.24

8.	Supply of 30 milk weighing machines to milk producers' co-operative societies @ Rs. 0.17 Lakhs/unit (DDD)	1.36	1.36	1.19	1.19	5.10
9.	Provision of PC-based automatic milk collection stations to IDF villages and milk producers' co-operative societies @ Rs. 1.75 Lakhs/unit, 2 units (DDD)	3.50	-	-	-	3.50
	Total	**81.84**	**77.39**	**15.08**	**15.08**	**189.39**

9. Implementation Chart of the Project

Activity	**2008-2009**	**2009-2010**	**2010-2011**	**2011-2012**
Supply of portable milking machines to members of the Society	7units	6 units	6 units	6 units
Provision of bulk milk coolers	1 unit	1 unit	-	-
Provision of a walk-in-cooler	1 unit	1 unit	-	-
Revival of 40 dormant milk producers' co-operative societies	10 societies	10 societies	10 societies	10 societies
Establishment of five khoa manufacturing units	2 unit	1 unit	1 unit	1 unit
Establishment of ten paneer manufacturing units	3 unit	3 unit	2 unit	2 unit
Establishment of two ice-cream manufacturing units	1 unit	1 unit	-	-
Supply of 30 milk weighing machines to milk producers' co-operative societies	8 units	8 units	7 units	7 units
Provision of PC-based automatic milk collection stations to IDF villages and milk producers' co-operative societies	2 units	-	-	-

10. Reporting

The projects will be implemented by the DDD, Kancheepuram and periodical progress reports will be submitted to the concerned authorities.

6. Training Programmes on Livestock Farming and Value-addition of Milk and Meat to the Farmers and Women SHGs under Capacity Building for Adoption of Technology and Training for Technical staff and Dairy Farmers

1. Abstract

The following training programmes will be conducted by the DDD, Kancheepuram to the technical staff and dairy farmers at a total cost of Rs. 19.9Lakhs:

1. Farmers study tour
2. Skill development training for technical staff of Aavin, Kancheepuram.
3. Orientation training/workshop for milk producers' at society level

2. Budget: (Rs. in lakhs)

II. Training Programmes by the DDD, Kancheepuram

(Amount in Rs. lakhs)

Activity	2008-2009	2009 -2010	2010-2011	2011-2012	Total Cost
1. Farmers study tour @ Rs.5000/farmer, 150 farmers for 4 years	2.00	2.00	2.00	1.50	7.50
2. Skill development training for technical staff of Aavin, Kancheepuram 46 staff per year, @ Rs.5000/- per staff, for 4 years	2.30	2.30	2.30	2.30	9.20
3. Orientation training/workshop for milk producers' at society level Rs.20,000 per programme, 4 programmes/year, for 4 years	0.80	0.80	0.80	0.8	3.20
Total Budget for Training	**5.10**	**5.10**	**5.10**	**4.60**	**19.90**

3. Background/ Problem Focus

The farmers are not aware of the latest technologies available in the areas of livestock farming. Value-addition of milk and meat are the thrust areas in the livestock industry.

4. Project Rationale

The training programmes are planned to provide the latest technological developments in the filed of animal husbandry.

5. Project Strategy

The Training Programmes will be conducted by the DDD, Kancheepuram.

6. Project Goals

Capacity building in the areas of livestock farming, value-addition of milk and meat, sheep and goat rearing and hygienic meat production, processing and establishment of modern retail meat units. Enlightening the technical staff and dairy farmers on latest developments in the dairy industry through training programmes and study tours.

7. Project Components

The following training programmes will be conducted by the Aavin, Coimbatore to the technical staff and dairy farmers at a total cost of Rs. 19.90 Lakhs:

1. Farmers study tour
2. Skill development training for technical staff of DDD, Kancheepuram.
3. Orientation training/workshop for milk producers' at society level

8. Project Cost and Financing

II. Training Programmes by the DDD, Kancheepuram

(Amount in Rs. Lakhs)

Activity	2008-2009	2009-2010	2010-2011	2011-2012	Total Cost
1. Farmers study tour @ Rs.5000/farmer, 150 farmers for 4 years	2.00	2.00	2.00	1.50	7.50
2. Skill development training for technical staff of Aavin, Coimbatore 46 staff per year, @ Rs.5000/- per staff, for 4 years	2.30	2.30	2.30	2.30	9.20
3. Orientation training/workshop for milk producers' at society level Rs.20,000 per programme, 4 programmes/year, for 4 years	0.80	0.80	0.80	0.8	3.20
Total Budget for Training	**5.10**	**5.10**	**5.10**	**4.60**	**19.90**

9. Implementation Chart of the Project

1. Training Programmes by the DDD, Kancheepuram

(No. of Programmes)

Activity	2008-2009	2009-2010	2010-2011	2011-2012	Total
1. Farmers study tour @ Rs.5000/ farmer, 150 farmers for 4 years	40 farmers	40 farmers	40 farmers	30 farmers	150 farmers
2. Skill development training for technical staff of Aavin, Coimbatore 46 staff per year, @ Rs.5000/- per staff, for 4 years	46 staff	46 staff	46 staff	46 staff	184 staff
3. Orientation training / workshop for milk producers' at society level Rs.20,000 per programme, 4 programmes/ year, for 4 years	4 programs	4 programs	4 programs	4 programs	16 programs

10. Reporting

The DDD, Kancheepuram will submit to periodical progress report on the training programmes conducted to the higher authorities.

6.. Institutional Development: Strengthening the Facilities at TANUVAS Centres for the Effective Disease Surveillance, Monitoring and Extension Services in the District

A. Strengthening of Farmers Training Centre at Kancheepuram

1. Abstract

Farmers' Training Centre (FTC) at Kancheepuram is functioning with the major mandate of imparting training to the rural farmers, self help groups, unemployed youth and entrepreneurs on livestock and poultry farming. It has established linkage with the farmers of Kancheepuram district in order to solve their practical problems in livestock. This centre needs to be strengthened further with more infrastructure by providing barbed wire fencing, establishing bore well, pump, distribution line facilities and constructing an integrated farming system model unit and improving the audio visual aids for imparting training to farmers more effectively on livestock . Hence, it is proposed to strengthen the Farmers' Training Centre with a total outlay of Rs.10.00 lakhs.

2. Budget : Rs. 10.00 lakhs

3. Background/ Problem Focus

Lacunae in existing infrastructure at FTC, Kancheepuram for transfer of technology at the field level

4. Project Rationale

The Farmers Training Centre, Kancheepuram serve the farmers of Kancheepuram and adjoining Thiruvallur districts in the areas of livestock production and health. The technical services and training programmes offered by this centre is being utilized by the farming community. Strengthening of this centre will help in effective dissemination of information and better conduction of extension activities in the district.

5. Project Strategy

In order to alleviate the problems faced by the farmers of the district with respect to livestock, Farmers' Training Centre, Kancheepuram will be strengthened with better infrastructure facilities so as to update the farmers with recent management techniques more effectively. Strengthening the centre by providing barbed wire fencing, establishing bore well, pump, distribution line facilities and an integrated farming system model unit, strengthening audio visual aids to impart better training to farmers.

6. Project Goals

Strengthening the Farmers Training Centre, Kancheepuram for effective dissemination of information from Laboratory to Land.

7. Project Components

- Strengthening the centre by providing barbed wire fencing,
- Establishing bore well, pump, distribution line facilities
- Establish an integrated farming system model unit
- Strengthening the centre with audio visual aids for imparting training more effectively

8. Project Cost and Financing (Rs. in Lakhs)

Strengthening of the TANUVAS centre, Farmers Training Centre at Kancheepuram with replacement of worn out barbed wire around the FTC campus, establishment of Bore well, pump and distribution line, Establishment of integrated farming system model unit, Computer with accessories, copier, audio visual aids, public address system, training materials etc., at a cost Rs. 10.00 Lakhs.

9. Implementation Chart of the Project

Activity	2008-2009	2009 -2010	2010-2011	2011-2012
Strengthening of the TANUVAS centre at Farmers' Training Centre Kancheepuram with infrastructure and facilities for conducting skill oriented training programmes	√	-	-	-

10 .Reporting

The Vice-Chancellor, Tamilnadu Veterinary and Animal Sciences University Madhavarm Milk Colony, Chennai - 51

6. Empowerment of Self Help Group Women / Unemployed Rural Youth through Skill Based Livestock and Poultry Training for Income Generation

1. Abstract

Self help group women / unemployed rural youth in Kancheepuram district are performing various agriculture and non-farming activities for their livelihood. In addition, wide spectrum of livestock and poultry farming activities provide ample opportunity for SHG members / unemployed rural youth for round the year employment and income. Imparting skill based training on livestock and poultry farming to 1200 SHG women / unemployed rural youth (5 batches of 20 beneficaries in a year each at KVK, Kattupakkam and FTC, Kancheepuram) will help the beneficiaries to undertake the enterprise in an efficient manner, thereby improving their standard of living.

2. Budget : Rs. 13.65 lakhs

3. Background/ Problem focus

Lack of awareness on latest scientific techniques in livestock and poultry sectors.

4. Project Rationale

Skill based training to women SHGs / unemployed rural youth will help them in managing their livestock and poultry farming activities successfully.

5. Project Strategy

The knowledge of beneficiaries will be updated with latest scientific farming practices.

6. Project Goals

Empowerment of SHG women and rural youth for income and employment generation

7. Project Components

- Strengthening of Infrastructure
- Identification of beneficiaries and imparting training

8. Project Cost and Financing

Financial requirement for KVK, Kattupakkam (TANUVAS)

Particulars	2008-09	2009-10	2010-11	2011-12	Total
Non- recurring					
Computer, Printer and AV aids	1,00,000	-	-	-	1,00,000
Copier	75,000	-	-	-	75,000
Sub-total	**1,75,000**	**-**	**-**	**-**	**1,75,000**
Recurring					
Allowance @ Rs 200 for 100 beneficiaries	20,000	20,000	20,000	20,000	80,000
Transport and field visit (@ Rs. 500 / beneficiary)	50,000	50,000	50,000	50,000	2,00,000
Training manual and other printing materials	1,00,000	1,00,000	1,00,000	1,00,000	4,00,000
Honorarium to resource persons	10,000	10,000	10,000	10,000	40,000
Establishment and maintenance of integrated farming system model unit	2,00,000	50,000	50,000	50,000	3,50,000
Miscellaneous expenses	30,000	30,000	30,000	30,000	1,20,000
Sub-total	**4,10,000**	**2,60,000**	**2,60,000**	**2,60,000**	**11,90,000**
Total	**5,85,000**	**2,60,000**	**2,60,000**	**2,60,000**	**13,65,000**

9. Implementation Chart of the Project

2008-12 - Infrastructure strengthening, Beneficiary identification and imparting training

10. Reporting

1. The Vice-Chancellor, TANUVAS, Madhavarm Milk Colony, Chennai - 51
2. The Commissioner and Director of Veterinary Services, Department of Animal Husbandry, Chennai – 6

Table. 64 Budget Estimates of Fisheries Sector 2008-2012)

Sl. No	Components	Implementing Agency	Unit Cost	Total units	2008-09		2009-10		2010-11		2011-12		Total cost
					Units	Cost	Units	Cost	Units	Cost	Units	Cost	
1	Seed rearing (Subsidy 50%)	Fisheries Department	5.00	4.00	2.00	10.00	1.00	5.00	1.00	5.00			20.00
2	Seed stocking in open waters (Subsidy 100%)	Fisheries Department	0.20	350.00	50.00	10.00	100.00	20.00	100.00	20.00	100.00	20.00	70.00
3	Supply of fishing implements (Subsidy 50%)	Fisheries Department	0.10	300.00	50.00	1.25	50.00	1.25	100.00	2.50	100.00	2.50	7.50
4	Capacity building	Fisheries Department	0.10	100.00	20.00	2.00	30.00	3.00	30.00	3.00	20.00	2.00	10.00
5	Repairs and Renovation of Model prawn farm	Fisheries Department	2.00	4.00	2.00	4.00	1.00	2.00	1.00	2.00			8.00
6	Sea ranching (Subsidy 100%)	Fisheries Department	7.00	8.00	2.00	14.00	2.00	14.00	2.00	14.00	2.00	14.00	56.00
7	Artificial fish habitats (Subsidy 100%)	Fisheries Department	15.00	8.00	2.00	30.00	2.00	30.00	2.00	30.00	2.00	30.00	120.00
8	Modern fish stall (Subsidy 50%)	TNFDC	5.00	4.00	1.00	5.00	1.00	5.00	1.00	5.00	1.00	5.00	20.00
9	Marketing of value added products (Subsidy 50%)	TNFDC	100.00	1.00	1.00	100.00							100.00
10	Modernization of indigenous FRP long liner (Subsidy 50%)	Fisheries Department	2.00	60.00	20.00	40.00	20.00	40.00	20.00	40.00			120.00
11	Supply of mopeds with insulated ice boxes (50%) Subsidy	TNFDC	0.15	30.00	10.00	1.50	10.00	1.50	10.00	1.50			4.50
	Fisheries - Total		**136.55**	**869.00**	**160.00**	**217.75**	**217.00**	**121.75**	**267.00**	**123.00**	**225.00**	**73.50**	**536.00**
1	Establishment of Demonstration Unit	TANUVAS	16.00	1.00	1.00	16.00							16.00
2	Breeding of endemic ornamental fishes	TANUVAS	18.00	1.00	1.00	18.00							18.00
	TANUVAS - Total		**34.00**	**2.00**	**2.00**	**34.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**34.00**
	Grand Total		**170.55**	**871.00**	**162.00**	**251.75**	**217.00**	**121.75**	**267.00**	**123.00**	**225.00**	**73.50**	**570.00**

V. Project

1. Seed Rearing (Subsidy 50%)

1. Abstract

The fish farmers in Kancheepuram district are progressive farmers and adopt modern technologies in fish seed production / fish production. The resources can be utilized to expand the inland fisheries activities in the district. The potential can also be tapped to cater to the need of other districts. Hence, it is proposed to encourage private participation in fish seed production / fish seed rearing by extending subsidy assistance of 50% of the capital cost with a production capacity of 10 million early fry / one million fingerlings. The total cost of one unit will be Rs. 20 lakh. The unit cost is given below:

2. Budget : Rs. 20.00 lakhs

3. Background / Problem Focus

Kancheepuram district has an area of 4.43 lakh ha. The district is mainly agrarian with a total rain fall of 900 mm per Annaum. In this district 163 private shrimp farms are available with a water spread are of 352.49 ha. The average Annaual production is 700 tonnes. Only *Penaeus monodon* is cultivated in this region. About 352.49 ha of brackish water resources are available . Area under inland fish farming and inland fish production is increasing. The total fish seed demand is estimated at 111.05 lakh against the present meager production of 5.00 lakh.

