Salem - District Agricultural Plan

NATIONAL AGRICULTURAL DEVELOPMENT PROGRAMME (NADP)

DISTRICT AGRICULTURE PLAN

SALEM 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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Director, CARDS

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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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EXECUTIVE SUMMARY

Salem District is one of the biggest Districts in Tamil nadu. It is bounded on the North by Dharmapuri district, on the South by Namakkal and Erode districts, the Western ghats in the West and on the East by Villupuram District. The district is having North Latitude between 11^0 14` and $12^0$ 53` and East Longitude between 77^0 44` and $78^0$ 50`. The geographical area of the district is 5205.30 sq kilometers. It has four revenue divisions viz., Salem, Attur, Mettur and Sankagiri and it is divided into nine taluks viz., Attur, Mettur, Omalur, Sankari, Salem , Yercaud, Gangavalli , Idappadi and Vazhapadi. The district comprises of three Municipalities viz., Idappadi, Attur and Mettur and one Corporation i.e Salem and 385 Village Panchayats with 646 Revenue villages. The district is also having 34 Town panchayats and 20 Panchayat Unions. It has a total population of 30.16 lakhs. The literacy in the district is about 57.50 per cent and the total working population accounts for 48.23 percent to the total population. Agriculture sector provides the major source of income to the population of the district and the major crops in this district are paddy, cholam, cotton, groundnut, maize etc., In addition, the other allied sectors like dairy, sheep/ goat, sericulture, inland fishing are the major sectors contributing to the district's economy as well as act as a major source of providing livelihood for improving the income and standard of living of the people.

SWOT of the District

Salem district has the following Strength, Weaknesses, Opportunities, and Threats which are essential for the better understanding for improving the district future. The major strengths are progressive nature of the farming community, farmers, climate and rainfall favorable for cultivation of a wide range of commercial value crops such as spices, plantation crops, flowers, medicinal and aromatic plants, cut flower cultivation etc., high agricultural population, promising allied sectors such as seed industry, Dairy / Sheep and Goat / Poultry, and Sago industry functioning in this district plays a vital role in the economy of the district.

The major weaknesses are more number of resource poor farmers, fragmented holdings, dependance on monsoon rain, low soil productivity, problem soils such as saline and alkaline soils, over exploitation of ground water in almost 75-80per cent of the blocks in the district. Majority of the area is under rainfed condition. Low adoption of plant population, non adoption of optimum seed rate, lack of awareness of latest technologies among the farmers is the other weaknesses.

The Opportunities are, immense scope for increasing area under hybrid vegetables (tomato, bhendi, cabbage), medicinal plants, establishing distillation units in Yercaud to extract oil from Palmarosa, Citronella, Lemon grass, fruit processing units and Jasmine Concentrate extraction units. Infrastructure facilities such as transport, communication, roads, location advantages such as national highway connecting to Chennai and Bangalore for easy transport of agricultural produce to the markets, development of seed industry, production of milk products and selling of packaged mutton and broiler meat, rearing of back yard poultry and Japanese quills are the other opportunities for development .

However, the threats identified are low productivity of crops, higher cost of cultivation, agricultural labour shortage, and uncertainty in market price for the produce and finally the gambling nature of agriculture.

Areas / Sectors which need to be addressed

The agriculture sector and allied sectors such as animal husbandry, fisheries, sericulture, agricultural marketing and agricultural engineering are the major sectors to be improved to enhance production and productivity of the crops and other products to improve the net income of the producers. This in turn will contribute for increasing the agricultural growth to four percent in the XIth plan.

On going programmes in the District

The Department of Agriculture is currently implementing various programmes in terms of crops to increase the productivity of crops mainly rice, cotton, groundnut, gingelly, sunflower, pulses, millets etc. The programmes includes crop wise interventions such as Integrated Nutrient Management, IPM, demonstration of new technologies (SRI in paddy), promotion and distribution of bio fertilizers, certified seeds etc. In addition, organizing farmers fields schools and farmers' visits are also included in the on going programmes. The Department of Horticulture is implementing a number of programmes such as Integrated Horticulture Development Programme, Integrated Tribal Development Programme, IAMWARM, National Horticulture Mission and Micro Irrigation in Salem district.

The sericulture Department is implementing some of the programmes such as new plantation of mulberry, provision of improved varieties, drip irrigation, provision of rearing appliances and sheds etc., The Agricultural Engineering Department is implementing projects on Soil conservation measures like contour Stone wall , check dams etc., in Tribal Hilly regions, Rainwater Harvesting structures (Percolation Ponds, Checkdams, Ooranis, Farm Ponds etc.,) Creation of Water Harvesting Structures, distribution of farm machineries such as Tractors, Power Tillers and implements like rotavator, Micro Irrigation etc., to improve the welfare of the farmers.

District Plan at a Glance

The total budget requirements of proposed plan for agricultural and allied sectors under NADP are given below. The total budget requirements for implementing various programmes for different sectors in the next four years 2008-09 to 2011-2012 is Rs. 10759.943 lakhs in Salem district.

Budget for Various Sectors Proposed under NADP – Salem District

(Rs.in lakhs)

S.No.	Departments	2008-09	2009-10	2010-11	2011-12	Total
1.	Agriculture	1178.560	995.380	977.520	990.773	4142.233
2.	Horticulture	157.850	162.850	168.850	170.350	659.90
3.	Animal Husbandry	829.380	352.200	292.940	291.670	1766.19
4.	Fisheries	313.140	190.500	191.500	142.000	837.14
5.	Agrl. Engineering	651.100	651.420	654.990	657.470	2614.97
6.	Agrl. Marketing	33.300	30.400	32.940	35.260	131.90
7.	Sericulture	39.400	39.400	39.400	39.400	157.60
8.	Public Works Department	125.000	105.000	95.000	125.000	450.00
	Total	**3327.730**	**2527.150**	**2453.140**	**2451.923**	**10759.943**

Public Private Partnership in the Proposed Plan

The public private partnership can be encouraged in all sectors wherever possible which involve huge investments in promoting the enterprises. In Salem district, some of the important sectors like setting up of new plants regarding solvent extraction units, cold storage chains, seed industry, value added enterprises etc to meet both the domestic and international demands are proposed.

Outcomes as a Result of Implementation of the Plan

Implementation of NADP funded schemes / projects in Salem district in different sectors, will definitely address the current issues and resolve the problems and fulfill the gaps identified in each sectors. In turn it will reflect on increasing employment, better products, increasing farmers' net income and finally it will improve the standard of living of the farmers and other stakeholders involved in various activities.

CHAPTER - I
INTRODUCTION

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 involves 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.

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 4.6.2008 under the chairmanship of District Collector, Salem. This meeting was attended by the scientists from TNAU, officials from line departments, the representatives of local bodies and wide coverage was given in the media also.

Finalization

The feedbacks 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

2.1. Introduction

i) Map of Salem District

Salem District is bounded on the North by Dharmapuri district, on the South by Namakkal and Erode districts, the Western Ghats in the West and on the East by Villupuram District (Fig.1).

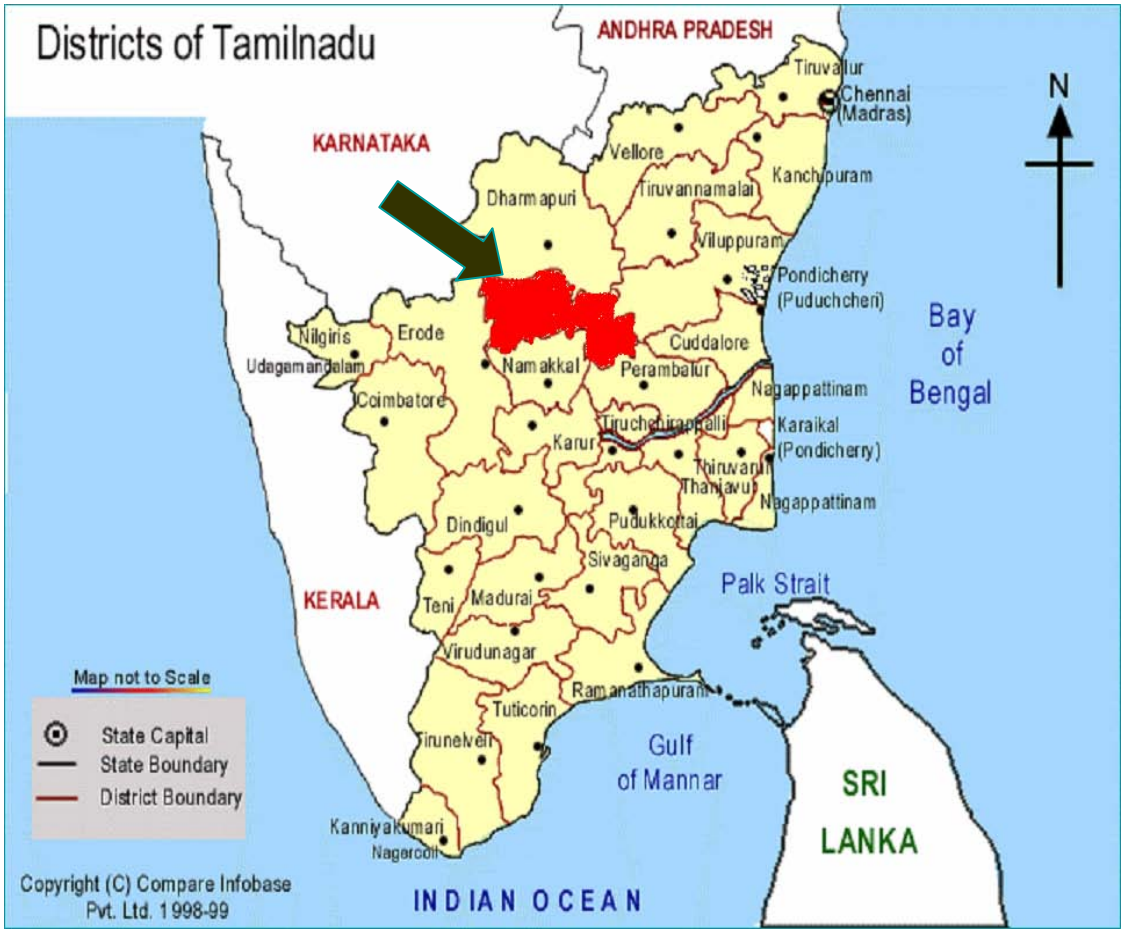


Fig.1 Map of Salem District

ii) General Statistics

The land use pattern in Salem district reveals that the net area sown and gross cultivated area is nearly 40 and 45.4 per cent of the total geographical area respectively. Forest area occupies the major area of 24.15 percent of the total geographical area. The cropping intensity is about 113 percent in Salem district.

Salem district is not endowed with any major irrigation system except Mettur Dam which irrigates about 0.15 lakh hectares through the West Bank canal of the Cauvery. Wells are the main source of irrigation in Salem district which constitutes about 97per cent of the total area under irrigation; both net and gross irrigated area. The irrigation intensity is 82 percent.

Of the 20 blocks in Salem district, 15 blocks are categorized as over exploited blocks (100 per cent extraction), 4 blocks under Critical (85-100per cent extraction) and one Semi Critical (60-85 per cent extraction). It reveals that the district has over exploited the ground water and it warrants the efficient use of irrigation water through improved technologies and soil and water conservation measures in the near future.

iii) Crops / Breeds / Fisheries etc., Activities in the District

Crops

Millets and other cereals are the principal crops in Salem district which covers major area of 93678 Hectares followed by Pulses, i. e 60743 ha. Oilseeds, Rice, Sugarcane are cultivated in 37198 Ha, 11038 Ha and 4986 Ha respectively. Average size of Land holding is 0.86 Hectare.

Important Food Crops:	Paddy, Cholam, Cumbu, Ragi, Red gram, Green gram, Black gram, Horse gram, Turmeric, Sugarcane, Mango, Banana, Tapiaco, Groundnut & Gingelly
Important Non-food Crops:	Cotton, Castor Seed, Coffee and Fodder Crops

The major ruling varieties in the principal crops are high yielding varieties such as ADT, IR and ASD in case of paddy followed by groundnut where TMV and VRI are the promising varieties and in Pulses, TMV and Vamban are the ruling varieties in this district. However, in Cotton and Maize though high yielding varieties are cultivated, hybrids and Bt varieties are extensively adopted in this district.