4. Project Rationale / Project Strategy / Project Goals

- The early fry reared for 45 days and grown up to a fingerling size
- 4 cycles per year and total 16 cycles in 4 years duration at Kancheepuram
- 50 Million fingerlings produced within the period of 4 years duration

5.Project Cost and Financing

Total cost : 20.00 lakhs

Unit cost : 5.00 lakhs (cost of construction of pond, purchase of implements including net and seed)

No. of units : 4 ha

S.N	Particulars	2008-09	2009-10	2010-11
1.	Preliminary official procedures for floating tenders and establishment of farm ponds	√	√	√

6. Implementation Chart of the Project

Sl. No	Particulars	2008-09			
		I Qtr	II Qtr	III Qtr	IV Qtr
1.	Infrastructure development in seed production through private and Government farm	√			
2.	Production of 50 million finger lings		√		
3.	Seed rearing / Seed production in two units of private farms.			√	
4.	Seed rearing / Seed production in two units of private farms.				√

7. Reporting

The project implemented by Department of Fisheries.

2. Seed stocking in open waters (Subsidy 100%)

1. Abstract

It is proposed to cover 5250 ha of water bodies additionally to bring under fish culture by extending 50% subsidy assistance for stocking fingerlings. The total cost would be Rs. 70 lakh for the supply of 105 lakhs fingerlings 50% subsidy.

2. Budget : Rs. 70.00 lakhs

3. Background / Problem Focus / Project Rationale / Project Strategy

- The Indian major carps along with / and Tilapia are the major species are captured in a inland water bodies in the district.
- Fish culture in a natural small water system is being practiced by stock and harvest system and not by scientific culture method.
- Subsidy will be extended to registered fish farmers
- Production expected to the tune of 240 tonnes of Fishes per year

4. Project Goals

To increase the area under fish culture to 5250 ha.

5. Project Cost and Financing

Unit cost	:	Rs.0.20/ha for supply of fingerlings
Total No. of Units.	:	350 ha
Total	**:**	**350 x 0.20=70.00 lakhs (@100%subsidy**

6. Implementation Chart of the Project

S. No	Particulars	2008-09	2009-10	2010-11
1.	Identification of fish farmers	√	√	√
2.	Supply of fish seeds	√	√	√

7. Reporting

The project will be implemented by Department of Fisheries

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3) Supply of Fishing Implements (Subsidy 50%)

1. Abstract

Fishermen will be provided with gill nets for effective fishing.

2. Budget : Rs 7.50 lakh

3. Background / Problem Focus / Project Rationale / Project Strategy / Project Goals

- To provide gillnets to the fishermen at 50% subsidy
- To enhance fish production through capture fisheries.
- To provide 300 nos. of gillnets to the inland fishermen.
- To increase fishing in natural water bodies by providing fishing implements.

4. Project Components

Supply of gillnets at 50% subsidy

5. Project Cost and Financing

No. of units	:	300
Unit cost	:	0.025 lakhs (purchase of coracle and nets)
Total cost (300 units x 0.02.5)	:	Rs. 7.50 lakhs

6. Implementation Chart of the Project

S.No.	Particulars	1 Qtrs	II Qtrs	III Qtrs	IV Qtrs
1.	Purchase and supply of coracle and nets	√	√	√	√

7. Implementation Chart of the Project

The project will be implemented by the Department of Fisheries.

8. Reporting

The progress of the project will be reported periodically.

4. Capacity of Building

1. Abstract

Kancheepuram district has vast potential for inland fish culture. The technological advancement need to be percolated at grass root level for which a regular farmers training is required. The facilities available in Kolovoy Lake will be utilized for importing training. The proposed training will be sandwiched programme with both theory and practical on different technologies such as scientific fish culture practices ornamental, fish breeding, hygienic handling and marketing, cage culture fin fishes will be undertaken to other states like Andhrapradesh, Orissa, West Bengal etc., to have field exposures. A total number of 100 persons will be trained at an estimated cost of Rs.10 lakh @ of Rs.10,000 per trainee.

2. Budget : Rs. 10.00 lakhs

3. Background / Problem Focus

The inland fisheries sector of Tamilnadu is endowed with a total water spread area of 3,18,790 ha with as major irrigation and long seasonal tanks (97,690 ha), short seasonal tanks/ponds (1,58,100 ha), estuaries and backwaters (56,000 ha) derelict waters, swamps etc. (7,000 ha). While these resources have a potential to yield 2.46 lakh tonnes of fish, the present yield is only 1.14 lakh tonnes. About 60% culturable area has been brought under culture practices.

4. Project Rationale

Imparting training in such fish culture practices would generate employment opportunities and make them self reliant and socially and economically empowered.

5. Project Strategy

To conduct training programme on freshwater fish culture for the farmers so as to improve their socio economic conditions.

6. Project Goals

- To conduct 60 training programmes on freshwater fish culture
- To conduct follow up studies.

7. Project Components

Composite fish culture, Ornamental fish culture, Integrated fish farming, Cat fish culture, Economies and Marketing

8. Project Cost and Financing

Total cost : 10 lakhs

Number of trainees : 100

Unit cost : Rs. 0.10

S. No.	Particulars	App. Budget
1)	Providing Stipend to the trainees	Rs. 5000
2)	Extension materials	Rs. 3500
3)	Miscellaneous	Rs. 1500
Total		**Rs. 10000**
100 x 10000		**Rs.10.00 lakhs**

9. Implementation Chart of the Project

S.No	Particulars	2008-09	2009-10	2010-11	2011-12
		I Qtr	IIQtr	IIIQtr	IV Qrs
1.	Selection of trainees	√			
2.	Extending training		√		
3.	Evaluation and reporting			√	√

10. Reporting

The progress of the project will be reported to the Department of Fisheries

5. Repairs and Renovation of Model Prawn farm at Vaniyanchavadi

1. Abstract

Vaniyanchavadi model prawn farm previously utilised for prawn culture practices. It is the need of the hour to go for alternative spices culture practices such as fin fish culture in order to modify the prawn farm with suitable arrangement as a demonstration farm to develop alternative spices culture. It is a necessary sum of Rs. 8.00 lakh shall be sanctioned for renovation and conversion purposes

2. Budget : Rs. 8.00 lakhs

3. Background

Freshwater prawns enjoy great demand in the international market, that is evident from the high price they fetch in the consumer market. The demand supply gap is widening year after year due to the rise in the consumption worldwide. Therefore there is a scope for the constant revenue for the freshwater prawn producers. The tropical climate in the State also favours the growth of the prawns.

Tamil Nadu has 0.37 million ha of freshwater resources. About 8 districts are blessed with good water resources including low saline waters. However, the production

of prawns from the state remains at very low figures. This can be attributed to the low level of technology adoption in aquaculture in the state along with the low percentage of people participating in the farming of prawns voluntarily. Large scale adoption of the technology and extensions of technical support to the farmers may bring in changes in the mindset of the people, especially inland fish farmers. Keeping this in mind the demo and practical production units in the districts with potential water bodies are proposed.

4. Project Rationale

Deepening of ponds, strengthening of bunds, Construction of outlets installation of machineries and construction of store, watchmen and engine rooms. for two ponds during the first year and the remaining two ponds for second year.

5.Project Strategy

The strategy involves the following aspects and approaches:

1. Establishment of freshwater prawn production units in different districts.
2. Preparation of ponds, stocking, feeding, sampling and stock management to ensure production of freshwater prawn.
3. Training the farmers to take up large scale farming of freshwater prawn.
4. Co-ordinating different production units for regularised marketing of prawns to maximize the revenue to the farmers.

6. Project Goals

The following are the goals set for this project.

1. To establish farming units for prawns to enhance production and revenue.
2. To train the farmers en masse to adopt the farming in large scale.
3. To develop and function demo units for freshwater prawn farming in the state.

7. Project Components

This project involves the following components.

a. Production ponds of 2000 m^2 each formed as a prawn farms in an ideal location.

b. Training to the farmers.

c. Production and marketing of prawns.

8. Project Cost and Financing

Sl. No	Particulars	2008-11 Cost
1.	Deepening of ponds, strengthening of bunds, Construction of outlets installation of machineries and construction of store, watchmen and engine rooms for unit I	Rs. 8.00 lakhs
2.	Deepening of ponds, strengthening of bunds, Construction of outlets installation of machineries and construction of store, watchmen and engine rooms for unit II	

9. Implementation Chart of the Project

Sl. No	Particulars	2008-11			
		I Qtr	II Qtr	III Qtr	IV Qtr
1.	Deepening of ponds, strengthening of bunds, Construction of outlets installation of machineries and construction of store, watchmen and engine rooms for unit I	√	√	√	√
2.	Deepening of ponds, strengthening of bunds, Construction of outlets installation of machineries and construction of store, watchmen and engine rooms for unit II		√	√	√

10. Reporting

Quarterly progress will be reported to the monitoring Agency by the implementing Agency.

Annually the progress can be reviewed with regard to production, possible enhancements adoption rate, etc.

6. Sea Ranching (Subsidy 100%)

1. Abstract

Replenishment of the wild stock it is essential to introduce the hatchery reared juveniles of the various shrimps and fishes into the open sea through the process of sea ranching

2. Budget : Rs. 56 .0 lakh

3. Background / Problem Focus

Kancheepuram region has been identified for implementing such sea ranching programmes

4. Project Strategy

The rearing of 1 million seeds could be carried out at a time in nursery cages for 45 days or until the species reaches juvenile stage and then released into the open sea

5. Project Goals

5 million seeds to be ranched every year

6. Project Components

Replenishment of wild stock; enhance the fish population.

7. Project Cost and Financing

Unit cost : Rs.7.00 lakh/million

Total No. of Units. : 8

Shrimp seeds

Unit cost : Rs. 5 lakhs / one million prawn seeds

Total No.of Units : 1

Total cost : Rs. 5 lakhs

Crab seeds

Unit cost : Rs. 2.00 lakhs / one lakh seeds

Total No.of Units : 1 units

Total cost : Rs. 2.00 lakhs

Total Cost per unit Containing Crab and Shrimp Seed Production Unit : 7 lakhs

(1 unit = 1 Million; Costing Rs.7.0 lakhs including Seed Cost, Rearing Cost, Feed Cost, Labour Cost etc.)

No. of units : 8

Total cost 7 lakhs x 8 units : Rs. 56 lakhs

8. Implementation Chart of the Project

S. No	Particulars	2008-09	2009-10	2010-11	2011-12
		I Qtr	II Qtr	III Qtr	IV Qtrs
1.	Construction of hatcheries	√	√	√	√
2.	Selection of breeders	√	√	√	√
3.	Sea ranching	√	√	√	√

7. Development of Artificial Fish Habituates

1. Abstract

Fish aggregating device facilitates concentration of various fish species and invertebrate organisms to harbour in a particular locality like coral reef base, heaped boulders, sea grass bed, and will serve as a feeding and spawning ground. In the event of removal of such bases from the natural ecosystem, the fish species scatter themselves for want of protection and threat from predatory fishes and aquatic animals. Dredging of sea bottom constantly would drive away the fish population from one territory to another territory. Blasting of the sea and dynamite fishing has caused enormous threat to the fish aggregating locality in the past and they have to be rehabilitated by artificial means to sustain the fishery and conserving from destruction. Fish aggregation devices would help fish to find their feeding and breeding grounds for prolifying themselves easily. So FADs are novel ways to make the distant fish species to be attracted towards an artificial device. This would also help the fisher folk to involve themselves collectively to rejuvenate the coastal fauna and flora to meet out their fishing needs and livelihood.

2. Budget : Rs. 120.00 lakhs

3. Background / Problem Focus

In view of depleting fish stock and diversified biodiversity, FAD has to be strengthened. Fish species are at the verge of stock depletion has to be governed through FADs. Tamilnadu with an extended coastal length attracts immediate attention to revive the stock by special means like FADs. FADs with community involvement especially in the coastal region would help implementing the programme in a successful way.

4. Project Rationale

- To enrich the inshore waters with diversified fish species
- To help the fishermen for good catch of fish
- To provide a protected ground for various fauna and flora
- To retain the semi natural ecosystem

5. Project Strategy

To implement the programme of community FADs in all the coastal districts to support marine fishery and stock retention.

6. Project Goals

To identify suitable ground along the coast to install FADs like concrete structures, boulders, and other fibre reinforced structures without polluting the coastal ecosystem.

To give awareness to the fishermen and coastal fisher folk about the value of FADs to implement the programme with fishermen participation for community development.

7. Project Components

Installation of FADs of various shapes and with different components like stone pitchments, barrels, tyres, hollow material and dead corals

8. Project Cost and Financing

Sl.No.	Components	Rs in lakhs
1.	An FAD of 3 metre diameter and width made up of concrete materials	15.00 lakhs
2.	Anchorage	
3.	Floor mast	
4.	Training fisher folk	

9. Implementation chart of the Project

Sl.No.	Particulars	I Qtr	II Qtr	III Qtr	IV Qtr
1.	Identification of suitable coastal site for installation	√			
2.	Design and fabrication of FADs		√		
3.	Installation			√	
4.	Training			√	√
5.	Sampling and fish catch		√	√	√

10.Reporting

The efficiency of FADs kept installed in the coast will be periodically monitored and aggregation of fish species will be observed and reported the same to the authorities through fisher folk with community involvement.