Animal Husbandry

Salem District has milch animal population of about 3.54 lakhs and breedable population of Cattle (279743 Nos.); Buffalo (98506 Nos.). Of the total population, cross breds accounted for 58.75 percent, indigenous animals accounted for 16.26 percent and buffaloes accounted for 24.99 percent in Salem district which shows that the dairy sector is functioning well in this district due to high quality breeds. The average milk yield is about 4.36 tonnes. The compound growth rate for milk is worked out to 7.68 percent. However, this sector is deficient in terms of fodder availability i.e. it has green and dry fodder deficiency of about 87 and 64 percent respectively.

Strength and Weakness - Dairy

Strength

- High crossbred population
- CGR for milk of cow and buffalo – 6.28
- CGR for productivity – 7.68

Dairy - Weakness

- Unscientific management
- Fodder shortage
- Under utilization of fodder resource
- Low quality product
- Over dependence on concentrate feed
- Lack of information resource
- Poor maintenance of buffalo calves

Strength and Weakness - Small Ruminants

Strength

- Low input farming
- Easy market and high demand

Weakness

- Non availability of shepherds
- Lack of quality germplasm
- Lack of grazing lands
- No technology intervention
- Lack of information resource
- Mineral deficiency related problems

Fisheries Sector

- Inland fishermen population – 19,600 (Highest inland population district in Tamilnadu)
- Inland water resources – 34,400 ha. (Reservoir – 15,500 ha., Long seasonal irrigational tanks – 1,300 ha., Short seasonal ponds – 15,600 ha.)
- 19,550 ha. only - utilized for fish culture at present
- Total inland fish production – 541 tonnes against potential of 7,400 tonnes.
- Government Fish Seed Farm (14,000 m2)- only fish seed production & rearing centre in Salem District. - of which 6,800 m2 is in repair condition.
- Fish seed production – 45 lakhs against requirement of 122 lakhs at present level & 131.45 lakhs at optimal production level.
- The gap of fingerling requirement is 77 lakhs at present level & 86 lakhs at optimal level.
- No private fish seed farm.
- Major fisheries activities - at Mettur Dam, Athur Taluk (34 – Farm Ponds).
- Fish production at Mettur Dam – 18 kg. / ha.
- Marketing society - 1 (Members – 2,000) , Inland fishing villages - 98, Cooperative societies - 22 (Members – 4,700)

Gaps Identified

- No self sufficiency in fish seed production.
- Lack of funds to repair Fish Seed Rearing Centres at Thirumurthy, Amaravathy, and Aliyar. Out of the total area 3.20 ha., 1.60 ha. are under repair.
- Lack of efficient fishing gears for operation in deep waters.
- Lack of post harvest infrastructure like whole sale market, retail outlet and quick transportation facilities.
- No private seed production and rearing centres.
- No perfected technology for breeding of endemic ornamental fishes.

2.2 District at a Glance

2.2.1. Location and Geographical Units

Salem District is one of the biggest Districts in Tamil nadu. It is bounded on the North by Dharmapuri district, on the South by Namakkal and Erode districts, the Western Ghats in the West and on the East by Villupuram District.

Geographical Position

North Latitude	Between 11^0 14` and $12^0$ 53`
East Longitude	Between 77^0 44` and $78^0$ 50`

The geographical area of the district is 5205.30 sq kilometers. It has four revenue divisions *viz.*, Salem, Attur, Mettur and Sankagiri and it is divided into nine taluks *viz.*, Attur, Mettur, Omalur, Sankari, Salem, Yercaud, Gangavalli, Idappadi and Vazhapadi. The district comprises of three Municipalities viz., Idappadi, Attur and Mettur and one Corporation i.e Salem and 385 Village Panchayats with 646 Revenue villages. The district is also having 34 Town panchayats and 20 Panchayat Unions (Fig 2).

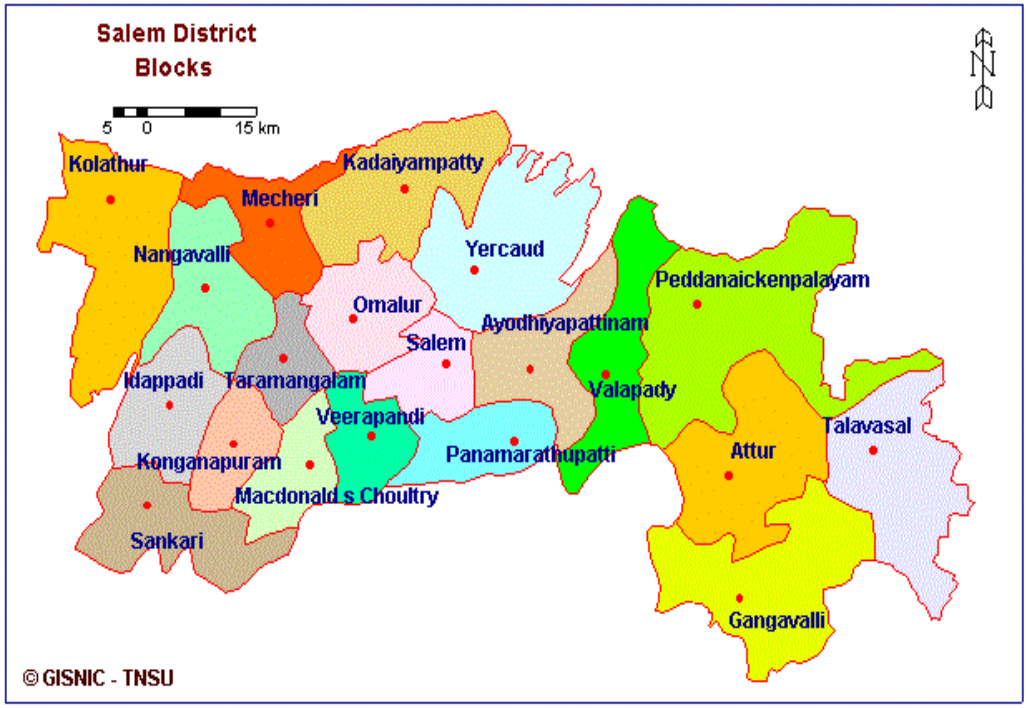


Fig.2 Map showing Blocks in Salem District

2.2.2. Demographic Profile

Salem district has a total geographical area of 5205 Sq.km. It has a total population of 30.16 lakhs. The literacy in the district is about 57.50 per cent and the total working population is 48.23 percent of the total population (Table 2.1).

Table 2.1. Area and Population - 2001 Census

S.No.	Particulars	Population 2001
1.	Area (Sq.km)	5205
2	Population	
	a. Male Population	1563633
	b. Female Population	1452713
	c. Rural Population	1626162
	d. Urban Population	1390184
	Total	**3016346**

Table 2.1 Contd…

S.No.	Particulars	Population 2001
3.	Density (per. Sq. Km.)	573
4.	Literates	1734442
5.	Main Workers	1279846
	a. Total Workers	1454645
	b. Male Workers	942939
	c. Female Workers	511706
	d. Rural Workers	883025
	e. Urban workers	571620
	f. Cultivators	301238
	g. Agricultural Labourers	387901
	h. Household Industry Workers	134261
	i. Other workers	631245
	j. Marginal Workers	174799
6.	Non –Workers (It Includes Aged persons, Housewives, Children and person engaged in personnel services etc.)	1561701
7.	Language Spoken in the District	Tamil, Telugu and Kannada

(Source: www.tn.nic.in)

2.2.3 Topography and Agro Climatic Characteristics

Topography

Land slope generally ranges from 500ft to 1200ft. above MSL with the exception of Yercaud which is at 5000ft. above MSL. District is intersected by numerous hills. Shervroy Hills and Kalrayan Hills adorn the district with natural beauty and forest wealth.

Climate

a. Temperature: Average temperature of the district was 37.9^0 C as maximum and 20.0^0 C as minimum.

b. Rainfall: The Normal Rainfall of the district is 787.10 mm which is lower than the state average of 943 mm. The North East Monsoon period is the major rainy season accounting for 66per cent of the normal rainfall followed by South West Monsoon (30 per cent).

Rainfall

Rainfall in Salem district is furnished in table 2.2. It is observed from the table that the annual normal rainfall in Salem district is about 1027.5 mm. It receives major rainfall from the South west monsoon followed by north east monsoon. It is also observed in the year 2007, Salem district received major rain fall from South west monsoon (46.06 percent) followed by north east monsoon (39.71 percent) with an average rainfall of 979.5 mm which is 4.67 percent lower than the normal rainfall.

Table 2.2. Rainfall in Salem District

(in mm)

Sl. No	Season	Normal	2003	2004	2005	2006	2007
1.	Winter Season	2.8	1.8	1.3	5.9	4.0	1.1 (0.11)
2.	Summer Season	220.3	172.1	388.0	254.9	148.9	138.2 (14.11)
3.	South West Monsoon	383.3	410.7	283.3	408.7	363.2	451.2 (46.06)
4.	North East Monsoon	421.1	368.4	305.9	665.0	372.1	389.0 (39.71)
5.	Annual Rainfall	1027.5	953.0	978.5	1334.5	888.1	979.5 (100.00)

(Figures in parentheses indicate the percentage to Annual rainfall)

Source: G Return Register, Office of the Joint Director of Agriculture, Salem District**.**

2.2.4. a. Land Use Pattern and Land Holdings

The land use pattern in Salem district is furnished in Table 2.3. It reveals that the net area sown and gross cultivated area is nearly 40 and 45.4 per cent of the total geographical area respectively. Forest area occupies the major area of 24.15 percent to the total geographical area. The cropping intensity is about 113 percent in Salem district

Table 2.3 Land Use Pattern in Salem District (Triennium ending 2006-07)

(in ha)

Sl. No	Category	2004 – 05	2005– 06	2006 -07	Triennium ending 2006-07
1.	Forests	125682	125682	125682	125682 (24.15)
2.	Barren & Uncultivable Land	39098	39098	39044	39080 (7.51)
3.	Land put to non agrl. use	58019	58673	59058	58583 (11.25)
4.	Cultivable waste	4798	6528	5548	5625 (1.08)
5.	Permanent Pastures and other grazing land	4206	4206	4200	4204 (0.81)
6.	Misc. tree crop and groves extended in the net area	3437	3460	3204	3367 (0.65)
7.	Current fallow	47182	43871	55105	48719 (9.36)
8.	Other fallow lands	35219	21566	23624	26803 (5.15)
9.	Net Area sown	202889	217446	205065	208467 (40.05)
10.	Area sown More than once	30701	33127	19897	27908 (5.36)
11.	Gross Area sown	233590	250573	224962	236375 (45.41)
12.	Total Geographical area	520530	520530	520530	520530 (100.00)
13	Cropping Intensity (per cent)	115.13	115.23	109.70	113.00

(Figures in parentheses indicate the percentage to total)

Source: Season and Crop Report, Government of Tamil Nadu, Various issues.

2.2.4. b. Land Holdings

The operational holdings in terms of area and number are presented in the table 2.4 and 2.5.

Table 2.4 Operational Holdings in Salem district

(Nos.)

Basic Details	Salem	Attur	Sankari	Mettur	Omalur	Salem District
a. Below 0.5 ha	37617	25265	39765	15565	27673	145885
b. 0.5 to 1.00 ha	20865	22878	14231	9284	12361	79619
c. 1.0 to 2.0 ha	10567	18660	9914	7988	7946	55075
d. 2.0 to 3.0 ha	2922	6115	3665	4840	1648	19190
e. 3.0 to 5.0 ha	1467	2618	1476	1065	874	7500
f. 5.0 to 10.0 ha	632	615	213	382	197	2039
g. 10.0 to 50.0 ha	218	66	19	39	24	366
h. 50.0 and above	0	0	0	0	0	0
Total	**74288**	**76217**	**69283**	**39163**	**50723**	**309674**

Source: G Return Register, Office of the Joint Director of Agriculture, Salem District

Table 2.5 Size wise Operational Holdings in Salem district

(ha)

Basic Details	Salem	Attur	Sankari	Mettur	Omalur	District
a. Below 0.5 ha	10646	7078	7331	7629	4659	37343
b. 0.5 to 1.00 ha	11942	14885	15390	7051	5513	54781
c. 1.0 to 2.0 ha	11457	24805	15516	12830	8615	73223
d. 2.0 to 3.0 ha	6542	14665	8768	5780	7209	42964
e. 3.0 to 5.0 ha	4794	9842	4794	4557	6528	30515
f. 5.0 to 10.0 ha	2722	4026	1369	2868	2699	13684
g. 10.0 to 50.0 ha	5195	1162	208	537	1051	8153
h. 50.0 and above	0	0	0	0	0	0
Total	**53319**	**76463**	**53376**	**41252**	**36274**	**260684**

Source: G Return Register, Office of the Joint Director of Agriculture, Salem District.