8. Modern Fish Stall (Subsidy 50%)

1. Abstract

Modern fish stall will have 20-25 fish stalls where facilities like ice boxes, crates, electronic balance and dressing table are provided along with electricity, draining and water facilities

Budget : Rs. 20.00 lakh

2. Background / Problem Focus

The Modern fish stall at present are poorly maintained. The essential market infrastructure like electricity, water, drainage and civic amenities in most of the retail fish markets are inadequate

3. Project Rationale

This is the last link in the marketing channel. Consumers' satisfaction is guaranteed at this retail outlet.

4. Project Strategy

The retail market will be located in 20 district headquarters of Tamilnadu based on the marketing potential. Fishermen will get reasonable price for their produce customers will get reasonable price for their fishes

5. Project Goals

- ❖ Providing quality fishes at reasonable price.
- ❖ To enhance revenue for the fisher folk engaged in fish marketing

6. Project Components

The essential market infrastructure like electricity, water, drainage and civic amenities in most of the retail fish markets are inadequate. Hence all the need infrastructure are to be created to preserve the quality of fish.

7. Project Cost and Financing

Rs. 5.00 lakhs - 1 Unit.

(Rs. in lakhs)

Sl. No.	Details	Unit cost	No. of units	Total
1.	Building (750 sq. ft.) with provision for 5 stalls with electricity, water supply and drainage	3.00	1	3.00
3.	Ice boxes	0.05	10	1.00
4.	Weighing balance	0.05	10	0.50
5.	Dressing table, knives, crates, price display board etc.	0.05	10	0.50
	Total			**5.00**

Budget : Rs. 20.00 lakh - 4 Units / Rs. 5.00 lakhs / unit

8. Implementation Chart of the Project

The modern fish stall will be established as follows:

Sl.No.	Particulars	2008-09	2009-10	2010-11	2011-12
1.	Construction of fish stall Purchase of ice boxes, crates, electronic balance, tables etc.	√	√	√	√

9. Reporting

All the retail fish markets will be monitored by the Dept. of Fisheries

9. Marketing of Value Added Fishery Products : (Subsidy 50%)

1. Abstract

Assistance will be provided for the marketing of the value added products in order to maximize the earning and revenue to the fisherfolk engaged in the production and marketing of the products.

2. Budget: Rs. 100.00 Lakhs

3. Background and Problem Focus

There is a good scope for the production of the value added products based on the available fish and shellfishes along the TN coast. However, there is stagnation in the off takeoff the materials due to supply fluctuation and this results in the loss to the fishermen who produced it. At this stage, value addition may help the fisherfolk to get higher price for the products.

4. Project Rationale

Subsidy assistance for marketing. Fishermen will get reasonable price for their produce customers will get variety of ready to eat fish varieties at reasonable price

5. Project Goal

- ❖ To maximize the earning for the fisher folk
- ❖ To improve the marketing possibility for the fishery products

6. Project Components

Subsidy assistance, Marketing, Production of value added products

7. Project Cost and Financing

1. Production of value added fishery products	: Rs. 25.00 lakhs
2. Training to the fisher folk in this trade	: Rs. 25.00 lakhs
3. Marketing tie ups and exhibitions	: Rs. 15.00 lakhs
4. Subsidy assistance for the marketing	: Rs. 25.00 lakhs
5. Packing materials and other infrastructure	: Rs. 10.00 lakhs
Total	**: Rs. 100 Lakhs**

8. Implementation Chart of the Project

Sl. No.	Particulars	2008-09	2009-10	2010-11	2011-12
1.	Construction of fish stall Purchase of ice boxes, crates, electronic balance, tables etc.	√	√	√	√

9. Reporting

The project will be monitored and implemented by the TNFDC .

10) Modernization of Indigenous FRP Long Liner (Subsidy 50%)

1. Abstract

There are 8 mechanized fishing boats and 2330 motorized FRP crafts are engaged in fishing operation. The inshore fishery is become stagnant since last decade, therefore to tap the offshore resource; it has to be diversified in to gill net and lone line fishing to reduce impact on inshore fishery. There is very good potential of deep sea resources such as Tuna in Kancheepruam district which is under exploited.

2. Budget : Rs. 120.00 lakhs

3. Background / Problem Focus

The present inshore boats have minimum facilities to exploit the deep sea resources such as tuna, further they don't have any advanced communication system and storage system. To overcome this lacuna and exploitation of tuna resources, needs about 60 medium range FRP boats may be introduced with modern fishing instruments, communication system facilities to exploit the deep sea tuna resources by providing 50% subsidy.

4. Project Rationale

This scheme will extend for the period of your years. The actual unit cost of medium range (42ft $_{LOA}$) FRP boat is about Rs. 4.00 lakh.

5. Project Strategy

It is expected that in addition to the present exploitation these will be about 200 tonnes of tuna will be exploited by FRP boats through these scheme. The scheme will be implemented and monitored by Fisheries Department.

6. Project Goals

- To Modernize the exiting FRP boats.
- To tap the offshore tuna fisheries resource.

7. Project Components

The FRP boats at present engaged in fishing have to be improved and replaced with modern fishing gears and fishing accessories.

The advanced communication system and navigational aids are absolutely necessary for the fishermen since they are expected to exploit fishes like tuna using long line.

8. Project Cost and Financing

- Unit cost : Rs.2.00 lakhs
- Total units : 60

Sl.No.	Particulars	Amount (Rs. in lakhs)
1.	Trawl net and Upgradation of FRP	2.00

9. Implementation Chart in the Project

Sl.No.	Particulars	I Qtr	II Qtr	III Qtr	IV Qtr
1.	Distribution and Upgradation of nets and FRP boats	√	√	√	√

10. Reporting

The project will be implemented by State Fisheries Department.

11) Establishment of Demonstration Units

1. Abstract

Transfer of technology for the farming is possible only by demonstration of the technology and subsequent hands-on training to the farmers. Keeping this mind, demo untis are proposed in all the districts for the transfer of technology.

2. Budget : Rs. 16.00 lakh

3. Background

Aquaculture is becoming one of the major economic activities of the coastal and inland areas of India during the past two decades. With 1000 Km of coastal belt and a vast area of inland water bodies Tamilnadu has great potential for fish culture activities in both marine and freshwater species of fishes. One of the major problems faced by the fish farmer is the low water holding capacity of the soil and consequent seepage. This leads to exorbitant operation cost for the average fish farmer because of the excessive water pumping .To avoid this pond liners can be used effectively.

4. Project Rationale

1. To establish a demonstration fish farm with polythene lined ponds
2. The proposed scheme would help in growing different varieties of fish in the ponds
3. The project would help create awareness among the farmers, entrepreneurs and all those who are involved in fish and shellfish farming for managing farms and improving farming without seepage and saving water.

5. Project Strategy

- A demo pond with polythene lining would be established and used for demonstrating the fish culture operation s to the farmers and entrepreneurs for demonstrating the need of less water and sustaining the fish culture irrespective of the soil quality.
- Undertake successful fish culture operations using demo ponds.
- Use the demo ponds for training fish farmers

6. Project Goals

a) Establishment of a polythene lined fish culture pond.
b) Establishing the concept of fish culture in all soil quality areas in the state without sacrificing the profitability of aquaculture
c) Standardise an economic fish culture protocol using polythene lined ponds

7. Project Components

This involves establishment of a demo pond farm with 8 culture ponds with varying capacity to study the feasibility of undertaking the operation with polythene lining. Repeated successful crops have to be harvested to demonstrate the efficacy of the technology. The ponds are to constructed and lined with polythene sheets of sufficient thickness and the culture has to be evaluated for defects and advantages.

8. Project Cost and Financing

Total Cost : Rs. 18 lakhs

Sl.No.	Particulars	Rupees in Lakhs
1	Establishment of demonstration fish farm	8.00
2.	Model fish seed hatchery	3.00
3.	Provision of lab and training hall facility	2.00
4.	Model fish processing unit	5.00
	Total	**18.00**

9. Implementation of the Project

Sl.No	Particulars	2008-09	2009-10	2010-11	2011-12
1.	Establishment of demonstration fish farm	√			
2.	Model fish seed hatchery	√			
3.	Provision of lab and training hall facility	√			
4.	Model fish processing unit	√			

The project could be effectively implemented upon receipt of the funds and consequent setting up demo farm.

10. Reporting

Quarterly progress will be reported based on which the project can be reviewed and analysed.

12) Breeding of Endemic Ornamental Fishes.

1. Abstract

Ninety five per cent of our ornamental fish export is based on wild collection. Majority of the indigenous ornamental fish trade in India is from the North Eastern states and the rest is from Southern states which are the hot spots of fish bio diversity in India. This capture based export is not sustainable and it is a matter of concern for the industry. In order to sustain the growth it is absolutely necessary to shift the focus from capture to culture based development. Moreover most of the fish species grown for their ornamental importance can be bred in India successfully. Organised trade in ornamental fish depends on assured and adequate supply of demand, which is possible only by mass breeding

2. Budget : Rs. 18.00 lakh

3. Background/Problem Focus

Ornamental fish keeping is one of the most popular hobbies in the world today. The growing interest in aquarium fishes has resulted in steady increase in aquarium fish trade globally. The trade with a turnover of US $ 5 Billion and an Annaual growth rate of 8 percent offers a lot of scope for development. The top exporting country is Singapore followed by Hong Kong, Malaysia, Thailand, Philippines, Srilanka, Taiwan, Indonesia and India. The largest importer of Ornamental fish is the USA followed by Europe and Japan. The emerging markets are China and South Africa. Over US $ 500 million worth of ornamental fish are imported into the USA each year.

India's share in ornamental fish trade is estimated to be Rs 158.23 lakh which is only 0.008% of the global trade. The major part of the export trade is based on wild collection. There is very good domestic market too, which is mainly based on domestically bred exotic species. The overall domestic trade in this field cross 10 crores and is growing at the rate of 20 per cent Annually. The earning potential of this sector has hardly been understood and the same is not being exploited in a technology driven mannaer. Considering the relatively simple technique involved, this activity has the potential to create substantial job opportunities, besides helping export earnings.

4. Project Rationale

Among the various aquaculture practices, ornamental fish culture is gaining momentum at present. There is much scope for self employment opportunities in this trade. Tamilnadu has sufficient potential for the development of ornamental fish culture in terms of land , water and labour resources, If the ornamental fish breeding is taken up by farmers, rural youth, women self help groups considerable quantities of ornamental fishes could be produced. This in turn could contribute considerably to GDP growth of our nation besides alleviating poverty.

5. Project Strategy

1) Breeding of live bearing ornamental fishes such as molly, guppy, plat and swordtail fish and egg laying ornamental fishes like gold fish, koi carp, fighter, gourami and oscar fish.
2) Production of healthy young ones
3) Development of good quality broodstock
4) Selling of ornamental fishes

6. Project Goals

1) To breed ornamental fishes and selling to the public
2) To increase the family income and to improve the socio economic status of the farmers, women self help groups and to create employment through aquariculture by quality broodstock supply.

7. Project Components

- Work Shed
- Cement tanks
- Glass tanks
- Heater
- Filter
- Other aquarium accessories

8. Project Cost and Financing : Rs. 18.00 lakhs

S. No.	Particulars	Rupees
1	Construction of hatchery shed 200 m2 x 1200	2,40,000
2	Construction of cement tanks 60000 lts	75,000
3	Air blower	20,000
4	Generator	100,000
5	Filter	200,000
6	Breeders	50,000
7	Bore well, pump, pipe lines	500,000
8	Lab instruments(glass wares and chemical)	100,000
9	Feed, fertilizer, manure	50,000
10	Miscellaneous	4,65,000
	Total	**18,00,000**

9. Implementation of the Project

Sl. No.	Particulars	2008-09	2009-10	2010-11	2011-12
1.	Floating of tenders		√		
2.	Establishment of hatchery		√		

10. Reporting

The progress of the work will be intimated once in 3 months to the reporting authority.

13) Supply of Mopeds with Insulated Ice Boxes (50% Subsidy)

1. Abstract

The mopeds with ice box will be provided to inland fishermen for hygienic marketing.

2. Budget : Rs. 4.50 lakh

3. Background / Problem Focus

For transporting and progressing fish hygienically.

4. Project Rationale

Fishermen and vendors will be provided with ice box and mopeds could help make available of the fish produce in time with quality retention.

5. Project Strategy

Making available mopeds and ice box at affordable price to meet the fishermen needs.

6. Project Goals

To promote and sale of fish of high quality with hygiene

7. Project Components

Supply of 30 units of mopeds with ice box at 50% subsidy

8. Project Cost and Financing

Cost of unit	:	0.15 Lakhs
Cost of the moped	:	0.25
Ice box	:	0.05
Total cost	**:**	**0.3**

Subsidy	:	0.15 (@ 50 **%)**
No of units	:	30 units
Total cost 30 x .15	**:**	**4.5 lakhs**

10. Implementation Chart of the Project (2008-11)

Sl.No.	Particulars	I Qtr	II Qtr	III Qtr	IV Qtr
1.	Supply of Moped with ice box	√	√	√	√

11. Implementation Chart of the Project

TAFCOFED will be implemented this project.

12. Reporting

Progress of the project will be reported periodically.

6.5 Agricultural Engineering

Under Agricultural Engineering, it is proposed to implement a series of projects under stream I and stream II. The projects under stream I will aim to conserve runoff water, control of intrusion of sea water and several soil conservation techniques for increasing soil fertility and soil productivity. water harvesting techniques will help to improve and stabilize the ground water potential. In view of proximity of Chennai city, many erstwhile farm labourers have migrated in city in search of urban jobs, causing acute shortage of labour for agricultural activities. This shortage to be overcome by introduction of modern labour saving implements and machinery. Under stream II, mechanization through conventional machineries / implements, construction of check dams, percolation ponds and farm ponds, land shaping, PVC pipes and ground level reservoir for water management will be taken up. The budget requirements for the above projects are presented in Table.6.42 and Table.6.43.