2.2.5. Irrigation and Groundwater

a. Irrigation

Salem district is not endowed with any major irrigation system except Mettur Dam which irrigates about 0.15 lakh hectares through the West Bank canal of the Cauvery. The sourcewise irrigation reveals that (Table 2.6) wells are the main source of irrigation in Salem district which constitutes about 97 per cent of the total area under irrigation; both net and gross irrigated area. The irrigation intensity is 82 percent.

Table 2.6 Source wise Area under Irrigation in Salem District – Triennium ending 2006-07

(in ha)

Source	2004 – 05		2005 – 06		2006 – 07		Triennium ending 2006-07	
	NIA	**GIA**	**NIA**	**GIA**	**NIA**	**GIA**	**NIA**	**GIA**
Canal	795	855	2100	2205	2430	2587	1775 (1.90)	1882 (1.65)
Tank	236	236	1708	1803	1808	1980	1251 (1.34)	1340 (1.18)
Wells	79168	96663	94165	115672	97180	119280 0	90171 (96.75)	110538 (97.17)
Others, if any	0	0	0	0	0	0	0	0
Total	**80199**	**97754**	**97973**	**119680**	**101418**	**123847**	**93197**	**113760**
Irrigation intensity (per cent)	121.89		122.15		108.15		113.76	

(Figures in parentheses indicate the percent to total)
Source: G Return Register, Office of the Joint Director of Agriculture, Salem District.

b. Sources of Irrigation

Cauvery river is the only major source available for irrigation other than wells in this district. In addition there are about seven tanks available in this district which contributes for irrigation in this district. The details of sources are given below.

Rivers : Cauvery, Sarabanga Nathi, Vasista Nathi , Suvetha Nathi

Tanks : Govindavadi tank, Ayyanar Koil tank, Mookaneri tank, Attur Pudu tank, Umayalpuram tank, Thedavoor tank, Aragaloor tank, Sendarapatty tank, Naduvalur tank, Sarvoy Periya tank, Vadaman tank .

c. Ground Water Potential

The Groundwater department has classified all the blocks into over exploited, critical and semi critical blocks according to exploitation of ground water potential. The list of blocks is given below. Of the 20 blocks in Salem district, 15 blocks are categorized as over exploited blocks (100 per cent extraction), four blocks under Critical (85-100 per cent extraction) and Semi Critical (60-85 per cent extraction). It reveals that the district has over exploited the ground water and it warrants the efficient use of irrigation water through improved technologies and soil and water conservation measures in the near future.

List of blocks		
Over Exploited (100per cent)	**Critical (85-100per cent)**	**Semi Critical (60-85 per cent)**
Salem, Ayothiapattinam, Panamarthupatty, Veerpandi, Vazhapadi, Attur, Pethanaickanpalayam, Gangavalli, Thalaivasal Magudanchavadi, Konganapuram, Mecheri Nangavalli, Omalur, Tharamangalam	Sankari, Edappadi, Kolathur, Kadayampatti	Yercaud

Source: www.tn.nic.in

CHAPTER - III

SWOT ANALYSIS OF THE DISTRICT

3.1 Introduction

The Salem district has its own merits and demerits in terms of resources availability and also the constraints. The detailed analysis of the district in terms of Strength, Weaknesses, Opportunities, and Threats are given for the better understanding and to improve the district in future.

3.2. SWOT Analysis of the District

Strength

- Progressive nature of the farming community which accounts for 23 per cent of the total population
- Climate and rainfall are favourable for cultivation of wide range of agricultural and horticultural crops – Commercial value crops such as spices, plantations, flowers, medicinal and aromatic plants and cut flower cultivation
- Agricultural population is high in this district which is favourable for the agricultural sector (29per cent).
- Seed revolution is taking place in cotton i.e. Bt cotton is grown in major area in this district under contract farming.
- Dairy / Sheep and Goat / Poultry industries are promising activities in this district
- Contribution of Sago industry functioning in this district which plays a vital role in the economy.

Weaknesses

- Resource poor farmers are more
- Fragmentation of holdings
- Depends on monsoon rain
- Soil productivity is low due to multiple crop cultivation
- Problem soils such as saline and alkaline soils are found in (16820 ha) this district

- Over exploitation of ground water in almost 75-80per cent of the blocks in the district
- Majority of the crops are grown under rainfed condition
- Low adoption of plant population, optimum seed rate
- Lack of awareness on latest technologies and lack of awareness among the farmers

Opportunities

- Immense scope for increasing area under hybrid vegetables (tomato, bhendi, cabbage)
- Growing of medicinal plants
- Possibility of establishing distillation units in Yercaud to extract oil from Palmarosa, Citronella, Lemon grass
- Starting of fruit processing units and Jasmine Concentrate extraction unit due to the availability of raw materials
- Infrastructure facilities such as good transport, communication and roads
- It is located on the national highway connecting to Chennai and Bangalore which is suitable for easy transport of agricultural produce to the markets
- Scope for further development of seed industry
- Scope for production of milk products and selling of packaged mutton and broiler meat
- Scope for rearing of back yard poultry and Japanese quils.

Threats

- Productivity of the crops is low.
- Higher cost of cultivation
- Almost all the blocks are experiencing agricultural labour shortage due to shifting of labour from agricultural sector to industrial sector
- Uncertainty in market price for the produce
- Gambling agriculture

Composite Index of Agricultural Development of Salem 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 100per cent 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 the 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 Salem district is taken from various government publications like Season and Crops Report and Economic Appraisal of Tamil Nadu for four year periods 1990-91, 1995-96, 2000-01 and 2005-06. In all, 25 indicators of agricultural development as given in Table 3.1 were used for estimating the composite index of development for the district. The 25 indicators were grouped into six different 'components': i) Crop-Area-Variables (10) ii) Irrigation (7) iii) Livestock (3) iv) Fisheries (1) v) Fertilizer (3) and vi) Cultivators and Labourers (2).

The analysis showed that Salem district was classified as 'highly developed' in agricultural development during 90-91 and developing in 95-96 and became 'developed' in agriculture during 2000-01 and 2005-06. In terms of overall agricultural development its rank among the 29 districts of Tamil Nadu varied from 2 to 17 during the 1990-91 to 2005-06. As far as the individual components of agricultural development are concerned, it's ranks in the above periods are summarized in the following Table 3.2. The table shows that except in fisheries and cultivators and labourers, in all other components its performance in the period of study is good.

Table 3.1. Selected Indicators of Agricultural Development for Salem District

Component	Indicators	No. of Indicators
Crop-Area-Variables	Cropping Intensity	10
	per cent of Gross Cropped Area to Total geographical area	
	Per cent Share of food grains to Gross Cropped Area	
	Per cent Share of food crops to Gross Cropped Area	
	Per cent Share of non food crops to Gross Cropped Area	
	Per cent Share of cultivable waste to total geographical area	
	Per cent Area under High Yielding Variety-Paddy	
	Per cent Area under High Yielding Variety-Cholam	
	Per cent Area under High Yielding Variety-Cumbu	
	Per cent Area under High Yielding Variety-Ragi	
Irrigation	Irrigation Intensity	7
	Per cent of Gross Irrigated Area to Gross Cropped Area	
	Per cent of Net Irrigated Area to net area sown	
	Per cent Area under Canal Irrigation to Gross Irrigated Area	
	Per cent Area under Tank Irrigation to Gross Irrigated Area	
	Per cent Area under Well Irrigation to Gross Irrigated Area	
	Per cent 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	Per cent of Cultivators to total population	2
	Per cent of Agri.labourers to total workers	
	Total	**25**

Table 3.2. Rank of Salem 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	16	19	1	-	-	14	2
	1995-96	13	15	1	24	24	19	14
	2000-01	2	9	14	23	18	19	17
	2005-06	13	17	2	25	8	17	11

CHAPTER - IV

DEVELOPMENT OF AGRICULTURE SECTOR

4.1 Introduction

In this chapter, information relating to Agricultural Sector in terms of land use, soil type, cropping pattern, major crops and varieties, area and production of crops are given in detail. In addition, the ongoing schemes and interventions proposed under NADP are presented in detail.

4.2 Land Use

The gross cultivated area in the district is about 2.5 lakh ha (2005-06) and the net cultivated area is 2.18 lakh ha (Table 4.1). The major crops in this district are paddy, millets, cotton, pulses and sugarcane which contributes for the major area under cultivation.

Table 4.1. Major Crops in Salem District

S. No.	Particulars	Area in ha (2005-06)	
1.	Gross Cultivated area (Ha)	250573	
2.	Net Area sown	217446	
3.	Area Sown more than once (Ha)	33127	
4.	Area and production of principal crops	Area (in "000" ha)	Production (in "000 Tonne)
	a. Paddy	37.328	152.634
	b. Millets and Other Cereals	44.714	60.185
	c. Pulses	11.746	5.955
	d. Sugarcane (Gur)	10.468	85.544
	e. Groundnut	32.202	52.038
	f. Gingelly	2.173	1.384
	g. Cotton (Bales)	14.931	4.405

Source: 'G' Return Register, 2005-06, Joint Director of Agriculture, Salem District

4.3 Soil Health

The soils of the district can be classified under 5 categories viz. clay soil, red loam, laterite soil, red sandy soil, sandy coastal Alluviam (Table 4.2). Black soil is considered as most fertile. The red soil is equal to loam in productivity. In and around Attur, soil is black due to alluvial deposit with red sub soil.

Table 4.2. Major Soil Types in Salem District (2005-06)

(ha)

Soil Type	Salem	Attur	Sankari	Mettur	Omalur	District
Red Loam	14646	15122	40858	7365	12952	90943 (17.47)
Laterite Soil	27495	0	0	0	0	27495 (5.28)
Black Soil	1794	29905	1941	137	1500	35277 (6.78)
Sandy Coastal Alluvium	0	0	1956	136	0	2092 (0.20)
Red Sandy Soil	48355	62678	23014	46083	37630	217760 (41.83)
Others	43568	60886	3951	23994	14564	146963 (28.23)
Total	**135858**	**168591**	**71720**	**77715**	**66646**	**520530 (100.00)**

Source: 'G' Return Register, 2005-06, Joint Director of Agriculture, Salem District

Of the above classification, red sandy and red loam soil constitutes the major area of about 59 percent in Salem district. However, saline and alkaline soils put together accounted for about 16820 ha in (Saline Soil- 6020 ha; Alkaline soil –10800 ha) and around Veerapandi, Pethanicknpalayam, Valapadi, Attur, Tharamangalam Blocks of Salem district.

Table 4.3 Profile of Soil in Salem District

S. No	Block	No. of Villages	Area in Sq.Km	Average Rainfall in mm	Water level		Land Use in per cent		General Slope	Dominant Soil series
					Summer	Winter	Agrl Land	Forest		
I	**Salem Taluk**									
1	Salem	39	196.14	870.90	8.15-19.45	6.47-19.45	32%		0-5%	Salem
2	Veerapandi	54	246.19	531.00	12.20-25.30	8.50-24.32	54%	15%	1-5%	Salem, Tulukkanur
3	Panamarattupatti	34	159.56	491.00	15.78-26.70	10.20-25.64	44%	42%	10-15%	Salem, Mallur
4	Ayodhiapattinam	51	262.35	952.10	15.30-24.60	14.0-20.0	46%	28%	5-10%	Salem, Somayyanur
II	**Valapadi Taluk**									
5	Valapadi	39	246.19	801.00	14.55-20.10	2.80-17.90	48%	26%	1-5%	Salem, Somayyanur
III	**Yercaud Taluk**									
6	Yercaud	67	382.67	1050.00	2.10-7.20	2.10-4.10	29%	63%	10-15%	Ooty, Yercaud
IV	**Mettur Taluk**									
7	Kolathur	13	268.88	844.00	7.45-16.20	4.44-13.18	45%	30%	5-10%	Irugur
8	Nangavalli	15	178.01	906.50	8.70-12.56	4.42-12.29	69%	11%	15-35%	Irugur, Tulkkanur
9	Mecheri	20	195.70	977.18	6.0-19.0	5.95-18.70	57%	5%	1-5%	Irugur
V	**Omalur Taluk**									
10	Omalur	35	202.94	980.00	6.00-19.00	5.95-18.70	72%	14%	1-5%	Irugur, Tulkkanur
11	Taramangalam	19	118.36	906.50	5.70-15.80	3.38-15.63	91%		1-5%	Irugur
12	Kadayampatti	24	345.16	847.00	8.17-17.62	5.03-13.92	34%	30%	5-10%	Irugur
VI	**Attur Taluk**									
13	Attur	30	336.68	651.00	10.50-37.40	4.75-37.00	79%	13%	15-35%	Irugur, Tulkkanur

Table 4.3 Contd…

S.No	Block	No. of Villages	Area in Sq.Km	Average Rainfall in mm	Water level		Land Use in per cent		General Slope	Dominant Soil series
					Summer	Winter	Agrl Land	Forest		
14	Peddanaickenpalayam	47	534.17	690.00	7.62-13.39	7.46-12.90	53%	31%	5-10%	Irugur, Tulkkanur
15	Talaivasal	44	404.88	651.00	8.05-20.65	3.20-19.68	79%	11%	5-10%	Irugur, Tulkkanur
VII	**Gangavalli Taluk**									
16	Gangavalli	31	410.18	772.00	6.35-15.8	3.54-12.90	79%	13%	15-35%	Irugur Periyanaickenpalayam
VIII	**Sangakiri Taluk**									
17	Sankagiri	34	299.55	710.80	14.20-24.90	5.25-22.90	80%	5%	1-5%	Tulkkanur, Chittalandur
18	Magudanchavadi	15	126.38	720.30	12.50-26.80	5.55-26.85	95%		1-5%	Tulkkanur, Mallasamudram
IX	**Idappadi Taluk**									
19	Idappadi	14	172.00	715.20	9.60-30.81	8.39-21.60	87%		1-5%	Irugur, Tulkkanur
20	Konganapuram	10	119.28	661.00	13.30-28.13	10.80-20.05	91%		1-5%	Irugur, Tulkkanur
			5205.27							

Note:

Irugur series - Strong brown to yellowish red, loamy soil - **(Redsoil)**

Tulukkanur Series - Very dark brown to dark brown, sandy clay to clay loam soil - **(Black soil)**

Salem series - Dark brown to dark red, Sandy loam to sandy clay loam

Table 4.4 Block wise Soil Productivity in Salem District

S.No	Block	Soil Productivity	LCC	Land Irrigability	Reclamation needed	Groundwater Potential	Tanks in Nos.	
							MI Tanks	Union Tanks
I	**Salem Taluk**							
1	Salem	Good	IIIe	2t	SC measures	Over exploited	6	8
2	Veerapandi	Good, Poor	IIIe	2t,3s	SC measures	Over exploited	2	24
3	Panamarattupatti	Good	IIIe,IIIes	2t,2s	SC measures	Over exploited	2	16
4	Ayodhiapattinam	Good	IIIe,IIe	2t	SC measures	Over exploited	5	11
II	**Valapadi Taluk**							
5	Valapadi	Good	IIIe,IIe	2t	SC measures	Over exploited	4	4
III	**Yercaud Taluk**							
6	Yercaud	Poor, Good	IIIe	3t,2t	SC measures	Safe	0	2
IV	**Mettur Taluk**							
7	Kolathur	Ext. Poor	IIIes	3s	SC measures	Semi critical	3	0
8	Nangavalli	Ext. poor, poor	IIIes,IIIe	3s	SC measures	Over exploited	1	7
9	Mecheri	Ext. Poor	IIIes	3s	SC measures	Over exploited	0	11
V	**Omalur Taluk**							
10	Omalur	Ext .poor, Poor	IIIes,IIIe	3s	SC measures	Over exploited	6	19
11	Taramangalam	Ext. poor	IIIes	3s	SC measures	Semi critical	5	13
12	Kadayampatti	Ext. poor	IIIes	3s	SC measures	Critical	9	27
VI	**Attur Taluk**							
13	Attur	Ext.poor, Poor	IIIes,IIIe	3s	SC measures	Over exploited	10	12
14	Peddanaickenpalayam	Ext.poor,Poor	IIIes,IIIe	3s	SC measures	Over exploited	12	6
15	Talaivasal	Ext.poor,Poor	IIIes,IIIe	3s	SC measures	Over exploited	16	12
VII	**Gangavalli Taluk**							
16	Gangavalli	Ext.Poor Poor	IIIes IIIs	3s 3sd	SC measures Alkalinity	Over exploited	13	16
VIII	Sangakiri Taluk							
17	Sankagiri	Poor	IIIe	3s	SC Measures	Semi critical	0	18
18	Magudanchavadi	Poor	IIIe, IIIs	3s,3sd	Alkalinity	Over exploited	0	14

Table 4.4 Contd…

S.No	Block	Soil Productivity	LCC	Land Irrigability	Reclamation needed	Groundwater Potential	Tanks in Nos.	
							MI Tanks	Union Tanks
IX	**Idappadi Taluk**							
19	Idappadi	Ext.Poor,poor	IIIes,IIIe	3s	SC measures	Semi critical	10	14
20	Konganapuram	Ext.Poor,poor	IIIes,IIIe	3s	SC measures	Over exploited	2	9
Total							**106**	**243**

Note:

Groundwater Exploitation Classification

- Over exploited >100per cent
- Critical 90-100per cent
- Semi critical 70-90per cent
- Safe <70per cent

Land Capability Classification

2 - Lands that have moderate limitations for sustained use under irrigation

- **3**- Lands that have severe limitations for sustained use under irrigation
- **s**- Soil Problem
- **t**- Topography problem
- **d**- Drainage problem

Land Irrigability Classification

- **II**-Good cultivable lands that have moderate limitations
- **III**-Moderately good cultivable lands that have severe limitations
- **e**- Erosion and run off
- **w**- Excess water
- **s**- Root zone limitations

4.4. Water Resources and Management

Sources of Irrigation

Cauvery river is the only major source available for irrigation other than wells in this district. In addition there are about 7 tanks available in this district which contributes for irrigation in this district. Wells accounted for the major source of irrigation in this district (82 percent). Of the 20 blocks in Salem district, 15 blocks are categorized as over exploited blocks (100 per cent extraction), 4 blocks under Critical (85-100per cent extraction) and Semi Critical (60-85 per cent extraction). It reveals that the district has over exploited the ground water and it warrants the efficient use of irrigation water through improved technologies and soil and water conservation measures in the near future.

4.5 Major Crops and Varieties in the District

Crops

Millets and other cereals are the principal crops in Salem district which covers major area of 93678 Hectares followed by Pulses, i..e. 60743 ha. Oilseeds, Rice, Sugarcane are cultivated in 37198 Ha, 11038 Ha and 4986 Ha respectively. Average size of Land holding is 0.86 Hectare.

Important Food Crops:	Paddy, Cholam, Cumbu, Ragi, Red gram, Green gram, Black gram, Horse gram, Turmeric, Sugarcane, Mango, Banana, Tapiaco, Groundnut & Gingelly
Important Non-food Crops:	Cotton, Castor Seed, Coffee and Fodder Crops

The major ruling varieties in the principal crops revealed that (Table 4.3) farmers are adopting high yielding varieties such as ADT, IR and ASD in case of paddy followed by groundnut where TMV and VRI are the promising varieties and in Pulses, TMV and Vamban are the ruling varieties in this district. However, in Cotton and Maize though high yielding varieties are cultivated, hybrids and Bt varieties are extensively adopted in this district.

Table 4.5 Major Crop Varieties in Salem District

Crop	Irrigated		Rainfed	
	HYV	Hybrid	HYV	Hybrid
Paddy	ADT 36, ADT 39, ADT 43, ADT 45, IR20, IWP, ASD-19	…..	…..	…..
Groundnut	…..	…..	TMV- 2, TMV -7, VRI - 2	…..
Maize	NK – 6240, CP – 818, Super – 900 gold, Pinnacle	…..	NK – 6240, CP – 818, Super – 900 gold	NK– 6240, CP – 818, Super– 900 gold, Pinnacle
Cotton	Surabi, MCU - 5	…..	RCH2, Rasi Excell Super	MRC6918, RCH2 – BT Rasi Excel Super
Pulses	…..	…..	TMV -1, VBN -2, VBN -3	

Source: 'G' Return Register, 2006-07, Joint Director of Agriculture, Salem District

Cropping Pattern

The cropping pattern in Salem district is presented in Table 4.6.

Table 4.6 Cropping Pattern in Salem District

(ha)

Sl. No	Name of Crop	2004 – 05		2005 – 06		2006 – 07	
		Rain fed	Irri - gated	Rain fed	Irri - gated	Rain fed	Irri -gated
1.	Paddy	--	36447	--	59446	--	42893
2.	Cholam	58132	17488	75133	7776	73885	15398
3.	Cumbu	4551	751	2642	387	1317	697
4.	Ragi	10258	4416	11440	4429	11098	2910
5.	Maize	11328	5429	17886	6504	15529	18518
6.	Total Minor millets	3301	--	2643	--	1585	--
7.	**Total Millets**	**87568**	**28086**	**109742**	**19098**	**103414**	**37523**

Table 4.6 Contd…. **(ha)**

Sl. No	Name of Crop	2004 – 05		2005 – 06		2006 – 07	
		Rain fed	Irri - gated	Rain fed	Irri - gated	Rain fed	Irri -gated
8.	Pulses Red gram	2556	265	2243	145	1845	32
9.	Black gram	7573	3630	9122	1643	11848	5528
10.	Green gram	12426	206	14033	113	9714	195
11	Cowpea	8159	741	10820	170	9628	124
12	Other Pulses	22639	501	19795	113	20075	361
13	**Total Pulses**	**53353**	**5343**	**56013**	**2184**	**53110**	**6240**
14	Sugarcane	--	9155	--	10636	--	13568
15	Groundnut	29617	16704	28681	9407	22005	15054
16	Gingelly	4825	1983	8374	2695	4789	3295
17	Sunflower	274	174	68	527	105	761
18	Castor	2891	285	2947	463	1689	46
19	Soyabean	--	105	--	102	--	307
20	**Total Oilseeds**	**37607**	**19811**	**40070**	**13194**	**28588**	**19463**
21	Cotton	12098	6167	10223	10344	11140	12507

Source: 'G' Return Register, 2006-07, Joint Director of Agriculture, Salem District

Table 4.7. Current input use level of major crops

Crop	Seed	Fertilizer	PP. Chemical
Paddy	Maximum	Maximum	Minimum
Maize	Maximum	Maximum	Minimum
Pulses	Minimum	Minimum	Minimum
Cotton	Maximum	Maximum	Minimum
Sugarcane	Maximum	Maximum	Minimum

Source: 'G' Return Register, 2006-07, Joint Director of Agriculture, Salem District

4.7. Special Projects / Programmes Ongoing in the District

The ongoing programmes with reference to Agricultural department are given in Table 4.8.