Table. 65 Project Cost for Agricultural Engineering Sector – Stream - I

(Rs. in lakhs)

S. No	Project Component	Unit Cost,	Subsidy, %	2008-09		2009-10		2010-11		2011-12		Total	
				Nos.	Cost	Nos	Cost	Nos.	Cost	Nos	Cost	Nos	Cost
	Stream : I												
I	**Introduction of Newly Developed Agrl. Machinery / Implements**												
1	Mini combine Harvester TNAU model	2.50	50%	2	2.50	2	2.50	2	2.50	2	2.50	8	10.00
2	Multi crop Thrasher (High capacity)	2.10	50%	2	2.10	2	2.10	2	2.10	2	2.10	8	8.40
3	Power weeder with attachment (all models)	1.00	50%	2	1.00	2	1.00	1	0.50	1	0.50	6	3.00
4	Power Thrasher	1.00	50%	2	1.00	2	1.00	2	1.00	4	2.00	10	5.00
5	Paddy Transplanter	1.40	50%	4	2.80	4	2.80	6	4.20	6	4.20	20	14.00
6	Post hole digger	0.85	50%	5	2.13	3	1.28	3	1.28	4	1.70	15	6.39
9	Maize Husker Sheller	0.90	50%	2	0.90	1	0.45	1	0.45	1	0.45	5	2.25
10	Coconut De- husker	0.60	50%	2	0.60	2	0.60	1	0.30	2	0.60	7	2.10
11	Ground nut decorticator	0.35	50%	5	0.88	5	0.88	5	0.88	5	0.88	20	3.52
12	Chisel plough	0.12	50%	4	0.24	4	0.24	5	0.30	17	1.02	30	1.80
13	Power Weeder - Oleo mac	0.65	50%	2	0.65	2	0.65	2	0.65	2	0.65	8	2.60
14	Ratoon Manager	1.00	50%	2	1.00	2	1.00	3	1.50	3	1.50	10	5.00
15	Multi crop Thrasher (Tractor PTO)	1.25	50%	5	3.13	5	3.13	10	6.25	10	6.25	30	18.76
16	Knapsac Power operated Hydraulic Sprayer	0.20	50%	10	1.00	10	1.00	10	1.00	10	1.00	40	4.00
18	Power Operated Chaff Cutter	0.30	50%	2	0.30	2	0.30					4	0.60
19	Japanese Yanmar 6 - row transplanter with nursery raising system	7.50	50%	1	3.75	1	3.75	1	3.75	1	3.75	4	15.00
20	Japanese Yanmar 8 - row transplanter with nursery raising system	10.50	50%	1	5.25	1	5.25	1	5.25	1	5.25	4	21.00

Table .65 contd…

S. No	Project Component	Unit Cost,	Subsidy, %	2008-09		2009-10		2010-11		2011-12		Total	
				Nos.	Cost	Nos.	Cost	Nos.	Cost	Nos.	Cost	No	Cost
21	Korean 4 - row walk behind transplanter	2.00	50%	2	2.00	2	2.00	2	2.00	2	2.00	8	8.00
22	Combine harvester - Tractor operated	12.00	50%	2	12.00	2	12.00	3	18.00	3	18.00	10	60.00
23	Combine harvester - Self propelled	16.00	50%	2	16.00	2	16.00	2	16.00	4	32.00	10	80.00
25	Gender friendly equipments	0.08	75%	40	2.40	40	2.40	60	3.60	60	3.60	200	12.00
II	**Innovative water harvesting structures**												
1	Lined farm pond with mobile sprinkler	3.00	90%	2	5.40	1	2.70	1	2.70	1	2.70	5	13.50
2	Rejuvenation of percolation ponds with 2 recharge shafts	1.00	100%	60	60.00	60	60.00	80	80.00	100	100.00	300	300.00
III	**Control of Sea Water Intrusion**												
1	Recharge shafts to prevent sea water intrution in coastal areas	0.50	100%	200	100.	200	100.	300	150.	300	150.	100	500.
IV	**Promoting the concept of Mechanised villages**												
1	Distribution of crop based package of Agrl. Machinery on cluster basis in the adopted villages												
	1. Paddy	31.68	75%	1	23.76	2	47.51	3	71.27	3	71.27	9	213.81
	2. Groundnut	3.52	75%	1	2.64	1	2.64	1	2.64	1	2.64	4	10.56

Stream II

Table.66 Project Cost for Agricultural Engineering Sector - Stream II

S.No	Project Component	Unit Cost	Subsidy%	2008-09		2009-10		2010-11		2011-12		Total	
				Nos.	Cost	Nos.	Cost	Nos.	Cost	Nos.	Cost	Nos	Cost
	Stream : II												
1	**Popularisation of Agricultural Mechanisation Through Conventional Machinery / Equipments**												
a	Power Tiller	1.16	25%	15	4.35	15	4.35	10	2.90	10	2.90	50	14.50
b	Rotavator	0.90	25%	60	13.50	40	9.00	40	9.00	40	9.00	180	40.50
c	Cultivator	0.16	25%	10	0.40	10	0.40	10	0.40	10	0.40	40	1.60
d	Off-set Disc Harrow	0.47	25%	4	0.47	3	0.35	3	0.35	5	0.59	15	1.76
e	Disc Plough	0.35	25%	10	0.88	10	0.88	10	0.88	10	0.88	40	3.52
2	**Water Harvesting Structures**												
a	Farm Pond - Unlined	0.50	90%	5	2.25	5	2.25	10	4.50	10	4.50	30	13.50
b	Checkdam - Minor	0.30	100%	10	3.00	10	3.00	20	6.00	20	6.00	60	18.00
c	Checkdam - Medium	0.75	100%	10	7.50	5	3.75	5	3.75	10	7.50	30	22.50
d	Checkdam - Major	1.00	100%	10	10.00	6	6.00	5	5.00	5	5.00	26	26.00
e	Percolation Pond	3.25	100%	6	19.50	4	13.00	2	6.50	3	9.75	15	48.75
f	Recharge Shaft	0.30	100%	120	36.00	120	36.00	100	30.00	60	18.00	400	120.00
g	New Village Tank	1.50	100%	10	15.00	4	6.00	5	7.50	10	15.00	29	43.50
3	**Soil Conservation works**												
a	Compartmental bunding	0.03	90%	50	1.35	50	1.35	100	2.70	100	2.70	300	8.10
b	Land Shaping	0.10	90%	60	5.40	60	5.40	30	2.70	30	2.70	180	16.20
c	Terrace Support Wall	0.30	90%	10	2.70	10	2.70	10	2.70	10	2.70	40	10.80
4	**Water Management works**												
a	PVC Pipe laying	0.15	90%	120	16.20	100	13.50	80	10.80	50	6.75	350	47.25
b	Ground level Reservoir	0.80	90%	20	14.40	15	10.80	15	10.80	10	7.20	60	43.20
c	Fertigation Assembly	0.12	50%	10	0.60	5	0.30	5	0.30			20	1.20
	Total			540	153.50	472	119.03	460	106.78	393	101.56	1865	480.88

6.5.1 Project for Rainwater Harvesting and Agricultural Mechanization

The project is proposed for Rs 1802.17 lakhs for four years project period and it is proposed to be implemented in all parts of the district.

The **thrust areas** identified in the district are:

- Rainwater harvesting: - For harvesting runoff water through Construction of Farm Ponds, Rejuvenation of Percolation ponds with recharge shafts and construction of Check Dams.
- Promoting Agricultural Mechanization
- Control of sea water intrusion
- Soil conservation and
- Water management
- Continuous water table decline.

2. Budget

The project cost is Rs 1321.29 lakhs under Stream – I and Rs. 480.88 lakhs under Stream –II , amounting to a total project cost of Rs.1802.17 lakhs for four years period, ie., 2008-2012.

The split up year wise project cost (Rs. in lakhs) is as follows.

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Table.67 Split up year wise project cost

Rs lakhs

Streams	2008-09	2009-10	2010-11	2011-12	Total
Stream – I	253.43	273.18	378.12	416.56	1321.29
Stream – II	153.50	119.03	106.78	101.57	480.88
Total	406.93	392.21	484.90	518.13	1802.17

3. Background / Problem Focus

In Kancheepuram district, the area under Well Irrigation has been increasing resulting in increased ground water exploitation. Reduction of water levels due to over extraction by irrigation users have resulted in drying up of domestic water wells in many areas. Out of 13 blocks, 3 blocks are classified as over-exploited blocks, 1 as critical and 7 as semi critical blocks and only 2 blocks as safe, with less than 70 %. Due to increased exploitation of ground water, the following problems have cropped up:

- Lowering of groundwater table below economic pumping level;
- Reduction in cultivation area;
- Power loss due to inefficient pumps; and
- Sea water intrusion into the inland aquifers in the coastal region and ground water pollution.

More than 95% of the surface water potential of the district has already been exploited through Minor Irrigation Tanks. The ground water potential has been exploited to such an extent that special methods of Rainwater harvesting and ground water recharge are warranted to save the well irrigated area of the district.

4. Project Rationale

1. The migration of agricultural labourers from villages to nearby urban areas leads to reduction in cropping area and in turn in productivity.
2. The only solution to overcome this problem is to go in for power farming i.e. complete mechanisation of agriculture.
3. To create awareness, traditional and newly developed farm machinery implements should be popularized among the farmers by supplying the machinery at subsidsed rates and by promoting the concept of complete mechanised villages.

4. Due to over exploitation of ground water, the ground water table is depleting day by day, which forces the farmer to go for deep bore wells and powerful efficient pumping.
5. Rainwater harvesting techniques, soil and water management techniques and recharge techniques will improve and stabilize the ground water potential.
6. Adopting soil conservation measures such as compartmental bunding, land shaping, construction of terrace support wall will increase the fertility and thereby the productivity of the soil.
7. Water management techniques such as PVC pipes laying, constructing GL reservoirs and supplying fertigation assembly at subsidised rates will save water, increase the cropping area, create additional sources of irrigation and reduce the fertilizer application.

5. Project Strategy

1. Supplying agricultural machinery and newly developed implements at subsidised rates to farmers and promoting the concept of mechanized villages will motivate the farmers to cultivate more area thereby increasing the agricultural production and productivity;
2. Construction of water harvesting structures such as farm ponds, percolation ponds, village tanks, check dams etc will improve the ground water potential besides facilitating supplemental irrigation;
3. Construction of recharge shafts in coastal region will reduce the salinity of ground water and slowly push the intruded wedge of the sea water back towards the sea;
4. Soil conversation works such as compartmental bunding, land shaping, terrace support wall etc will conserve the soil and its fertility;
5. Water management works such as pvc pipes laying, constructing G.L reservoirs and supplying fertigation assembly at subsidized rates will save

water, increases the cropping area and productivity, reduce the quantity of fertilizer etc.

Project Implementation

The Project will be implemented by Agricultural Engineering Department (AED) in coordination with other user departments. The staff available will be utilized right from selection of farmers. Publicity will be given through mass media, village level meetings and individual contacts. The programme implementation will be monitored and evaluated periodically by a committee consisting of District officials of AED to sort out specific issues and ensure the success of the programme.

6. Project Goals

1. Increasing the agricultural area and its production.

This can be achieved only by complete mechanization starting from land preparation to harvest.

2. Improving the ground water potential

This can be achieved by constructing various innovative RWH structures. These structures besides improving the ground water potential provide supplemental irrigation thereby minimizing the utilization/exploitation of ground water.

3. Control of sea water intrusion in coastal regions

Increase of salinity in ground water and intrusion of sea water will be reduced slowly by constructing recharge shafts in coastal region villages. Construction of recharge shafts will push back the intruded sea water towards the sea.

6..Project Components

Project Components - Agricultural Machinery / Implements

Stream – I

1. Introduction of Newly Developed Agricultural Machinery / Implements

- Mini combined Harvester TNAU model
- Multi Crop Thrasher (High Capacity)
- Power weeder with attachment (All models)
- Power Thrasher
- Paddy Transplanter
- Post hole digger
- Shredder (Heavy)
- Shredder (Medium)
- Maize Husker Sheller
- Coconut De-Husker
- Ground Nut decorticator
- Chisel Plough
- Power weeder
- Ratoon Manager
- Multi crop Thrasher
- Knapsac Power operated Hydraulic Sprayer
- Shredder (Tractor PTO operated)
- Power operated Chaff cutter
- Japanese Yanmar 6 Row transplantor with nursery raising system
- Japanese Yanmar 8 Row transplantor with nursery raising system
- Korean 4 row walk behind transplantor
- Combine Harvester-Tractor operated
- Combine Harvester-Self Propelled
- Maize Combine Harvester
- Gender Friendly equipments

2. Innovative Water Harvesting Structures

Lined farm Pond with Mobile sprinkler

Rejuvenation of Percolation Ponds with two Recharge Shafts

3. Control of Sea Water Intrusion

Recharge Shafts to prevent sea water intrusion in coastal areas

4. Promoting the Concept of Mechanized Villages

Distribution of crop based package of agricultural machinery on cluster basis in the adopted villages for Paddy, Groundnut, Maize

Project Components

Stream – II

Stream –II

Popularization of Agricultural Mechanization through Conventional Machinery / Implements

- Power Tiller
- Rotavator
- Cultivator
- Offset Disc Harrow
- Disc Plough

Water Harvesting Structures

- Farm Pond-Unlined
- Check Dam-Minor
- Check Dam-Medium
- Check Dam-Major
- Percolation Pond
- Recharge Shaft
- New Village Tank
- Collection Well

Soil Management Works

- Compartmental Bunding
- Land Shaping
- Terrace Support Wall

Water Management Works

- PVC Pipe Laying
- Ground Level reservoir
- Fertigation Assembly

8. Project Cost and Financing

Project Cost for Financing

S. No.	Components	Rs in Lakhs
1	Introduction of newly developed Agricultural Machinery / Implements	283.42
2	Innovative Water Harvesting Structures	313.50
3	Control of Sea Water intrusion	500.00
4	Promoting the concept of Mechanized villages	224.37
	Stream I-Total	**1321.29**
1	Popularization of Agricultural Mechanization through conventional Machinery / Implements	61.88
2	Water Harvesting structures	292.25
3	Soil Management Works	35.10
4	Water management Works	91.65
	Stream II- Total	**480.88**
	Total Project Cost (Stream I & II)	**1802.17**

9. Implementation Chart of the Project

The project is proposed for a period of four years, i.e 2008-2012. The component wise and year wise and month wise split up programme of the project is enclosed.