Table 4.8. Ongoing Schemes Operating under Dept. of Agriculture in Salem District

S.No.	Components	Unit	2008-09	
			Phy.	Fin.(Rs.lakhs)
Rice				
I) Seed				
1	Supply of Quality Certified Seeds at Nominal cost to enhance the SRR @ Rs.5/-Kg.	Mt.	1290	64.50
II) Integrated Nutrient Management (INM)				
1	Distribution of Green Manure Seeds @ 75per cent subsidy or Rs.15/- Kg. Whichever is less	Mt.	40	6.00
2	Distribution of Mico-nutrient mixtures @ Rs.500/Hac. Or 50per cent subsidy whichever is less	Lakh Hac.	0.06	30.00
III) Integrated Pest Management				
1	Farmers Field School @ Rs.17000/-No.	Nos.	40	6.80
2	Organising IPM: Distribution of Bio-Pesticides @ Rs.500/-Hac.	Hac.	0	0.00
V) Technologies				
1	Demonstration on SRI Technology @ Rs.3000/Hac. (or) 50per cent subsidy	Nos.	0	0
VI) Others				
1	Distribution of Bio-fertilizers @ 50per cent subsidy (or) Rs.3/-packet	Lakh.No.	1	3.00
Millets				
1	Distribution of Bio-fertilizers @ Rs.3/-packet	Lakh Nos.	0.30	0.90
Pulses				
1	Production of Certified Seeds by Department @ Rs.10/-Kg.	Mt.	500	50.00
2	Distribution of Irrigation pipes @ 50per cent subsidy (or) Rs.15000/-unit maximum of 800 Mt.	Nos.	100	15.00
3	Distribution of Bio-fertilizer @ 50per cent subsidy or Rs.3/-pack.	Lakh No.	1	3.00
4	Distribution of Foliar nutrient spray for 2 times @ 50per cent subsidy or Rs.200/- Hac.whichever is less	Hac.	2000	4.00
5	Integrated Nutrient Management in pulses @ Rs.1250/-Hac.	Lakh Hac.	0.15	187.50
6	Integrated Pest Management in pulses @ Rs.750/Hac.	Lakh Hac.	0.15	112.50

Table 4.8 Contd…

S.No.	Components	Unit	2008-09	
			Phy.	Fin.(Rs.lakhs)
Oil Seeds				
1	Farmers Field School @ Rs.22680/ No.	Nos.	5	1.13
2	Farmers Training 50 farmers/batch 2 days duration @ Rs.15000/-No.	Nos.	20	3.00
3	Publicity/POL/Housing of Vehicles Rs.100000/District		0	1.00
4	Purchase and distribution of Breeder Seeds @ Rs.50/- kg.	Mt	4.0	2.00
5	Distribution of Certified seeds under Seed Village @ 50per cent subsidy or Rs.12/-kg.	Mt	650	78.00
Groundnut				
1	Distribution of Certified seeds subsidy @ Rs.12/-Kg.	Mt.	130	15.60
2	Distribution of Gypsum @ 50per cent subsidy or Rs.500/-Hac.	Hac.	1000	5.00
3	Distribution of Micro nutrient mixture @ Rs.500/- Hac. Or 50per cent subsidy	Hac.	1000	5.00
Gingelly				
1	Production of Certified seeds subsidy @ Rs.10/-kg.	Mt.	5	0.50
2	Distribution of Certified seeds Subsidy @ Rs.12/-kg.	Mt.	5	0.60
3	Distribution of $MNSO_4$ for Gingelly Subsidy @ 50 per cent or Rs.100/-Hac.	Hac.	800	0.80
Sunflower				
1	Distribution of Sunflower Hybrid minikits	Nos.	40	0.00
Cotton (Irrigated)				
1	Precision Farming : Compact Block demonstration on 10 Ha Cluster subsidy @ 90per cent or 6.0 Lakhs/Cluster	Nos.	3	18.00
2	Farmers fields schools to SHG/TANWABE /FIG Farmers @ Rs.17000/-Nos.	Nos.	10	1.70
3	Distribution of MN Mixture @ 50per cent subsidy or Rs.500/Hac.	Hac.	500	2.50
Cotton (Rainfed)				
1	Distribution of Certified seeds @ Rs.20/-Kg.	Mt.	10	2.00
	Grand Total			**620.03**

4.8. Constraint Analysis

The extent of yield and the yield gap is given in Table 4.9.

Table 4.9. Extent of Yield Gap in Major Crops

S.No	Crop	Potential Yield (kg/ha)	Actual Yield (kg/ha)	Yield gap (kg/ha)
1.	Paddy	6992	5909	1083
2.	Maize	6000	5000	1000
3.	Pulses	700	600	100
4.	Cotton	1800	1600	200
5.	Sugarcane	140000	129000	11000

Source: 'G' Return Register, 2006-07, Joint Director of Agriculture, Salem District

Strategies

The important strategies identified for improving the yield and fill the yield gap are i) Introduction of new technologies, promotion, and cultivation of Hybrids and BTs.

Technological Gap

Top 3 technologies mostly adopted

1. Seed treatment 2. INM 3. IPM

Top 3 technologies least adopted

1. Soil test recommendation adoption
2. Maintaining Plant population
3. Water Management

Table 4.10 Action Plan proposed for NADP by Department of Agriculture in Salem District (2008-2012)

(Rs. Lakh)

Components	Unit	2008-09		2009-10		2010-11		2011-12		Total	
		Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.
Rice: Seed											
One Time grant to TANWABE FIG for Certified Seed Production & distribution @ Rs.50000 per group	Nos.	15	7.50	0	0	0	0	0	0	15	7.50
Incentive for Seed production to SHGs, TANWABE Groups @ Rs.3/-Kg.	Mt.	450	13.50	450	13.50	450	13.50	450	13.50	1800	54.00
Seed distribution subsidy for Seed production by SHGs @ Rs.5/-Kg.	Mt.	450	22.50	450	22.50	450	22.50	450	22.50	1800	90.00
Seed Minikit of new HYV @ Rs.100/-Minikit	Nos.	860	0.00	860	0.00	900	0.00	900	0.00	3520	0.00
Hybrid Rice Seed production Subsidy @ Rs.20/-Kg. To TANWABE/FIG 10 acre/Group & 4 Mt./Group	Mt.	10	2.00	20	4.00	20	4.00	20	4.00	70	14.00
Hybrid Rice Seed distribution subsidy 75per cent cost or Rs.75/-Kg whichever is less	Mt.	10	7.50	20	15.00	20	15.00	20	15.00	70	750.0
Integrated Nutrient Management (INM)											
Distribution of Soil Health Card (Soil & Water Testing) Rs.25/-per card per farm	Nos.	0	0.773	0	0.773	0	0.773	0	0.773	0	3.09

Table 4.10 Contd… **(Rs. in Lakhs)**

Components	Unit	2008-09		2009-10		2010-11		2011-12		Total	
		Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.
Vermi-compost production Unit for farmers and SHG Women farmers @ Rs.10000/-Unit	Nos.	20	2.00	20	2.00	20	2.00	20	2.00	80	8.00
Distribution of Gypsum @ 50per cent subsidy (or) Rs.500/Ha. Whichever is less		0.06	30.00	0.07	35.00	0.08	40.00	0.09	45.00	0.3	150.0
Integrated Pest Management											
Massive Rat Compaign in villages @ Rs.5000/-Village	Nos.	210	10.50	210	10.50	210	10.50	210	10.50	840	42.00
Publicity and Training for Rat Campaign @ Rs.50000/-District	Lakhs	0	0.50	0	0.50	0	0.50	0	0.50	0	2.00
Machineries and Equipments											
Promotion of SRI: Distribution of marker Cono weeder and other items @ Rs.30000/-Ha (or) 50per cent of cost whichever is less	Ha.	3400	102.00	3400	102	3400	102	3400	102.00	13600	408.0
Transplanter to TANWABE, FIG groups farmers @ 50per cent or Rs.75000/ No. whichever is less	Nos.	5	3.75	5	3.75	5	3.75	5	3.75	20	15.00
Power Tiller / mounted Harvester @ Rs.75000/-Nos. (or) 50per cent subsidy whichever is less	Nos.	25	18.75	30	22.50	30	22.50	40	30.00	125	93.75
Distribution of Power Thrasher @ 50per cent subsidy (or) Rs.50000/- whichever is less	Nos.	3	1.50	3	1.50	4	2.00	5	2.50	15	7.50

Table 4.10 Contd… **(Rs. in Lakhs)**

Components	Unit	2008-09		2009-10		2010-11		2011-12		Total	
		Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.
Technologies											
Village Campaigns @ Rs.1000/ campaign	Nos.	500	5.00	500	5.00	500	5.00	500	5.00	2000	20.00
Production of Short film on new technologies @ Rs.2.50 Lakhs/Nos.	Nos.	1	2.50	1	2.50	1	2.50	1	2.50	4	10.00
Others											
Distribution of Tarpaulins @ Rs.5000/ Nos. (or) 50per cent subsidy	Nos.	100	5.00	100	5.00	100	5.00	100	5.00	400	20.00
Publicity / POL @ Rs.1 Lakh per District.	Lakh	0	1.00	0	1.00	0	1.00	0	1.00	0	4.00
Community Thrashing floors @ Rs.2 Lakhs/ Nos.	Nos.	5	10.0	5	10.0	5	10.0	5	10.0	20	40.00
Millets											
Distribution of Millets certified seeds @ Rs.8/-Kg. or 50per cent subsidy	Mt.	22	1.76	24	1.92	25	2.00	25	2.0	96	7.68
Hybrid Millets technology Demonstration Including Minor millets @ Rs.2000/Ha.	Ha.	30	0.60	30	0.60	40	0.80	40	0.80	140	2.80
Maize											
Distribution of Hybrid Maize @ Rs.75/-Kg. Or 50per cent subsidy (rainfed)	Mt.	400	300.00	400	300.00	400	300.00	400	300.00	1600	1200.0

Table 4.10 Contd… **(Rs. in Lakhs)**

Components	Unit	2008-09		2009-10		2010-11		2011-12		Total	
		Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.
Distribution of Hybrid Maize @ Rs/75/- Kg or 50per cent subsidy (irrigated)	Mt.	50	37.5	50	37.5	50	37.5	50	37.5	200	150.0
Pulses											
One Time Grant to TANWABWE or FIG group for Certified **pulses** seed production and distribution @ Rs.50000/- groups with the production of lot/groups	Nos.	50	25.00	…	…	…	…	…	…	50	25.00
Provision of Incentive for pulses certified seed production by TANWABE, FIG @ Rs.10/-kg. To be shared by TANWABE and Seed Growing farmers in the ratio of 25:75	Mt.	500	50.00	500	50.00	500	50.00	500	50.00	2000	200.0
Seed distribution @ 50per cent subsidy (or) Rs.12/-kg. To Department TANWABE & FIG	Mt.	1000	120.00	1000	120.00	1000	120.00	1000	120.00	4000	480.0
Precision Farming using sprinkler @ 90per cent subsidy limited to Rs.15000/-	Nos.	300	45.00	300	45.00	300	45.00	300	45.00	1200	180.0
DAP 2per cent Spray with 100per cent subsidy	Ha	4500	9.0	..	..	..	..	…	…	4500	9.0
Distribution of Rain Gun @ 50per cent subsidy (or) Rs.15000/-unit	Nos.	5	0.75	5	0.75	5	0.75	5	0.75	20	3.00

Table 4.10 Contd… **(Rs. in Lakhs)**

Components	Unit	2008-09		2009-10		2010-11		2011-12		Total	
		Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.
Farmers Training 50 farms /2 days / Rs.15000/- Batch	Nos.	10	1.5	10	1.50	15	2.25	15	2.25	50	7.50
Oilseeds											
Distribution of Tarpaulin @ 50per cent subsidy or Rs.5000/No.	Nos.	20	1.00	20	1.00	20	1.00	20	1.00	80	4.00
Precision Farming on 10 Ha .cluster @ subsidy 90per cent or Rs.8.00 Lakhs / cluster	Nos.	4	32.0	4	32.0	4	32.0	4	32.0	16	128.0
Construction of Rural Godown and Marketing Centre for TANWABE/FIG for Stocking and distribution of Seeds and other Inputs @ Rs.10 lakhs/Godown	Nos.	15	150	…	…	…	…	…	…	15	150.0
Gingelly											
Distribution of Tarpaulins Subsidy @ 50per cent or Rs.5000/-No.	Nos.	10	0.50	10	0.50	10	0.50	10	0.50	40	2.00
Sunflower											
Distribution of Hybrid Sun flower @ 50per cent subsidy or Rs.150/-kg.	Tons.	3	4.50	3	4.50	4	6.00	4	6.00	14	21.00
Hybrid Sun flower crop demonstration @ 50per cent subsidy or Rs.5000/Hac.whichever is less	Ha.	20	1.00	20	1.00	25	1.25	30	1.50	95	4.75

Table 4.10 Contd… **(Rs. in Lakhs)**

Components	Unit	2008-09		2009-10		2010-11		2011-12		Total	
		Phy.	Fin.	Phy.	Fin.	Phy	Fin.	Phy	Fin.	Phy.	Fin.
Cotton											
Distribution of BT Cotton seeds through private subsidy @ 50per cent subsidy (or) Rs.375/-packet of 450 gram	Lakh No.	0.23	86.25	0.23	86.25	0.25	93.75	0.25	93.75	0.96	360.00
Distribution of Certified seeds @ Rs.20/-Kg.	Tons	10	2.00	10	2.00	10	2.00	10	2.00	40	8.00
Formation of FIG @ Rs.12500/-per Group for Training, ID Card, Library and Office Automation, District level meeting	Nos.	150	18.75	125	15.63	0	0.00	0	0.00	275	34.38
Establishment of Agri Clinics and Agri Business by unemployment Agri Groundwater @ Rs.2.50 lakh/Per No.(or) 25per cent subsidy	Nos.	5	12.50	5	12.50	0	0.00	0	0.00	10	25.00
Exposure visit to outside state (5 farmers/block) (10 days Rs.600/-day-farmer/30 farmers/Tour visit @ Rs.1.80 Lakh/visit	Nos.	4.00	7.20	4.00	7.20	4.00	7.20	4.00	7.20	16	28.80
Exposure visit to within state (50 farmers/Tour 5 days Rs.300/day Rs.1.50 Lakhs/visit	Nos.	2	3.00	2	3.00	2	3.00	2	3.00	8	12.00

Table 4.10 Contd… **(Rs. in Lakhs)**

Components	Unit	2008-09		2009-10		2010-11		2011-12		Total	
		Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.
Publicity of Propoganda Printing of Literatorers Display boards conducting press Tours Technology, Transfer through TV Radio and Others mass media @ Rs.2.00 lakhs		0	2.00	0	2.00	0	2.00	0	2.00	4	8.00
Video Conferencing facilities to District Head Quarters @ Rs.10 Lakhs per district		0	10.00	0	0.00	0	0.00	0	0.00	0	0.00
Strengthening of FTC Conducting of Farmers Training @ 50 farmers/Batch 40 Trainings/annum @ Rs.20000/-Batch	Nos.	40	8.00	40	8.00	40	8.00	40	8.00	160	32.00
Purchase of LCD Protector, Copier, Digital Canera, Scanner, Computer, etc. @ Rs.2.5 Lakh/FTC		0	2.50	0	0.00	0	0.00	0	0.00	0	2.5
Exposure visit to Technical Officers to Other States 30 Officers/Batch @ 10 Batches Rs.1000/-day for 10 days	Nos.	0	0.0	0	0.0	0	0.0	0	0.0	0.0	0.0
Grand total			**1178.56**		**995.38**		**977.52**		**990.773**	**0.00**	**4142.23**

CHAPTER - V

ALLIED SECTORS

5.1 Horticulture

In Salem district, horticulture crops (vegetables and plantation crops) occupy the major share next to agricultural crops. Tapioca is the major vegetable crop in the district with a normal area of 27000 ha and an average productivity of 34 tonnes/ha. The other major vegetables are onion, tomato, bhendi, brinjal, followed by greens and gourds. Among the plantation crops, coffee accounted for major share of area followed by arecanut and betel vine. Similarly, mango and banana are the two fruit crops that occupy major share in the cropped area. The area, production and productivity of major vegetables, plantation and fruit crops are given in Table 5.1, 5.2 and 5.3.

Table 5.1. Area, Production and Productivity of Major Vegetable Crops in Salem District

S. No	Name	Area (ha)	Production (in M.Ton)	Productivity (M.Ton / Ha)
1	Tapioca	27007	908741	33.65
2.	Onion	469	3759	8.01
3	Tomato	1737	14421	8.30
4	Brinjal	637	5530	8.69
5	Bhendi	454	2861	6.30
6	Greens	111	1776	16.00
7	Gourds	143	1801	12.59
8	Other vegetables s	2624	58859	22.43
	Total	**33182**	**997748**	**30.07**

Source: Office Records of the Joint Director of Horticulture, 2005-06

Table 5.2. Area, Production and Productivity of Major Plantation Crops in Salem District

S.No	Name	Area (ha)	Production (in Tonnes)	Productivity (Tonness / Ha)
1	Betel vine	181	3982	22.00
2	Arecanut	1479	1789	1.21
3	Coffee	6958	5219	0.750
4	Others	25	9	0.38
	Total	**8643**	**10999**	**1.27**

Source: Office Records of the Joint Director of Horticulture, 2005-06

Table 5.3. Area, Production and Productivity of Fruits in Salem District

S.No	Name	Area (ha)	Production (in M.Ton)	Productivity (M.Ton / Ha)
1	Mango	2274	11161	4.91
2.	Banana	1367	67126	49.10
3	Sapota	199	4975	25.00
4	Guava	302	3293	10.90
5	Jack	90	1111	12.34
6	Amla	64	896	14.00
7	Mandarin orange	239	469	1.96
8	Others	358	8101	22.62
	Total	**4893**	**97132**	19.85

Source: Office Records of the Joint Director of Horticulture, 2005-06

Horticulture Development

To increase the production and productivity of horticultural crops various interventions were being attempted by the government from time to time. Of which, some of the major programmes being implemented by the Department of Horticulture as on going schemes are given in the following table. The total budget of the on going schemes in Salem district is about Rs.971.56 lakhs. Of this National Horticulture Mission programme is being implemented for about Rs.461.978 lakhs followed by Micro irrigation project (Rs.399.05 lakhs) and IAMWARM project (79.91 lakhs) in effective manner during the year 2008-09. Particulars have been furnished in Table 5.4

Table 5.4. Details of Ongoing Schemes for the Year 2008- 09

Sl. No.	Name of the Scheme	Physical Programme (Ha.)	Finance (Rs. Lakhs)
1.	Integrated Horticulture Development Programme	2316	21.222
2.	Integrated Tribal Development Programme	140	9.400
3.	IAMWARM	500	79.908
4.	National Horticulture Mission	2700	461.978
5.	Micro Irrigation	2300	399.050
	Total	**7956**	**971.558**

5.2. Animal Husbandry

Salem district is endowed with good potential for livestock activities. The institutions involved in livestock development are provided in Table 5.5.

Table 5.5 Dairy development in Salem district

Particulars	2005-2006
Veterinary Institutions	
Veterinary Hospitals	6
Veterinary Dispensaries	58
Clinical Centres	1
Sub Centres	53
Poultry Development	
Birds Sold for breeding (Lakh Nos.)	6.18
Birds sold for food (Lakh No.)	8.15
Live Stock and Poultry Population	
Livestock and Poultry population (Lakh Nos.)	
a. Cattle	5.94
b. Buffaloes	1.77

c. Sheep	3.71
d. Goat	4.98
e. Poultry	26.78
Dairy Co-operative societies	1
Milk Chilling Plants	3
No of Milk Co-op Societies	
a. Registered	1092
b. Functioning	1010
Milk Production (Lakh Liters)	
a. Flush Season	780.64
b. Lean Season	577.36

(Source: www.salemtn.gov.in)

5.3 Fisheries

The Salem District has a total area of 5245 sq. km and the population is 30.16 lakhs. The annual rainfall in the district is 898 mm and the predominant occupation of the people is agriculture. The district is endowed with rich water resources and has 98 inland fishing villages. The river Cauvery flows in the region and the major reservoir namely Stanley reservoir is located in the district. The inland water resource in the district includes a major reservoir, two minor reservoirs, long seasonal irrigational tanks and short seasonal ponds.

An Overview of Fisheries Resources

The Stanley reservoir located in Mettur is the major reservoir in the state with a total water spread area of 15346 ha. The water spread area of the minor reservoirs viz: Anaimaduvu dam and Kariakoil dam are 106.81 Ha and 69.40 ha respectively. The long seasonal tanks and short seasonal ponds in the district belong to Public Works department and panchayats. The total inland water resource in the district is 34,400 ha and among this only 21,700 ha is at present utilized for fish culture. The area under fish culture is provided in Table 5.6.

Table 5.6 Area under Fishery development in Salem District

Sl. No	Name of the Taluks	Reservoirs		Tanks with PWD		Tanks with Panchayats	
		No.	Area in Ha	No.	Area in Ha	No.	Area in Ha
1	Mettur	1	15346	7	151.52	20	202.61
2	Edapadi			9	510.00	24	398.75
3	Salem			-	-	64	7813.49
4	Omalur			9	600.09	100	1795.71
5	Sankari			4	74.60	28	283.08
6	Attur	2	176.21	-	-	50	5131.53
7	Ercadu			-	-	1	7.25
	Total	**3**	**15522.21**	**29**	**1336.21**	**287**	**15632.42**

An Overview of Fisheries Activities

The stocking of fishes in the reservoirs in the district is carried out by Fisheries Department. The harvesting of fish in Stanley reservoir and the other two minor reservoirs is done through Fishermen Cooperative Society members. The tanks and ponds belonging to other department is mainly leased out to Fishermen Cooperative society and the stocking and harvesting is done by the lessee. A total of 25 tanks belonging to various departments viz: Salem Corporation, P.W.D and Revenue Department have been taken up for fish culture by the Fisheries Cooperative Societies in the district. The total inland fish production in the district is 1200 tonnes as against a potential of 7400 tonnes.

Fish seed production and rearing is being taken up in the Government Fish Farm located in Mettur. The total area of the Government fish farm is 15 acres. The area available for fish seed production is 14000 m^2 and out of this 2500 m^2 is under repair. The induced breeding technique is being adopted for seed production and at present the total seed produced is 45 lakhs as against the total seed requirement of 122 lakhs in the district. The seed produced are used for stocking the reservoirs and excess seed produced are sold to fish culturist in the region. For mosquito control, culture and supply of *Gambusia* species is also taken up in the farm.

The fish culture is not done in a large scale in the district. A total of 34 farm ponds have been constructed through the World Bank IAMWARM scheme in Attur taluk and at present culturing of fish is being carried out in 12 farm ponds.

The marketing of fish caught in Mettur reservoir is taken up through the Mettur Dam Fishermen Cooperative Marketing Society. The Fisheries Department issues license to the fishermen to harvest fish in the reservoir. The fishes caught are procured from the fishermen and marketed through the society. The fishes are sold to the local consumers and the excess catch is sold through the tenders.

Fisheries department also takes up fishermen welfare activities in the district by formation of fishermen cooperative societies. Among the cooperative societies, the Mettur Dam Fishermen Cooperative Marketing Society is the largest with 2000 members spread over Salem and Dharmapuri districts.

Total number of cooperative society	:	16
Total number of society members	:	5759
Number of Fishermen Cooperative society	:	13
Total number of Fishermen Cooperative society members	:	5568
Number of Fisherwomen cooperative society	:	3
Total number of Fisherwomen cooperative society members:		191

Issue of Concerns for Fisheries Development in Salem District

- The present fish production in the district is only 1200 tonnes against a potential of 7400 tones
- The long seasonal tanks and short seasonal ponds do not have adequate water throughout the year and hence only short term fish culture can be carried out in these water bodies.
- The seed production is only 45 lakhs against the requirement of 122 lakhs at present

- The Government fish seed farm, Mettur is the only fish seed production and rearing center in the district
- The seed produced through the fish seed farm is not sufficient to stock all the water bodies
- There is no private farmer involved in seed production
- Fish culture is not taken up by fish farmers in a large way
- The fishing crafts and gears used are not efficient to catch fish from deep waters and in rivers
- Lack of infrastructure for post harvest handling and storage of fish
- Lack of ice plant and adequate ice in the region for chilling of fish
- Lack of processing facility in the region
- Lack of cold storage facility for storage of excess catch
- There is no sufficient insulated vehicle for transportation of fish in chilled condition
- Lack of adequate scientific knowledge among the fishermen in fishery management
- Insufficient training packages on fish culture, fish seed production, fish feed formulation and post harvest handling and processing of fish, value addition to fish products.

Key Areas of Intervention for Fisheries Development in the District

- Increase the fish seed production by strengthening of Government fish seed farm at Mettur Dam by repair and renovation and by creating additional nursery space
- Encouraging private participation in fish seed production by extending 50per cent subsidy to the farmers
- Rearing of seeds in cages through private participation by extending 90per cent subsidy
- Supply of quality fish seeds under subsidized cost to fish farmers to increase fish production
- Stocking of long seasonal tanks and short seasonal ponds with quality fish seeds in subsidized rate
- Encouraging private farmers in fish farming by extending subsidy to increase fish production
- Establishment of ornamental fish culture and breeding units through private participation by extending 90 per cent subsidy

- Provision of ice making units in fish landing and marketing centers with 90 per cent subsidy
- Provision of insulated ice boxes for storage of fish with 90 per cent subsidy
- Provision of insulated vehicle at 100per cent grant to the Fishermen cooperative marketing society
- Provision of mopeds with ice boxes for transportation of fish with 50 per cent subsidy
- Establishment of modern fish stalls in major towns in the district
- Supply of modern fishing crafts and gears for operation in deep inland water bodies and rivers with 90 per cent subsidy
- Training of Fisheries officials on modern scientific fisheries development Training of fishermen in better fisheries management.