10. Reporting

The progress of this programme will be inspected frequently by sub divisional officers and district officer and reviewed monthly. The monthly progress report will be obtained in the following format from the field level officers.(Format enclosed)

Agricultural Engineering

Objectives

The Centrally sponsored scheme of promoting agricultural mechanisation among the farmers is implemented to supplement the available farm power and to ease the agricultural operations.

Functions:

To popularize and to create awareness among the farmers, subsidy is being given as detailed below**.**

Table.68 Subsidy Details of Agricultural Machinery / Implements

Sl. No	Name of the Agricultural Machinery / Implements	25 % or Maximum Eligible amount
1	Tractors delivering up to 35 HP	Rs 30000
2	Power Tillers	Rs. 0000
3	Rotavators	Rs 20000
4	Zero till seed drill	Rs 5000
5	Self Propelled Paddy Transplanter	Rs 25000
6	Self Propelled Paddy Reaper	Rs 25000
7	Tractor Drawn Implements Such as Cultivators, Disc plough, Disc plough Chisel Plough, M.B. Plough, etc	Rs 10000
8	Cage Wheel for tractors	Rs 2000
9	Tractor mounted sprayer	Rs 4000
10	Tractor operated post hole digger	Rs 10000
11	Gender friendly equipment	Rs 10000
12	Power Threshers	Rs 10000

Micro Irrigation Scheme

TANHODA is the monitoring agency for this scheme. Agricultural Engineering Department is one of the Designated Agency for implementing the scheme.In this scheme, drip irrigation systems are installed for the tree crops by the AED, for which 50% of the cost of the system is given as subsidy to the farmers. The maximum ceiling limit is 5.00 ha per family.

Replacement of Old Pumpsets

Objectives

The energy efficiency in farm sector pumpsets is poor as the farmers are using the higher capacity pumpset than the required level or old pumpsets. They have poor discharge compared to the power consumed. The improper installation of switchboard, earth and allied accessories also increase the power consumption. It is therefore proposed to replace the old in efficient electrical pump set for saving electricity.

Functions

In coordination with the electricity board official, overstressed transformers are identified. Preference is being given to replace the old pump set that comes under over stressed transformer based on the Energy Index.

Table.69 Subsidy details of farmers

Sl. No	Description	Others	SC / ST Farmers
1	Less than 5 HP	25% of the cost subject to a maximum of Rs.2500/-	25% of the cost subject to a maximum of Rs.3500/-
2	5 HP & Above	25% of the cost subject maximum of Rs.5000/-	25% of the cost subject maximum of Rs.6000/-
3	Accessories	50% of the cost subject maximum of Rs.1500/-	50% of the cost subject maximum of Rs.1500/-

Rain Water Harvesting and Run off Management

Objectives

The main objective is to conserve the soil and water and to improve the groundwater potential by constructing Rain Water Harvesting structures such as Check dam, Farm pond, and Percolation ponds. Wells are also rejuvenated and recharge shafts are also constructed in this scheme.

Functions

Rain Water Harvesting structures such as Check dam, Farm pond, and Percolation ponds. Wells are also rejuvenated and recharge shafts are also constructed in this scheme.

All these works are carried out in individual farmer`s land and in community lands. Contribution from the beneficiary either in the form of cash or kind is collected at 5% of the cost of the estimated value of the work(for SC / ST beneficiary) and at 10% for other beneficiary).

RIDF- XI - NABARD

Objectives

The main objective is to conserve the soil and water and to improve the groundwater potential by constructing Rain Water Harvesting structures such as Check dam, Farm pond, and Percolation ponds. Wells are also rejuvenated and recharge shafts are also constructed in this scheme.

Functions:

In this scheme rain water harvesting structures are constructed in approved watersheds to harvest the rain water and to conserve the soil and water. The scheme is funded by NABARD.

All these works are carried out in individual farmer`s land and in community lands. Contribution from the beneficiary either in the form of cash or kind is collected at 25% of the cost of the estimated value of the work for individual beneficiary and at free of cost for community works.

Land Development Scheme

Objectives

a. To make irrigation and farm operations efficient and easier, through proper land grading.

b. To supplement the 'farm power' requirements of farmers and enable timely cultivation operations.

Functions

a. Agricultural Engineering Department provides Bulldozers on hire basis to farmers for taking up reclamation of lands, leveling, grading and shaping the cultivable lands for bringing more area under cultivation as well as to make them irrigable.

b. Tractors with implements are provided on hire for ploughing, puddling, harrowing and transporting the agricultural produces.

c. Combine Harvesters are hired to farmers for harvesting in time and to minimise the loss of grains.

Minor Irrigation Scheme

Objectives

a. To help farmers in locating the suitable site (through Geo-physical Survey) for sinking open wells and tubewells,

b. To bring new areas under irrigation by creating irrigation facilities.

c. To stabilise the areas already under irrigation.

d. Promoting conjunctive use of surface water and ground water by harnessing ground water resources.

Functions

a. Farmers are guided to choose suitable ground water structure i.e. construction of open well or Tube well or Bore well based on the strata.

b. The dried up defunct open wells are revitalised either by deepening or by putting vertical and horizontal bores inside the well.

c. The required Minor Irrigation Machinery are provided to farmers on hire basis for sinking of Tube Wells / Bore wells, revitalisation of open wells, development of bore wells and tube wells.

Two Acre Scheme

TAWEDEVA is the monitoring agency for this scheme. In this scheme, land development works are carried out by the AED in the lands identified by the Agriculture and the Revenue departments.

Honourable Chief Minister's Scheme of Distribution of 2.00 acres land to the poor landless agricultural families

Distribution of wasteland, as such to the poor landless agricultural families will not bring any social and economical developments in their life. Hence the Government have decided that these lands are to be developed and reclaimed into cultivable agricultural land by taking land development activities. Since the poor landless agricultural labourer cannot afford to do so, the Government have decided to develop and itself reclaim the lands before distribution.

The Agricultural Engineering Department has been entrusted with the task of the land development activities in the above said scheme through the District Collector, Kancheepuram.

Planning

After the recommendations of the Agriculture / Horticulture Department officials for the suitable crop to be raised in these lands based on the soil health cards, suitable `package of land development activities are planed to be carried out by the Agricultural Engineering Department. Accordingly project reports have been prepared in the identified lands.

Execution

In the land identified by the Revenue Department, the Agricultural Engineering Department will recommend a package of land development activities. These works will be executed by engaging departmental machinery and by outsourcing. Considerable portion of the expenditure of reclamation works are converted into revenue to the Government by engaging departmental machinery.

The staff of Agricultural Engineering Department, Kancheepuram have been involved in full swing to complete the work on war footing within scheduled time.

6.6. Strengthening of Agricultural Marketing and Agribusiness Development in Tamil Nadu through NADP funding

Current Status of Agribusiness

Agriculture, as a primary sector provides livelihood to 56% of the population and contributes around 13% of the State GDP. In value terms between 65 and 75% of agricultural produce is transacted in markets, usually through long marketing chains, regulated markets and an emerging commercialized retail system in urban centers. Unorganized small players (handling less than 0.5 t/day) process more than 75% of industry output. The Government is taking efforts to achieve targeted growth rate of 4% in Agriculture during XI Plan period. Though fertile soil, good quality water and long period of sunlight which are the basic requirements for Agriculture available in abundance in Tamil Nadu, still the productivity has not been enhanced to its potential level.

The Government is taking efforts to attain sustainable agricultural development by bringing agriculture as a commercial venture by switching over from the present method of cultivation through adoption of new scientific method of cultivation to increase the productivity to manifold, value addition, processing and utilization of marketing opportunities. To improve the marketing opportunities for agricultural produce, the Uzhavar Santhai, post harvest management, cold storage facilities for perishables, food processing, establishment of export zones, terminal markets have been taken up. To reduce the loss of the food products which are upto 30%, necessary provisions are made in the Agricultural Industrial Policy to ensure remunerative price to the produce, encourage food processing sector and export to earn foreign exchange by increasing the food processing from the present level of1% to 10%, out of the total production, increasing value addition from 7% to 30%. Under this policy, all

assistance which is provided to other industries will be extended to agro based industries, agricultural machineries and industries manufacturing micro irrigation equipments.

One Deputy Director of Agriculture (Agri Business) for each district, one Agricultural Officer for every two blocks, one Assistant Agricultural Officer for one block have been posted as per restructuring to regulate Agri Business and encourage entrepreneurs. In 103 Uzhavar Shandies, 51 Agricultural Officers and 52 Deputy Agricultural Officers are posted. After restructuring 239 original posts have been enhanced to 906 posts in Agricultural Marketing and Agri Business Department.

6.2. Agribusiness and the National Development Goals

The Planning Commission's Mid-Term Appraisal (MTA) of the Tenth Plan notes that achieving higher growth rates depends on reversing the decline in growth of the agricultural sector and requires a move away from 'business as usual'. Under the eleventh Plan, areas identified for special attention in the agriculture sector included among others: (i) diversification to high value crops and activities; (ii) increasing cropping intensity; (iii) strengthening of marketing, processing and value addition infrastructure; (iv) revamping and modernizing the extension systems and encouraging the private sector to provide extension services; and (v) bridging the gap between research and farmers' yields.

For the agriculture sector, the eleventh Plan projected an annual growth rate of 4% which was seen as achievable if growth of 6 to 8% could be achieved in horticulture. These growth rates have not eventuated largely because constraints identified in the Plan have not been overcome. These constraints include lack of modern and efficient infrastructure, poor technological support and post harvest management, underdeveloped and exploitative market structures, inadequate research and extension to address specific agricultural problems and linkages with farmers and

industry. The strong relationship between agriculture and rural poverty means that current plans, policy and sector performance will be unable to address the needs of rural poor.

The two most important programs related to agribusiness development are the Technology Mission for Integrated Development of Horticulture (TM) and the National Horticultural Mission (NHM). The focus of the TM is production of horticultural products in Hill states, whereas post harvest management and processing have only a nominal presence. The NHM has a broader coverage of states and addresses issues of market infrastructure development and processing. However, the key issue of coordination within value chains is not addressed. There needs to be a better understanding of why despite generous subsidies in the past, progress has been slow with private investment in market infrastructure and development of the processing industry. At present 21 Market committees are functioning in Tamil Nadu at district Level There are 277 Regulated Markets, 15 Check Posts, 108 Rural Godowns and 108 grading centres functioning under the Market Committees

6.3. Major Constraints and Challenges in Agricultural Marketing and Agribusiness Development in the State

Current agricultural marketing and agribusiness system in the state is the outcome of several years of Government intervention. The system has undergone several changes during the last 50 years owing to the increased marketed surplus; increase in urbanization and income levels and consequent changes in the pattern of demand for marketing services; increase in linkages with distant and overseas markets; and changes in the form and degree of government intervention. An important characteristic of agricultural produce markets in Tamil Nadu has been that private trade has continued to dominate the market. With the large quantities required to be handled by the private trade, the size and structure of markets over time have

considerably expanded. There are a large number of wholesalers and retailers handle the trade in food grains. Apart from traders, processors also play an important role as they also enter in the market as bulk buyers and sellers.

Agricultural development continues to remain the most important objective of State planning and policy. The experience of agricultural development in the state has shown that the existing systems of delivery of agricultural inputs and marketing of agricultural output have not been efficient in reaching the benefits of technology to all the sections of farmers. The timely, quality and cost effective delivery of adequate inputs still remains a dream despite the marketing attempts of the corporate sector and the developmental programmes of the state. Also, the farmers are not able to sell their surplus produce remuneratively. There are plenty of distress sales among farmers both in agriculturally developed as well as backward regions in the State. There are temporal and spatial variations in the markets and the producers' share in consumers' rupee has not been satisfactory, except for a few commodities. In fact, in some commodities like tomato in some regions in State, producers end up making net losses at the same time when traders make substantial profits from the same crop. However, it needs to be recognized that producers' relative share in the final price of a product certainly goes down with the increase in the number of value-adding stages, and therefore, cannot be used as an indicator of a market's efficiency or inefficiency. Nevertheless, the other aspects of the market performance like absolute share of the producer in terms of remunerability, fluctuations in prices across seasons, large spatial price differences and lack of proper market outlets itself, are the issues which have become increasingly crucial in the present context. There are structural weaknesses of agricultural markets like unorganized suppliers as against organized buyers, weak holding capacity of the producers and the perishable nature of the produce in the absence of any storage infrastructure. In the presence of these characteristics of the market, the rural producers cannot simply be left to fend for themselves so far as marketing of their produce is concerned. And if the marketing system does not assure

good returns to producers, not much can be achieved in the field of product quality and delivery which are critical for processing and manufacturing sectors. In the environment of liberalization and globalization, the role of the state in agricultural marketing and input supply is being reduced, and an increasing space is being provided to the private sector to bring about better marketing efficiency in input and output markets. On the other hand, processors and/or marketers face problems in obtaining timely, cost effective, and adequate supply of quality raw materials.

Small farms produce more than 35 percent of State total grain, and over half of total fruits and vegetables despite being resource constrained. The marginal holdings have higher cropping intensity compared with that of the small, medium and large farmers, mainly owing to higher irrigated area as percentage of net sown area. The small and marginal farmers are certainly going to stay for long time in State though they are going to face a number of challenges. Therefore, what happens to small and marginal farmers has implications for the entire State and people's livelihoods. But, they can adequately respond to these challenges only if there is efficient marketing system for handling their small surpluses. Otherwise, they will only be losers in the process of globalization and liberalization. The viability of the small holdings is an important issue and promoting agricultural diversification towards high value crops through an efficient marketing system is argued to be one of the means through which this can be achieved. Hence there is an urgent need for specific intervention in agricultural marketing in Tamil Nadu.

6.4. Sector Problem Analysis

The core problem for agribusiness development in Tamil Nadu is the general failure in coordinating the decisions of private stakeholders (e.g. farmers, traders and agro-processors in the case of the agrifood system) and service providers from the public, private and nongovernmental organizations (NGO) sectors.

Farmers fail to link among themselves through effective producer organizations able to undertake joint decisions in production and marketing. Farmers have weak linkages with enterprises and often fail to link effectively to markets because of limited access to relevant market intelligence and inadequate market infrastructure. Farmers are also poorly linked to research and extension providers able to address their specific technology and knowledge needs that would enable them to innovate into high value production systems.

Entrepreneurs have weak linkages with farmers through contracts and vertical integration arrangements and are distant from consumers because of the absence of organized retail chains. Linkages with service providers are characterized by a lack of confidence particularly in the case of research and extension organizations. The absence of proper certification, quality assurance systems and inadequate infrastructure continues to limit the integration of production with international markets.

Service Providers Most agencies fail to link with each other, particularly during implementation of national programs. Links between states and central agencies are often limited. Service providers from the public sector are often unable to provide effective services due to lack of funding, bureaucratic hurdles and the lack of a culture that is client and business oriented. Most NGOs are not used to working in the field of enterprise development and their presence in the agribusiness sector is marginal. Service providers from the private sectors are emerging but are mainly oriented to the needs of corporate clients rather than small and medium enterprises or producer groups that dominate total production.

Past interventions to improve technology, infrastructure and access to credit and markets had modest impact on growth of the sector. The policy assumption that more funds and subsidies will lead to the desired results has proven to be incorrect.

Steps for ensuring coordination within each value chain have not been recognized. In spite of subsidies, progress has been slow with few effective value chains emerging and few stakeholders investing in market infrastructure such as the cooperative sector in Bangalore. The capacity of individuals, groups and service providers to understand and practice value chain principles and management remains low.

For growth to accelerate substantially a new way of thinking about agribusiness development in Tamil Nadu and promoting agribusiness is needed. This new way, and the related business practices that go with it, implies overcoming significant coordination failures. This requires appropriate institutional mechanisms that currently do not exist within current policy setting.

6.5. Project Rationale

The rationale for the proposed Augmentation of Agricultural Marketing and Agribusiness development in Tamil Nadu through NADP funding is based on the following:

1. The rate of agricultural growth over the past decade has been declining in Tamil Nadu. Agribusiness through its linkages to production, industry and services has the potential to transform the agricultural system into a more dynamic sector.
2. As urbanization and incomes grow, there is a growing demand for a wider range of agrifood products, of higher quality and greater convenience, to use in Tamil Nadu. Meeting this demand requires organized retailing and effective agribusiness supply chains.
3. Agribusiness contributes to the production of higher value products and diversification away from staple foods. Through this diversification and the development of the value chain between producers and consumers, the rural economy benefits from innovation and the creation of non-farm employment.
4. Tamil Nadu has a comparative advantage in a number of agricultural commodities. Increasing integration with global markets and the potential to become a stronger player in agricultural trade requires quality assurance and competitive advantage.
5. The State Government has identified agribusiness development as a strategic priority. In Tamil Nadu, agribusiness has a significant role to play in rural and

economic development, and agro-enterprises could be a major source of rural non-farm employment and income.

6. The existing government programs to promote agricultural diversification are broad-based programs with multiple objectives. For agribusiness development to happen a more focused approach is needed to complement the initiatives already covered by the different national programs.

6.6. Project Strategy

The project will promote the Agri-business practices and models required to support agribusiness development in Tamil Nadu, allowing the sector to contribute to economic growth, particularly in rural areas. New Agri-business practices will be introduced relating to: (i) farmers and entrepreneurs engaging service providers to solve specific technology problems (ii) learning to work together in the value chain (iii) making effective use of market intelligence in decision making; and (iv) making investments in supply chain infrastructure and market places.

6.7. Project Approach

The project aims at improving business practices needed for agribusiness development in Tamil Nadu. Profit motivations are critical to the improvement of business practices. Rather than starting from a production point of view, stakeholders are encouraged to start from understanding market requirements and opportunities. The project will help stakeholders to access the relevant technologies and knowledge services needed for realizing the identified profit opportunities. Those profit opportunities are realized by working together with other stakeholders in the value chain, and by improving linkages through investments and existing in physical infrastructure.

6.8. Project Goals

The expected impact of the project will be an increasingly competitive agribusiness sector, informed by the adoption of improved business practices in the Agriculture sector, leading to diversification, higher value added, and higher incomes

for farmers, farm workers and entrepreneurs and reduced rural poverty. The expected outcome of the project will be increased benefits (incomes) for farmers, farm workers and entrepreneurs in the selected value chains.

Through the adoption of improved agribusiness practices the project will facilitate the development of a competitive agribusiness sector in Tamil Nadu, promoting diversification and contributing to the transformation of agriculture into a system producing higher value and contributing to the reduction of poverty in rural areas.

The envisaged project's interventions will provide higher value for consumers, value that will be shared as distributed benefits to value chain stakeholders including farmers, entrepreneurs and workers. This will be achieved through activities that improve business practices related to use of market information, investment in technology transfer and knowledge services, development of value chain linkages and investment in market infrastructure. The distributed benefits will provide incentive for ongoing involvement and further innovation from which the sector can extend its development.

The project **impact** is to develop an increasingly competitive agribusiness sector in Tamil Nadu attained through the adoption of improved business practices in the horticultural sector leading to higher value added and higher income of farmers, farm workers and entrepreneurs, particularly women amongst them.

The project **outcome** is increased benefits to farmers, entrepreneurs and workers who are involved in selected value chains in Tamil Nadu

6.9. Project Components

1. Establishment/ organization of commodity groups for marketing in the state with financial assistance from NADP
2. Facilitation of Contract Farming between farmers and bulk buyers in the state with financial assistance from NADP
3. Dissemination of Market intelligence

4. Arrangement of Buyers - Sellers Meet
5. Organizing the exposure visits to important markets with in the state and out side the state by commodity groups / farmers and extension functionaries.
6. Strengthening of market extension centre at each district/ block level for capacity building and dissemination of marketing information.
7. Strengthening of selected village shandies with financial assistance from NADP
8. Capacity building of farmer's skill
9. Price surveillance
10. Regulated Market uzhavar Shandies Publicity
11. Market Infrastructure

6.6.1 Establishment/ Organization of Commodity Groups for Marketing in the State with Financial Assistance from NADP

Project Rationale

According to Government sources, the inefficient marketing system leads to an avoidable waste of around Rs 50,127 crore. A major part of this can be saved by introducing scale and technology in agricultural marketing. Milk and eggs marketing are two success areas of role of scale and technology in marketing. The extent to which the farmer-producers will benefit (out of saving of avoidable waste) depends on the group-marketing practices adopted by the farmers. In this sense, Farmers' Groups/ Commodity Groups need to be promoted for undertaking marketing activities on behalf of the individual members of the group.

Based on the international experience, in view of expanding retail trade, organizing the farmers and equipping the commodity groups can facilitate the aggregation of produce and also enhance the bargaining power of the farmers. The experience in Malaysia, Thailand and Philippines indicated that the retail chains will depend on some intermediary agency for sourcing the produce. If this role can be taken by the farmers' commodity groups, the commodities can move directly to the market without any intermediary. Further, adoption of technology both in production and post-harvest management which is expected to flow from the organized retailers and other research institutions can be efficient through the farmers' commodity

groups. There is no single model for organizing the farmers for the whole country. Depending on the strength of the existing farmers' institutions, various models could be adopted. The model of farmers' marketing commodity groups cannot be the same throughout the country. It can be cooperatives, SHGs or any other form. Therefore it is proposed to organize the commodity groups for marketing of agricultural commodities in Tamil Nadu over the period of four years.

Project Strategy

Formation of commodity groups for group marketing in the state with financial assistance from NADP

Project Goals

Organizing Group Marketing of major agricultural commodities for realizing higher prices through establishing commodity groups.

Project Components

1. Organising meetings with large number of farmers
2. Identification of willing / co operating Farmers
3. Organising the willing farmers in to groups
4. Periodical meeting with groups and coordinating the activities

Project Cost and Financing

Arranging / organising Commodity Groups involves several rounds of meeting with large number of farmers to begin with and finally arriving at about required number of farmers for group cultivation of marketing. To organize these an amount of Rs.20000/= is provided per group.

In this project it is proposed to organize six commodity groups in Paddy, Maize, Sunflower, Banana, Groundnut, Pulses and Gingelly commodities for marketing of agricultural commodities in Kancheepuram distict over the period of four

years. This will require resources of Rs. 27.60 lakhs for the period of four years. The details are presented in Table. 72.

Reporting

1. Quarterly progress reports to be sent to the Deputy Director (Agricultural Marketing and Agri Business) by the concerned Agricultural Officer (Agricultural Marketing and Agri Business) and Secretaries of Marketing Committees.

2. Periodical Inspection to be undertaken by the Deputy Director (Agricultural Marketing and Agri Business)

6.6.2 Facilitation of Contract Farming between Farmers and Bulk Buyers in the state with Financial Assistance from NADP

Project Rationale

Apart from linking the farmer to consumer through farmers' organizations, another initiative for reducing transaction cost is establishment of direct channel between farmer-processor/bulk consumers, through contract farming (CF). For different reasons, both farmers and farm product processors/distributors may prefer contracts to complete vertical integration. A farmer may prefer a contract which gives access to additional sources of capital, and a more certain price by shifting part of the risk of adverse price movement to the buyer. Farmers also get an access to new technology and inputs, including credit, through contracts which otherwise may be beyond their reach. For a processor or distributor, contracts are more flexible in the face of market uncertainty, make smaller demands on scarce capital resources, and impose less of an additional burden of labour relations, ownership of land, and production activities, on management.

At more macro economic level, contracting can help to remove market imperfections in produce, capital (credit), land, labour, information and insurance markets; facilitate better coordination of local production activities which often involve initial investment in processing, extension etc.; and can help in reducing

transaction costs. It has also been used in many situations as a policy step by the state to bring about crop diversification for improving farm incomes and employment. CF is also seen as a way to reduce costs of cultivation as it can provide access to better inputs and more efficient production methods. The increasing cost of cultivation was the reason for the emergence of CF in Japan and Spain in the 1950s and in the Indian Punjab in the early 1990s. Though there are concerns about the ability of the small farms and firms to survive in the changing environment of agribusiness, still there are opportunities for them to exploit like in product differentiation with origin of product or organic products and other niche markets. But, the major route has to be through exploitation of other factors like external economies of scale through networking or clustering and such other alliances like CF.

Marketing tie-ups between farmers and processors or bulk purchasers have special significance for small farmers, who have small marketed surplus and do no have staying power. Such arrangements are being encouraged to help in reducing price risks of farmers and to also expand the markets for farm products. It is to be noted that contract farming of sugarcane is going on for the last more than 50 years in Tamil Nadu. In case of cotton, maize and medicinal plants there are few cases of contract farming. Contract farming in milk, eggs and broiler production is successfully taking place in large scale in Tamil Nadu. The lessons taught in case of sugarcane, cotton and other commodities have to be taken into account during formulation of the project. For this in this NADP programme facilitation contract farming between the traders and producer is proposed.

Project Strategy

Facilitation contract farming between the traders and producer by organising buyers and sellers meet in the block levels

Project Components

1. Organising meeting with farmers, large scale buying firms, crop insurance companies and banks.
2. Identification of willing / co operating Farmers/ commodity clusters
3. Organising the willing farmers in to groups
4. Arranging the Groups to have contract/agreement with select large scale buyers, banks and crop insurance firms.
5. Periodical watching of contracts and conflict management.

Project Cost and Financing

Arranging / organising Commodity Groups involve several rounds of meeting with large number of farmers and traders, train them contract specification and monitor them. To organize these an amount of Rs.10,000/= is provided.

In this project it is proposed to organize the meeting on various crops regarding contract farming between farmers and bulk buyers in Kancheepuram district for marketing of agricultural commodities in Tamil Nadu over the period of four years. This will require resources of Rs. 5.52 lakhs for the period of four years. The Details are presented in Table. 72.

Implementation Chart of the Project

Implementation chart of the project is given in Table. 72.

Reporting

1. Quarterly progress reports to be sent to the Deputy Director (Agricultural Marketing and Agri Business) by the concerned Agricultural Officer (Agricultural Marketing and Agri Business) and Secretaries of Marketing committees.
2. Periodical Inspection undertaken by the Deputy Director (Agricultural Marketing and Agri Business)

6.6. 3. Dissemination of Market Intelligence

Project Rationale

Rural (primary and periodic) Markets are the first contact points of farmers with the market economy, both for selling and buying. As there have been high price differentials many times between the Wholesale Markets and the Rural Markets, there is room for arbitrage which is being exploited by the traders to their advantage. Therefore, it is imperative to make the Wholesale Markets as the price discovery point and the Rural Markets as the price takers with due consideration for transport and other costs. As the Rural Markets have few traders, the tendency to collude among them is high. In the Wholesale Markets, as traders are many, one can expect a fair price. In a country like India with 70 percent of its population living in about 6.25 lakhs villages and depending on agriculture as their main occupation, accurate and timely information about the market prices of the agricultural commodities is of extreme significance.

The most important marketing information is price data. Agricultural price data are based on thousands or millions of transactions, many of them on a small scale, that are taking place every day all over the country. Collecting an adequate sample and making sure that these are representative enough to be useful is not an easy task. As farmers become more market oriented, extension workers need to be in a position to advise them not only on how to grow crops but also on how to market them. Knowledge of produce handling, storage and packaging is also essential. An understanding of costs and margins is essential for all those involved with agricultural marketing. Before any agro-processing venture is started, or before an existing venture decides to expand its product line, an understanding of the market for the planned products is essential. Market research can never guarantee success but it can certainly increase the likelihood that the new business will turn out to be profitable. Hence in this project is included the dissemination of market intelligence provided by the Domestic and Export Market Intelligence Cell, Centre for Agricultural and Rural

Development Studies, Tamil Nadu Agricultural University, Coimbatore and other agencies.

Project Strategy

Dissemination of Market intelligence provided by the Domestic and Export Market Intelligence Cell, Centre for Agricultural and Rural Development Studies, Tamil Nadu Agricultural University, Coimbatore and other agencies through different mass media.