5.4 Watershed Development

Salem District is one of the biggest Districts in Tamil Nadu. It is bounded on the North by Dharmapuri district, on the South by Namakkal and Erode districts, the Western ghats in the West and on the East by Villupuram District.

The geographical area of the district is 5205.30 sq kilometers. It has 4 Revenue Divisions – Salem, Attur, Mettur, and Sankagiri and it is divided into 9 Taluks *viz.*, Attur, Mettur, Omalur, Sankari, Salem, Yercaud, Gangavalli, Idappadi, and Valapadi. The district, as whole comprises of three Municipalities viz., Idappadi, Attur and Mettur and one Corporation i-e Salem and 385 Villages Panchayats with 646 Revenue villages. The district is also having 34 Town panchayats and 20 Panchayat Unions.

Land slope generally ranges from 500ft to 1200ft. above MSL with the exception of Yercaud which is at 5000ft. Above MSL. District is intersected by numerous hills. Shervroy Hills and Kalrayan Hills adorn the district with natural beauty and forest wealth. Average temperature of the district was 37.9 ^{0} C as maximum and 20.0 ^{0} C as minimum. The Normal Rainfall of the district is 787.10mm which is lower than the state average of 943mm. The North East Monsoon period is the major rainy season accounting for 66per cent of the normal rainfall followed by South West Monsoon (30per cent).

The soils of the district can be classified under 5 categories viz. clay soil, black loam, black soil, red ferruginous and red soil. Black loam is considered most fertile. The red soil is equal to loam in productivity. In and around Attur, soil is black due to alluvial deposit with red sub soil.

Salem district is not endowed with any major irrigation system except Mettur Dam which irrigates about 0.15 lakh hectares through the West Bank canal of the Cauvery, as such the main sources of irrigation is only well irrigation which constitutes about 80per cent of the total area under irrigation. The total net irrigated area in the district was 117223 hectares.

Millets and other cereals are principle crops in Salem district which covers major area of 93678 Hectares followed by Pulses, ie., 60743 hec. Oilseeds, Rice, Sugarcane are cultivated in 37198 Hec, 11038 Hec and 4986 Hectares respectively. Average size of Land holding is 0.86 Hectare.

The major ongoing programmes in Salem district (Table 5.10) comprises of Integrated Tribal Development Programme (ITDP), Rainwater Harvesting and Runoff Management Programme (ROM), NABARD RIDF Scheme, Agricultural Mechanization Programme (AMP), National Agricultural Development Programme (NADP), Replacement of Old Farm pumpsets Scheme and TN-IAMWARM Project in Upper Vellar Subbasin with an outlay of Rs.348.84 lakhs during 2007-08. Rotavator is being supplied @25per cent subsidy under NADP during the year 2007-08 and this will be continued in the next 4 years also under NADP.

Table 5.7. On - Going Schemes under Agricultural Engineering Department (2007-08)

S.No	Name of the Scheme	Amount Spent (Rs. Lakhs)	Remarks
1	Integrated Tribal Development Programme (ITDP)	38.00	Soil conservation measures like contour Stone wall , check dams etc., in Tribal Hilly regions
2	Rainwater Harvesting and Runoff Management Programme (ROM)	103.05	Rainwater Harvesting structures (Percolation Ponds, Checkdams, Ooranis, FarmPonds etc.,). 10per cent Contribution.
3	NABARD RIDF Scheme	72.18	Creation of Water Harvesting Structures as above. 25per cent Contribution for individual based works.
4	Agricultural Mechanization Programme (AMP)	29.84	Tractors, PowerTillers, implements like rotavator etc @ 25per cent subsidy
5	National Agricultural Development Programme (NADP)	9.75	Rotavator @ 25per cent subsidy.
6	Replacement of Old Farm pumpsets Scheme	56.91	Subsidy @ 25per cent for others, 50per cent for SC/ST farmers
7	TN-IAMWARM Project in Upper Vellar Subbasin	39.11	Micro Irrigation (50per centsubsidy), Farm Ponds(10per cent),Implements @ 100per cent subsidy to WUAs

The major soil series found in the district are Irugur, Tulkkanur and Salem series followed by Mallur, Somayanur in some of the blocks. The soil productivity in the district indicated that out of 20 blocks, 5 blocks are categorized under “good”. However, the remaining 3 and 17 blocks are categorized as poor and extremely poor respectively (Table 5.11). The land capability in Salem district indicates that out of 20 blocks, 13 blocks are categorized under land having severe limitation for sustained use under irrigation coupled with soil problem followed by land having moderate limitation for

sustained use under irrigation coupled with topography problem (5 blocks) and land having severe limitation for sustained use under irrigation coupled with soil and drainage problem. Similarly, land irrigability in the district indicated that the cultivable lands are moderately good cultivable land with severe limitations and having erosion and root zone limitations. In addition, the ground water potential has been declined and it indicates that 14 blocks are categorized under over exploited blocks followed by semi critical (4 blocks), critical (1), and safe blocks (1 block). Hence it is understood that the soil has to be reclaimed to increase the productivity of soil and crops and also to increase the ground water potential.

5.5. Agricultural Marketing and Agribusiness

Salem district has number of marketing institutions which facilitates smooth marketing of different crops grown in this district. There are 13 regulated markets, two Co-operative marketing Societies, five wholesale markets (Rice, turmeric, tamarind, fruits and flowers) and seven Uzhavar Sandhais functioning in this district. Value added enterprise is promoted for puffed rice, tomato and tapioca. In addition, five storage godowns, Central Warhousing Corporation (1), civil supplies godowns (9) and three private cold storage units are available in this district to cater to the needs of the farm produce for sale (Table 5.8).

Table 5.8. Marketing facilities for Agricultural Produce in Salem District

i)	Regulated Markets	:	1.	Salem
			2.	Valapadi
			3.	Attur
			4.	Thalaivasal
			5.	Gangavalli
			6.	Thamampatti
			7.	Karumandurai
			8.	Sankari
			9.	Konganapuram
			10.	Kolathur

			11.	Mecheri
			12.	Omalur
			13.	Kadayampatti
ii.	**Co-op Marketing Societies**	:	1.	Salem Co-op Marketing Societies
			2.	TCMS/ Konganapuram
iii.	**Uzhavar Sandhai**	:	1.	Suramangalam
			2.	Dadagapatty
			3.	Ammapet
			4.	Hasthampatti
			5.	Attayampatty
			6.	Attur
			7.	Mettur
iv.	**Contract farming (Crops / area covered)**		--	Maize - 5000 Ha.
v.	**Wholesale Markets**	:	1.	Leighbazaar – Rice, Turmeric & Chillies
			2.	Voc Market – Vegetables & Flowers
			3.	Thalaivasal – Fruits
			4.	Ayothiapattinam – Rice
			5.	Thammampatti – Tamarind market
B.	**Value addition of farm produce :**			
	1. Puffed Rice			Ayothiapattinam
	2. Tomato			Jam, Sauce Vallapadi
	3. Tapioca			Pappad, Chips - Attur, Thalivasal
C.	**Storage Godown available including cold Storage :**			
	Storage Godowns attached with regulated Markets at			Salem Omalur Karumandurai Gangavalli Thammampatti
	Warehousing corporation Godown		:	Salem – 2 Nos.

	Civil Supplies Godown		:	Salem – 9 Nos.
	Cold Storage Available		:	Private 3 Nos.

5.6 Sericulture

Sericulture is one of the major activities concentrated in Salem district other than agricultural enterprises. It provides alternate livelihood security to majority of the farming communities in the district. It is an Agro-based rural industry ensuring small, marginal farmers, particularly women to earn high remuneration and thereby helps in poverty alleviation in rural areas. Cultivation of an acre of mulberry provides employment to five persons throughout the year. As a result of various extension activities of the Department of Sericulture in Salem District, now, 1503 sericulturists are involved in silkworm rearing by cultivating 2045 acres of mulberry.

In Salem district, Mulberry activities are there in some pockets of all the 20 blocks, of which a remarkable development is seen at Panamarathupatty, Edapady, Mecheri, Omalur, Attur, D.Perumapalayam, and Kovilmeru, where the climate is favourable for silkworm rearing. There are 11 technical service centres functioning. These centres are involved in mulberry expansion activities, distribution of silkworm seed to the sericulturist. Training to the new farmers and giving technical guidance to them in various sericulture activities. One cocoon market is available in Salem for selling cocoon.

Government silk farms are functioning at Yercaud, Nathakkarai, Vellimalai, and S.Pudur. It is functioning for training to the sericulturist and to supply mulberry saplings. There are two private Chawkie Rearing centres functioning at Nagarmalai Adivaram and Rayarpalayam in Attur taluk for distribution of Chawkie silkworm to the farmers for getting better cocoon harvest.

The following Beneficiary Schemes are being Implemented by the Sericulture Department:

- Rs.1500/- as plantation incentive under plan scheme.
- Rs.15, 000/- as subsidy for installation of Drip Irrigation for 1.00 acre.
- Rs.60, 000/- and Rs.27, 500/- providing subsidy to the farmers who constructed of Rearing shed worth of Rs.1, 20,000/- and Rs.55, 000/-.
- Rs.30, 000 worth of rearing appliances issued to the farmers who have rearing shed facility and are instructed to rear Bivoltine silkworm races through the scheme every year. Majority of the farmers are unable to get scheme benefit. To avoid the crisis, the department is providing some additional support to the remaining sericulturist apart from scheme benefits like providing micronutrients for improving soil health, disseminating new innovation through training and formation of demonstration plots.

CHAPTER - VI
DISTRICT PLAN

6.1. Introduction

The agriculture and allied sectors such as animal husbandry, fisheries, sericulture, agricultural marketing, and agricultural engineering are the major sectors to be improved to enhance production and productivity of the crops and other products to improve the net income of the producers. This in turn will contribute for increasing the agricultural growth to four percent in the XIth plan. There are many programmes proposed under NADP for implementation in the next four years.

6.2. Innovative Schemes

Innovative programmes in various sectors are proposed under NADP in Salem district. It includes promotion of SRI in paddy cultivation, promotion of maize through distribution of hybrid seeds, mechanization of agricultural operations, organic farming through promotion of vermicompost, promotion of vegetable and fruit crops, adopting package of plant protection measures, net house structures, promotion of mechanized village models, Commodity groups, involving self help group members, inter state exposure visits etc.

6.3. Vision of XI Plan

The major vision of the XI plan is to achieve the agricultural growth rate by four percent. To reach this objectives, agricultural and allied sectors need interventions in various activities such as crop improvement through technologies, marketing support, farmers organizations and other supporting activities such as soil and water conservation, dissemination of price information, market intelligence and creation of awareness programmes, infrastructural facilities. In this context all the agricultural and allied sectors proposed needed interventions at the district level to achieve the growth at national level.

6.4 District Plan

The total budget requirements of proposed plan for agricultural and allied sectors to be implemented under NADP in the next four years 2008-09 to 2011-2012 is Rs.10760.03 lakhs in Salem district.

Table 6.1 Budget on Various Sectors Proposed under NADP – Salem District

S.No.	Departments	Budget (Rs.Lakhs)
1.	Dept. of Agriculture	4142.33
2.	Dept. of Horticulture	659.90
3.	Dept.of Animal Husbandry	1766.19
4.	Fisheries Department	837.14
5.	Dept. of Agrl. Engineering	2614.97
6.	Agrl. Marketing and Agribusiness	131.90
7.	Dept.of Sericulture	157.60
8.	Public Works Department	450.00
	Total	**10760.03**

Project Proposals

In this chapter, the individual proposals to be undertaken under agriculture and allied sectors are presented below.

1. Agriculture

The Department of Agriculture has proposed two projects namely (i) increasing the productivity of Paddy through adoption of SRI technology and ii) increasing the productivity of Maize in Salem district.