Project Components

1. Procurement of market intelligence reports and
2. Dissemination of Market intelligence to all the Stake holders through different mass media.

Project Cost and Financing

In this project it is proposed to disseminate Market intelligence of agricultural commodities to all the Stake holders through different mass media in Kancheepuram district over the period of four years. This will require resources of Rs.33.58 lakhs for the period of four years. The details are presented in Table. 72

Implementation Chart of the Project

Implementation chart of the project is given in Table. 72.

Reporting

1. Quarterly progress reports to be sent to the Deputy Director (Agricultural Marketing and Agri Business) by the concerned Agricultural Officer (Agricultural Marketing and Agri Business) and Secretaries of Marketing committees.

2. Periodical Inspection undertaken by the Deputy Director (Agricultural Marketing and Agri Business)

6.6.4. Arrangement of Buyers - Sellers Meet

Project Rationale

Indian farmers usually produce diverse goods and services to meet the family requirements. Marketable surpluses, if any, are disposed off immediately after harvest to meet the cash requirements when prices are generally depressed and often to specific buyers who have provided credit.

There is limited market for all good and services produced by the farmers in the vicinity. In contrast, quite often, they buy goods and services in lean period when prices are generally higher. Therefore, the nature, degree and the complexity of the problems faced vary among the farmers, regions, and markets.

Several alternatives are available within each market for the farmers. Critical evaluation of the alternatives is important in deciding a profitable set to determine the overall profitability of the farms.

The most important aspect of the agricultural market intelligence is to create awareness about the demand and quality requirements for various agricultural produce among farmers and also to build knowledge on the availability of various agricultural commodities among the traders.

There is increasing pressure on all segments of the agriculture produce economy to respond to the challenges that the global markets pose in the new post: WTO world trade order.

Buyers and sellers meet functions as platform linking agribusiness community namely farmers, traders, commission agents, agricultural processed food organizations, millers, machinery manufacturers in an egalitarian exchange of ideas and materials.

It is beautifully explained as a business partnership between producers and buyers to enhance their knowledge for mutual gain.

Arrangement of these meetings brings together the two important aspect of success i.e. technology and human resources. Besides display of agricultural commodities through exhibitions, the meet aspect covers all the latest market related interventions and provides need based solutions to farmers through direct contact with experts.

Project Cost and Financing

In this project it is proposed to arrange for 48 buyers sellers meet in Kancheepuram district over the period of four years. This will require resources of Rs.11.04 lakhs for the period of four years. The details are presented in Table. 72.

6.6.5 Organizing the Exposure Visits to Important Markets with in the State and Outside the State by Commodity Groups / Farmers and Extension Functionaries

Project Rationale

The goal of 4% growth in agriculture can only be achieved by increasing productivity per unit of land. Considering the costs and constraints of resources such as water, nutrients and energy, the genetic enhancement of productivity should be coupled with input use efficiency. This can be made possible only by creation and utilization of new and improved technology. Since new technology creation and development is a slow process, for attaining the desired 4% growth during the XIth Plan period, we will have to rely more on known and proven technology. Agriculture research system claims to have a large number of promising technologies to achieve high growth and promote farming systems that improve natural resource base. However, these are not seen at farmers' fields at large. Visit of other areas, where new technologies are implementing successfully i.e., exposure visits is an important thing

to enlighten the farmers for implementing those technologies in their areas also. It is easy to know the new technology through demonstration. Farmers will be selected to visit different places within the State where the technologies are well adopted. Therefore it is proposed to organize the exposure visit to important markets with in the state and out side the state by commodity groups / farmers and extension functionaries in the state for marketing of agricultural commodities in Tamil Nadu over the period of four years.

Project Strategy

Organizing the exposure visits to important markets with in the state and out side the state by commodity groups / farmers and extension functionaries.

Project Goals

Organizing the exposure visit to important markets with in the state and out side the state by commodity groups / farmers and extension functionaries in the state for marketing of agricultural commodities in Tamil Nadu over the period of four years from NADP funding

Project Components

1. Organizing the exposure visit to important markets with in the state by commodity groups / farmers
2. Organizing the exposure visit to important markets out side the state by commodity groups / farmers
3. Organizing the exposure visit to important markets with in the state and out side the state by extension functionaries

Project Cost and Financing

Visit of important markets, where new opportunity for marketing of the commodity and consumer preference i.e., exposure visits SAFAL market Bangalore is

an important thing to enlighten the farmers for marketing their produce as well as consumer preference. It is easy to know the marketing of the commodity through observation and participation in the well developed markets. Farmers will be selected to visit different market places within the State where the new opportunities for marketing of commodities exist. This will require resources of Rs.24.33 lakhs for the period of four years. The details are presented in Table.72.

Reporting

1. Quarterly progress reports to be sent to the Deputy Director (Agricultural Marketing and Agri Business) by the concerned Agricultural Officer (Agricultural Marketing and Agri Business) and Secretaries of Marketing committees.
2. Periodical Inspection undertaken by the Deputy Director (Agricultural Marketing and Agri Business)

6.6.6. Strengthening of Market Extension Centre at Each District/ Block Level for Capacity Building and Dissemination of Marketing Information

Project Rationale

Over the last few years mass media has seen a phenomenal growth in the country both in terms of reach and advance in technology. This medium has not been exploited to its full potential for the purpose of agricultural extension specifically market led extension. A concerted and well-coordinated effort now needs to be made to use the electronic media in the Extension strategy by strengthening infrastructure facility. Market led Extension is now becoming more diversified, technology intensive, knowledge oriented and more demand-driven. This requires the extension workers at the cutting edge level to be master of so many trades, which is neither practicable nor possible. Use of IT in extension enables the extension workers to be more effective in meeting the information needs of farmers. The growing Information and communication technology is used widely in the entire developmental sector

except in agricultural sector. Use of interactive multimedia and such other tools will help the extension workers to serve the farmers better. Similarly, extension systems have to utilize the existing print and electronic mass media for faster dissemination of information to farmers. The technological advancement in telecommunication and space technology has to be fully tapped for devising appropriate programs for farmers. Hence there is a urgent need to strengthening of market extension centre at each district/ block level with LCD projectors and lap top computer including internet facilities.

Project Strategy

Strengthening of market extension centre at each district/ block level for capacity building and dissemination of marketing information.

Project Goals

Strengthening of market extension centre at each district/ block level for capacity building and dissemination of marketing information in Tamil Nadu over the period of four years from NADP funding

Project Components

Strengthening of market extension centre at each district/ block level

Project Cost and Financing

Over the last few years mass media has seen a phenomenal growth in the country both in terms of reach and advance in technology. This medium has not been exploited to its full potential for the purpose of agricultural extension specifically market led extension. A concerted and well-coordinated effort now needs to be made to use the electronic media in the Extension strategy by strengthening infrastructure facility. In this project it is proposed to strengthening market extension centre in

Kancheepuram district over the period of four years. This will not require resources of Rs. 2.50 lakhs for the period of four years. The details are presented in Tabe.72

Implementation Chart of the Project

Reporting

1. Quarterly progress reports to be sent to the Deputy Director (Agricultural Marketing and Agri Business) by the concerned Agricultural Officer (Agricultural Officer and Agri Business) and Secretaries of Marketing committees.

2. Periodical Inspection undertaken by the Deputy Director (Agricultural Marketing and Agri Business)

6.6.7. Strengthening of Selected Village Shandies with Financial Assistance from NADP

Project Rationale

Considering the importance of Rural Primary Markets, there is an urgent need to develop these rural periodic markets in a phased manner with necessary infrastructural amenities to have a strong base of the marketing channel. The task of developing more than 21,000 Rural Periodic Markets is a gigantic one. Therefore, only selected markets will be developed initially and the rest could be developed in phases. The selection of markets is based on economic considerations rather than financial viability in view of their socio-economic importance and equity. Considering the existing constraints in the markets, the modernization should provide for transparent auction system for price discovery of the agricultural produce, bulk weighing arrangement, bulk handling, proper parking, waste disposal, and storage facility. The details of infrastructure needed for an ideal wholesale market are given below:

1. Grading Facilities
2. Price Display Mechanism
3. Electronic Weighing Machine

Project Strategy

Strengthening of selected village shandies through establishing Grading Facilities, Standardization Facilities, Price Display Mechanism and Electronic Weighing Machines

Project Components

1. Establishing Grading Facilities
2. Establishing Standardization Facilities
3. Purchasing and Establishing Price Display Mechanism and Electronic Weighing Machines

Project Cost and Financing

In this project it is proposed to strengthen Village Shandies in Kancheepuram district over the period of four years. .

Reporting

1. Quarterly progress reports to be sent to the Deputy Director (Agricultural Marketing and Agri Business) by the concerned Agricultural Officer (Agricultural Marketing and Agri Business) and Secretaries of Marketing committees.

2. Periodical Inspection undertaken by the Deputy Director (Agricultural Marketing and Agri Business)

6.6.8. Capacity Building of Farmers' Skill

Project Rationale

Apart from pursuing policies and creating formal organizations to intervene in agricultural marketing, governments have adopted several programmes of providing market support services. It appears that the types of programmes initiated cover a very wide spectrum of possible solutions to help small and marginal farmers. However, the benefits have not adequately reached the intended target groups. The main reason is

that agricultural marketing and business related aspects of training, education and research have remained neglected in our country.

The role of the market as knowledge and information exchange amongst the converging farmers needs to be appreciated and harnessed. Farmers get benefit from deregulation of markets, minimum guaranteed price scheme, contract farming, and crop/income insurance, only to the extent they organize in marketing groups, self-help groups, cooperatives or companies and learn skills suited to the new marketing environment. Understanding quality standards (including FAQ), learning the terms of contract and insurance, and choosing and preparing the produce for the market are going to be essential skills for farmers. There is a need for greater synergy between extension services and market. State Marketing Departments and Boards, APMCs, Krishi Vigyan Kendras (KVKs), Marketing Cooperatives, NGOs and PRIs should pay increasing attention to train the farmers in marketing related skills. All stakeholders in the Supply Chain (i.e. from farmers to consumers) should be exposed to the following characteristics and complexities of the marketing system to make it more efficient. Hence in this project the following training programmes are proposed with budget requirement of Rs. 7.82 lakhs

- Training on Warehousing and storage
- Training on Grading
- Training on Market intelligence
- Training on Post Harvest Management of selected commodities
- Massive awareness programme is to be undertaken to demystify the commodity futures markets and enable the farmers to enter into futures contract so as to insure their price risk.
- Training to farmers on selected commodities for Export Promotion.

Project Strategy

Training will be organized for farmers / commodity groups on Warehousing and storage, Grading, Market intelligence, Post Harvest Management of selected commodities and awareness programme is to be undertaken to demystify the commodity futures markets and enable the farmers to enter into futures contract so as to insure their price risk in the state with financial assistance from NADP.

Project Components

Organising training to farmers / commodity groups on Warehousing and storage, Grading, Market intelligence, Post Harvest Management of selected commodities and awareness programme is to be undertaken to demystify the commodity futures markets and enable the farmers to enter into futures contract so as to insure their price risk

Project Cost and Financing

In this project it is proposed to organize about 17 trainings under Capacity Building of Farmers Skill titles for marketing of agricultural commodities in Kancheepuram district over the period of four years. This will require resources of Rs**.** **7**.82 lakhs for the period of four years. The Details are presented in Table. 72.

Reporting

1. Quarterly progress reports to be sent to the Deputy Director (Agricultural Marketing and Agri Business) by the concerned Agricultural Officer(Agricultural Marketing and Agri Business) and Secretaries of Marketing committees.

2. Periodical Inspection undertaken by the Deputy Director (Agricultural Marketing and Agri Business)

6.6.9. Strengthening of Selected Market Infrastructure (Equipments) through NADP Funding

Rationale

Considering the importance of different Markets, there is an urgent need to develop these markets in a phased manner with necessary infrastructural amenities to have a strong base of the marketing channel. Suitability and adequacy of marketing infrastructure depends on the type and quantity of marketed surpluses of agricultural produce in the State. The estimated marketed surpluses of various commodities are given in the Table reflected the need for improvement in the market infrastructure in coming years.

Estimates of Marketed Surpluses of Various Commodities

Table.70 Estimates of Marketed Surpluses of Various Commodities

Commodity	Marketed surplus ratio (%)
Rice	51.9
Wheat	53.8
Jowar	39.7
Bajra	45.4
Maize	46.2
Other Coarse Cereals	57.1
Pulses	53.9
Food grains	
Oilseeds	79.6
Sugarcane	92.9
Fruits and Vegetables**	88.2
Cotton	100.0
Fish	100.0
Milk	60.0
Mutton and Goat Meat	100.0
Beef and Buffalo Meat	100.0
Meat(Total)	100.0
Eggs	88.2

****** Source of Marketed Surplus (MS) Output Ratio for Fruits and Vegetables is Achyra, S S (2003). Agril. Marketing in India, (as a Part of Millennium Study of Indian Farmers), P134 (Original Source- Agril Statistics at a Glance 2001. Agril. Statistics Division, Directorate of Economics and Statistics, Ministry of Agriculture, New Delhi).

Project Components

1. Purchasing and Establishing price display board and mobile controlled display board
2. Purchasing and Establishing collection centres
3. Purchasing and Establishing chilli dryers
4. Purchasing and Establishing cool Chambers/cold storage
5. Purchasing and Establishing Price Display Mechanism and Electronic Weighing Machines
6. Purchasing and establishing moisture meter
7. Purchasing and Distribution of Tarpaulins, Plastic crates and storage pins

Project Cost and Financing

In this project it is proposed to strengthen market infrastructure in Kancheepuram district over the period of four years.

Reporting

1. Quarterly progress reports to be sent to the Deputy Director (Agricultural Marketing and Agri Business) by the concerned Agricultural Officer (Agricultural Marketing and Agri Business) and Secretaries of Marketing committees.
2. Periodical Inspection undertaken by the Deputy Director (Agricultural Marketing and Agri Business)

6.6.10. Establishment of Price Surveillance Mechanism through NADP Funding

Rationale

Collection of real time data in the open markets for major agricultural commodities and further analysis is essential for forecasting of prices well in advance of the sowing season so that farmers can take their sowing decisions on a scientific basis. This will enhance the income of the farmers which is one of the objectives of the project.

Project Components

This involves collection of data on prices of different commodities in the unregulated markets in the notified area. This entails collection of time series and current/real time data which will be sent to Domestic and Export Market Intelligence Cell of Tamil Nadu Agricultural University, for processing and further analysis to forecast prices of major agricultural commodities.

Project Cost and Financing

In this project it is proposed to collect data at a minimum interval of one month from major assembly markets on a continuous basis in Kancheepuram district over the period of four years. This will require resources of Rs.2.30 lakhs for the period of four years. The Details are presented in Table. 72.

Reporting

1. Quarterly progress reports to be sent to the Deputy Director (Agricultural Marketing and Agri Business) by the concerned Agricultural Officer (Agricultural Marketing and Agri Business) and Secretaries of Marketing committees.
2. Periodical Inspection undertaken by the Deputy Director (Agricultural Marketing and Agri Business)

6.6.11. Strengthening of Regulated Market and *Uzhavar Shandies* Publicity through NADP Funding

Rationale

Arrivals to market yards of regulated markets is only about 15 % of the marketed surplus in Tamil Nadu. Similarly sale through *Uzhavar Shandies* is also limited in case of fruits and vegetables. Hence it is necessary to have publicity programme on the benefits of sale through regulated markets and *Uzhavar* Shandies so that the net price realized by the farmers could be increased. To achieve this publicity and propaganda programmes will be undertaken in this district for the next four years

Project Components

Hoardings, publicity through F.M. radio, posters, folders, wall paintings and village cultural programmes will form the components.

Project Cost and Financing

In this project it is proposed to have the publicity programmes with the above components in this district with a financial outlay of Rs.23.00 Lakhs over the period of four years. The Details are presented in Table. 72.

Reporting

1. Quarterly progress reports to be sent to the Deputy Director (Agricultural Marketing and Agri Business) by the concerned Agricultural Officer (Agricultural Marketing and Agri Business) and Secretaries of Marketing committees.
2. Periodical Inspection undertaken by the Deputy Director (Agricultural Marketing and Agri Business)

Project Cost

The total cost for development of agricultural marketing so as to increase the profitability of farmers would be Rs.23.00 Lakhs for this district for the next four years.

Implementation

Department of Agricultural Marketing and Agribusiness, Government of Tamil Nadu will be the implementing agency for proposed project. The Deputy Director of Agricultural Marketing along with the team of Officials and the Secretary of District Market Committees and team of Officials of Market Committee and Regulated Markets will be implementing the project jointly.

13. Project Performance Monitoring System

Outcomes of the project will be measured against initial baseline data which will provide a benchmark for future interventions. The details of each monitoring and evaluation activity will be refined and finalized during the first six months of the project, as a joint effort of the management of the project , the stakeholders and technical assistance by the Performance Monitoring Evaluation unit.

14. Sustainability

Project sustainability refers to the continuation of benefits generated by the project even after project completion. Through the project activities, stakeholders will improve their capacity in identifying market opportunities and taking sound business decisions regarding investment, production and marketing. The improved capacity will result in the emergence of profitable enterprises better able to adapt to market conditions and seize existing opportunities and benefits; the enterprises and the benefits will continue to exist even after the completion of the project. However, the success of the project also depends on the sustainability of some of the institutional mechanisms (for example DEMIC) introduced by the project. In some cases, the institutional support will have to be continued for the benefits to continue to flow after the completion of the project and result in the models and practices introduced by the project to be replicated by other stakeholders in the agricultural sector in the State.

6.6.12 Agricultural Marketing

Table. 71 NADP Marketing activities in Kancheepuram District

(Value in Lakhs)

S. No	Components	2009			2010			2011			2012			Total
		Unit cost	Phy	Fin	Unit cost	Phys	Fin	Unit cost	Phy	Fin	Unit cost	Phy	Fin	
1	**Commodity group formation**													
	Groudnut	0.2	30	6.00	0.22	30	6.60	0.2	30	7.20	0.26	30	7.80	**27.60**
2	**Market Intelligence dissemination**													
	Publicity Van, Hoardings, wall painting, DVD	0.1	20	2.00	0.11	20	2.20	0.1	20	2.40	0.13	20	2.60	**9.20**
	Farmers Meetings	0.1	52	5.20	0.11	52	5.72	0.1	52	6.24	0.13	52	6.76	**23.92**
	Purchase of marketing materials	0.1	1	0.10	0.11	1	0.11	0.1	1	0.12	0.13	1	0.13	**0.46**
3	**Facilitation of contract farming**	0.15	8	1.20	0.165	8	1.32	0.2	8	1.44	0.2	8	1.56	**5.52**
4	**Trainings on**													
	Commodity Markets	0.1	6	0.60	0.11	6	0.66	0.1	6	0.72	0.13	6	0.78	**2.76**
	Value addition Groundnut - Training	0.1	4	0.40	0.11	4	0.44	0.1	4	0.48	0.13	4	0.52	**1.84**
	Export Promotion	0.1	4	0.40	0.11	4	0.44	0.1	4	0.48	0.13	4	0.52	**1.84**
	Min PH Loss Trainings	0.1	3	0.30	0.11	3	0.33	0.1	3	0.36	0.13	3	0.39	**1.38**
5	**Exposure visit to markets**													
	Within State	0.75	1	0.75	0.825	1	0.83	0.9	1	0.90	0.98	1	0.98	**3.45**
	Visit to National Markets	1.5	3	4.50	1.65	3	4.95	1.8	3	5.45	2	3	5.99	**20.88**
6	**Arrangement of buyer seller meetings**	0.2	12	2.40	0.22	12	2.64	0.2	12	2.88	0.26	12	3.12	**11.04**
7	**Streng. Of market extension centre**	2.5	1	2.50	2.75	0	0.00	3	0	0.00	3.25	0	0.00	**2.50**
8	**Streng. Of village shandies**	0	0	0.00	0	0	0.00	0	0	0.00	0	0	0.00	**0.00**
9	**Market price surveillance**	0.1	5	0.50	0.11	5	0.55	0.1	5	0.60	0.13	5	0.65	**2.30**
10	**Publicity - regulated market**	5	1	5.00	5.5	1	5.50	6	1	6.00	6.5	1	6.50	**23.00**
11	**Market infrastructure activities**	0	0	0.00	0	0	0.00	0	0	0.00	0	0	0.00	**0.00**
Total				**31.85**			**32.29**			**35.27**			**38.29**	**137.69**

Table.72 NADP Marketing activities in Kancheepuram District

(Amount in Rs.)

		2009			2010			2011			2012			
S. No	**Components**	**Unit cost**	**Phy**	**Fin**	**Unit cost**	**Phy**	**Fin**	**Unit cost**	**Phy**	**Fin**	**Unit cost**	**Phy**	**Fin**	**Total**
1	**Commodity group Formation**													
	Groudnut	20000	30	600000	22000	30	660000	24000	30	720000	26000	30	780000	2760000
2	Market Intelligence dissemination													
	Publicity Van, Hoardings, wall painting, DVD	10000	20	200000	11000	20	220000	12000	20	240000	13000	20	260000	920000
	Farmers Discus	10000	52	520000	11000	52	572000	12000	52	624000	13000	52	676000	2392000
	Purchase of marketing materials	10000	1	10000	11000	1	11000	12000	1	12000	13000	1	13000	46000
3	Facilitation of contract farming	15000	8	120000	16500	8	132000	18000	8	144000	19500	8	156000	552000
4	Trainings on													
	Commodity Markets	10000	6	60000	11000	6	66000	12000	6	72000	13000	6	78000	276000
	Groundnut - Training	10000	4	40000	11000	4	44000	12000	4	48000	13000	4	52000	184000
	Meeting	10000	4	40000	11000	4	44000	12000	4	48000	13000	4	52000	184000
	Min PH Loss Training	10000	3	30000	11000	3	33000	12000	3	36000	13000	3	39000	138000
5	Exposure visit to markets													
	Common	75000	1	75000	82500	1	82500	90000	1	90000	97500	1	97500	345000
	Visit to National Markets	150000	3	450000	165000	3	495000	181500	3	544500	199650	3	598950	2088450

Table.72 contd….

(Amount in Rs.)

		2009			2010			2011			2012			
S. No	**Components**	**Unit cost**	**Phy**	**Fin**	**Unit cost**	**Phy**	**Fin**	**Unit cost**	**Phy**	**Fin**	**Unit cost**	**Phy**	**Fin**	**Total**
6	Arrangement of buyer seller meetings	20000	12	240000	22000	12	264000	24000	12	288000	26000	12	312000	1104000
7	Streng. Of market extension centre	250000	0	0	275000	0	0	300000	0	0	325000	0	0	0
8	Streng. Of village shandies	0	0	0	0	0	0	0	0	0	0	0	0	0
9	Market price surveillance	10000	5	50000	11000	5	55000	12000	5	60000	13000	5	65000	230000
10	Publicity - regulated market	500000	1	500000	550000	1	550000	600000	1	600000	650000	1	650000	2300000
11	Market infrastructure activities	0	0	0	0	0	0	0	0	0	0	0	0	0
			120	2935000		120	3228500		120	3526500		120	3829450	13519450

Table.73 Public Works Department

(in lakhs)

Sl. No	Name of the Scheme	Estimate Amount
1	Improvement and Renovation of Neenjal Maduvu in Chengalpet Taluk and Rehabilitation of P.V Kalathur Tank in Thirukallikundram Taluk	355.00
2	Rehabilitation of Sempoondi Anaicut at Kiliya Nagar village of Madhurandhagam Taluk	150.00
	Total	505.00

Sensitization Meeting

The NADP meeting was organized at Kancheepuram on 21.5.2008. On behalf of the District Collector, the District Revenue Officer, Shri.V.Rajaraman, presided the NADP meeting. In all, about 400 Panchayat Presidents and 100 farmers participated. Th.Anadhan, the Joint Director of Agriculture, Kancheepuram welcomed the gathering. Dr.M.Asokhan, Associate Professor, Dept. of AE&RS, TNAU, Coimbatore presented the various interventions proposed by the Line Departments for different sectors. The Presidents and the participants actively participated in the meeting and offered valid suggestions for furthering the growth in agriculture and allied sectors.

The suggestions were incorporated and detailed District Agriculture Plan has been prepared.

National Agricultural Development Programme –
Sensitization Workshop Meeting held on 21.05.2008 at Kancheepuram

Welcome address by Joint Director of Agriculture

District Revenue Officer Addressing the Panchayat Presidents

President asking Queries

Panchayat President asking Queries

Participation of Panchayat Presidents

Vote of Thanks by Deputy Director (GOI)

ஊராட்சி தலைவர்களுக்கு வேளாண் பயிலரங்கம்

காஞ்சிபுரம், மே.23: காஞ்சி புரத்தில் நடந்த வேளாண் வளர்ச்சி திட்ட பயிலரங் கத்தில் 400 ஊராட்சி மன் றத் தலைவர்கள் கலந்து கொண்டனர்.

காஞ்சிபுரம் மாவட்டத் தில் உள்ள ஊராட்சி மன் றத் தலைவர்களுக்கு தேசிய வேளாண் வளர்ச்சி திட் டம் குறித்த பயிலரங்கம், காஞ்சிபுரம் அன்னை அஞ் சுகம் திருமண மண்டபத் தில் நேற்று முன்தினம் நடந்தது. மாவட்ட வரு வாய் அலுவலர் ராஜாரா மன் தலைமை வகித்தார். சுமார் 400 ஊராட்சி மன் றத் தலைவர்கள் கலந்து கொண்டனர். இத்திட்டம் குறித்து வேளாண் பல்க லைக்கழக பேராசிரியர் அசோகன் விளக்கினார்.

தேசிய வேளாண் வளர்ச்சித் திட்ட பயிலரங்கம்

காஞ்சிபுரம், மே 21: காஞ்சிபுரம் மாவட்ட ஊராட்சித் தலைவர்களுக்கான தேசிய வேளாண் வளர்ச்சித் திட்டம் குறித்த பயிலரங்கம் புதன்கிழமை காஞ்சிபுரத்தில் நடந்தது.

வேளாண் துறையில் தற்போதுள்ள தேக்க நிலையை போக்கி, உற்பத்தியை பெருக்கும் வகையில் தேசிய வேளாண் வளர்ச்சி திட்டம் செயல்படுத்தப்பட்டுள்ளது.

காஞ்சிபுரம் மாவட்டத்தில் 2011-ம் ஆண்டு வரை மேற்கொள்ள, திட்டங்கள் குறித்த வரைவு தயாரிக்கப்பட்டுள்ளது. ஊராட்சித் தலைவர்கள் இதுகுறித்து அறியும் வகையிலும், விவசாயிகளுக்கு அறிமுகம் செய்யும் வகையில் பயிலரங்கம் நடந்தது.

மாவட்ட வருவாய் அலுவலர் வே.ராஜாராமன் தலைமை தாங்கி, திட்டத்தின் சிறப்பு குறித்து விளக்கினார். வேளாண் இணை இயக்குநர் ஆனந்தன் வரவேற்றார். வேளாண் பல்கலைக்கழக பேராசிரியர் அசோகன் திட்ட வரைவு குறித்து விவரித்தார். வேளாண் துறை அதிகாரிகள் கருணாகரன், ரஞ்சித்குமார், செல்வம், தோட்டக்கலை உதவி இயக்குநர் ராதாகிருஷ்ணன் ஆகியோர் விவசாயிகளின் சந்தேகங்களுக்கு பதில் அளித்தனர்.

செம்மை நெல் சாகுபடி, தோட்டக் கலை தொழில்நுட்பங்கள், மண் பரிசோதனை குறித்து விவசாயிகளுக்கு விளக்கப்பட்டது. வேளாண் அதிகாரிகள் நடராஜன், பழனிவேலு, ரங்கநாதன், அய்யாதுரை கலந்து கொண்டனர். ஆர்.வி.கருணாகரன் நன்றி கூறினார்.