6.1.1 Increasing Productivity of Paddy through Adoption of SRI Technology

(i) Abstract

Paddy is one of the major crop being grown in Salem District with projected area of 44000 hectares. Since productivity of paddy mainly depends on the use of quality seed materials, production and distribution of hybrid, seed and high yielding varieties is highly essential.

System of Rice Intensification is implemented in Salem District in order to get higher profitability due to lower cost of production by restricting the seed rate, optimum use of inputs and also by curtailing unnecessary use of human capital. SRI technology will be only successful when the key technologies like uniform leveling of field, proper spacing and timely weeding using suitable machineries and implements at the time of requirement are adopted. Having this in mind, it is proposed to distribute machineries and implements like Transplanter, marker and Conoweeder to farmers who are all following SRI technologies under NADP Project. Also, it is proposed to distribute power thrasher, mini harvester and construction of thrashing floor to reduce the cost of labour and post harvest losses.

(ii) Budget

Table 6.2 Budget for SRI Technology.

(Rs. in lakhs)

No.	Item	Year			
		2008-09	2009-10	2010-11	2011-12
1.	Production of Hybrid Seed	2.00	4.00	4.00	4.00
2.	Distribution of Hybrid Seeds	7.50	15.00	15.00	15.00
3.	Distribution of certified Seed	22.50	22.50	22.50	22.50
4.	Distribution of G.M Seed	6.00	6.00	6.00	6.00
5.	Power tiller mounted Harvester	18.75	22.50	22.50	30.00
6.	Transplanter	3.75	3.75	3.75	3.75

7.	Marker and conoweeder	102	102.00	102.00	102.00
8.	Thrashing floor	10.00	10.00	10.00	10.00
9.	Power thresher	1.50	1.50	2.00	2.50
	Total	**174.00**	**187.25**	**187.75**	**195.75**

(iii) Back ground

Increasing the productivity of paddy is highly dependent on the use of seed of hybrids and high yielding varieties (HYVs). Moreover, timely completion of nursery and main field operations require use of transplanter, marker, power tiller, construction of thrashing floor, distribution of power thrasher and mini harvester is essential to reduce the cost of labour and post harvest losses.

(iv) Project Rationale

Paddy is one of the major crops being grown in Salem District and the productivity of paddy mainly depends on the use of quality seed materials and high yielding varieties. The cost of cultivation of paddy is also high when compared to the income realized from the crop. The cost of labour accounts for the major share in the total cost and timely harvest is also essential to retain the profitability of the crop. Hence, this project necessitates some of the interventions like production and distribution of hybrid seeds, distribution of Power tiller, Paddy transplanter, conoweeder and marker, power thrasher, and construction of thrashing floor etc. are needed to enhance the productivity of paddy.

(v) Project Goal

The project aims at increasing production and productivity of paddy through use of seeds of hybrids and high yielding varieties, use of system of rice intensification and reduce the cost of cultivation by reducing the use of inputs like seed, labour and inorganic fertilizers.

(vi) Project Components

1. Production and distribution of hybrid seeds
2. Distribution of certified Seed
3. Distribution of G.M. Seeds
4. Distribution of Power tiller mounted harvester
5. Distribution of transplanter
6. Distribution of cona weeder and marker
7. Construction of thrashing floor
8. Distribution of power thrasher
9. Distribution of mini harvester

(vii) Project Cost

The proposed programmes will cost about Rs.744.75 lakhs for the four periods.

Table 6.3 Implementation Chart for SRI Paddy

Sl.No.	Item	Unit	Year			
			2008-09	2009-10	2010-11	2011-12
1.	Production of Hybrid Seeds	Tons	10	20	20	20
2.	Distribution of Hybrid Seeds	Tons	10	20	20	20
3.	Distribution of certified Seeds	Tons	450	450	450	450
4.	Distribution of G.M Seeds	Tons	6	6	6	6
5.	Distribution of transplanter	Nos	3400	3400	3400	3400
6.	Distribution conoweeder and marker	Nos	5	5	5	5
7.	Distribution of power tiller	Nos	25	30	30	40
8.	Distribution of mini harvester	Nos	3	3	4	5
9.	Construction of thrashing floor	Nos	5	5	5	5

(viii) Reporting

After completion of the project, year wise evaluation will be made by monitoring and evaluation wing and the report will be submitted every year.

6.3 Increasing the Productivity of Maize

(i) Abstract

Maize is one of the major crop being grown in Salem District and its area is increasing in recent years due to increase in profitability and demand for starch and poultry feed industries. The production and productivity of maize could be increased mainly by way of using hybrid seeds and hence, the production and distribution of hybrid seeds at nominal / subsidized cost is essential as the price of hybrid seeds is very high.

In addition to the distribution of hybrid seeds, distribution of rotavator, mini harvester stripper, erection of pipelines, construction of thrashing floor, vermicompost units is essential as these will reduce the inputs, labour costs and also will reduce the post harvest losses.

(ii) Budget

The proposed budget is given in Table 6.4.

Table 6.4 Budget for Increasing Productivity of Maize

(in Rs. lakhs)

S. No.	Item	Year			
		2008-09	2009-10	2010-11	2011-12
1.	Distribution of Hybrid Seeds	37.5	37.5	37.5	37.5
2.	Hybrid Seed Demonstration	0.6	0.8	1.0	1.0
3.	Erection of pipeline	7.5	7.5	15	15
4.	Distribution of Rotavator	2.5	2.5	2.5	2.5
5.	Vermi compost unit	2.0	2.0	2.0	2.0
6.	Mini Harvester stripper	10	10	10	10
7.	Construction of Thrashing floor	10.0	10.0	10.0	10.0
	Total	**70.1**	**70.3**	**78.0**	**78.0**

(iii) Background

Maize is one of the promising crops to the farmers of Salem district as the farmers are getting remunerative price for maize due to increase in demand for starch and poultry feed industries.

In this context, increase in productivity and profitability of maize depends mainly on the production and distribution of hybrid seeds at subsidized rate. In addition to this, other inputs like distribution of rotavator, mini harvester stripper, erection of pipelines, construction of thrashing floor, and vermi - compost units are essential as these not only reduce the input costs but also will reduce the post harvest losses.

(iv) Project Rationale

Enhancement of production, productivity of maize, reduction of input costs and minimizing the post harvest losses necessitates the following items.

(i) Distribution of Hybrid Seeds
(ii) Hybrid Seed Demonstration
(iii) Erection of pipeline
(iv) Distribution of Rotavator
(v) Vermi compost unit
(vi) Mini Harvester stripper
(vii) Construction of Thrashing floor

(v) Project Strategy

The project envisages enhancement of production, productivity of maize, reduction in input costs and minimizing the post harvest losses by way of following technological interventions with demonstration approach and formation of Self- help groups for production of Vermi compost at block level.

(vi) Project Goal

The project aims at

(i) Enhancement of production, productivity of maize by way of production and distribution of seeds of hybrid maize.

(ii) Reduction in the cost of inputs, labour and optimum utilization of inputs Minimization of post harvest losses by way of distribution of mini harvester, Stripper and Construction of thrashing floor.

(vii) Project Component

(i) Distribution of Hybrid Seeds

(i) Hybrid Seed Demonstration

(ii) Erection of pipeline

(iii) Distribution of Rotavator

(iv) Vermi compost unit

(v) Mini Harvester stripper

(vi) Construction of Thrashing floor

Table 6.5 Increasing Productivity of Maize

Sl.No.	Item	Unit	Year			
			2008-09	2009-10	2010-11	2011-12
1.	Distribution of Hybrid Seeds	Tons	50	50	50	50
2.	Hybrid Seed Demonstration	Ha	30	40	50	50
3.	Erection of pipeline	Nos	50	50	100	100
4.	Distribution of Rotavator	Nos	5	5	5	5
5.	Vermi compost unit	Nos	20	20	20	20
6.	Mini Harvester stripper	Nos	2	2	2	2
7.	Construction of Thrashing floor	Nos	5	5	5	5

(viii) Reporting

After completion of the project implementation, year wise evaluation will be made by monitoring and evaluation wing and the report will be submitted every year.

Table 6.6. Budget Proposed and Action Plan for Agriculture Sector- 2008-2012

(Rs. in Lakhs)

Components	Unit	2008-09		2009-10		2010-11		2011-12		Total	
		Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.
Rice: Seed											
One Time grant to TANWABE FIG for Certified Seed Production & distribution @ Rs.50000 per group	Nos.	15	7.50	0	0	0	0	0	0	15	7.50
Incentive for Seed production to SHGs, TANWABE Groups @ Rs.3/-Kg.	Mt.	450	13.50	450	13.50	450	13.50	450	13.50	1800	54.00
Seed distribution subsidy for Seed production by SHGs @ Rs.5/-Kg.	Mt.	450	22.50	450	22.50	450	22.50	450	22.50	1800	90.00
Seed Minikit of new HYV @ Rs.100/-Minikit	Nos.	860	0.00	860	0.00	900	0.00	900	0.00	3520	0.00
Hybrid Rice Seed production Subsidy @ Rs.20/-Kg. To TANWABE/FIG 10 acre/Group & 4 Mt./Group	Mt.	10	2.00	20	4.00	20	4.00	20	4.00	70	14.00
Hybrid Rice Seed distribution subsidy 75% cost or Rs.75/-Kg whichever is less	Mt.	10	7.50	20	15.00	20	15.00	20	15.00	70	52.50.0
Integrated Nutrient Management (INM)											
Distribution of Soil Health Card (Soil & Water Testing) Rs.25/-per card per farm	Nos.	0	0.773	0	0.773	0	0.773	0	0.773	0	3.09
Vermi-compost production Unit for farmers and SHG Women farmers @ Rs.10000/-Unit	Nos.	20	2.00	20	2.00	20	2.00	20	2.00	80	8.00
Distribution of Gypsum @ 50% subsidy (or) Rs.500/Ha. Whichever is less		0.06	30.00	0.07	35.00	0.08	40.00	0.09	45.00	0.3	150.0

Table 6.6 Contd… **(Rs. in lakhs)**

Components	Unit	2008-09		2009-10		2010-11		2011-12		Total	
		Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.
Integrated Pest Management											
Massive Rat Compaign in villages @ Rs.5000/-Village	Nos.	210	10.50	210	10.50	210	10.50	210	10.50	840	42.00
Publicity and Training for Rat Campaign @ Rs.50000/-District	Lakhs	0	0.50	0	0.50	0	0.50	0	0.50	0	2.00
Machineries and Equipments											
Promotion of SRI: Distribution of marker Cono weeder and other items @ Rs.30000/-Ha (or) 50% of cost whichever is less	Ha.	3400	102.00	3400	102	3400	102	3400	102.00	13600	408.0
Transplanter to TANWABE, FIG groups farmers @ 50% or Rs.75000/ No. whichever is less	Nos.	5	3.75	5	3.75	5	3.75	5	3.75	20	15.00
Power Tiller / mounted Harvester @ Rs.75000/-Nos. (or) 50% subsidy whichever is less	Nos.	25	18.75	30	22.50	30	22.50	40	30.00	125	93.75
Distribution of Power Thrasher @ 50% subsidy (or) Rs.50000/- whichever is less	Nos.	3	1.50	3	1.50	4	2.00	5	2.50	15	7.50
Technologies											
Village Campaigns @ Rs.1000/ campaign	Nos.	500	5.00	500	5.00	500	5.00	500	5.00	2000	20.00
Production of Short film on new technologies @ Rs.2.50 Lakhs/Nos.	Nos.	1	2.50	1	2.50	1	2.50	1	2.50	4	10.00
Others											
Distribution of Tarpaulins @ Rs.5000/ Nos. (or) 50% subsidy	Nos.	100	5.00	100	5.00	100	5.00	100	5.00	400	20.00
Publicity / POL @ Rs.1 Lakh per District.	Lakh	0	1.00	0	1.00	0	1.00	0	1.00	0	4.00
Community Thrashing floors @ Rs.2 Lakhs/ Nos.	Nos.	5	10.0	5	10.0	5	10.0	5	10.0	20	40.00

Table 6.6 Contd… **(Rs. in lakhs)**

Components	Unit	2008-09		2009-10		2010-11		2011-12		Total	
		Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.
Millets											
Distribution of Millets certified seeds @ Rs.8/-Kg. or 50% subsidy	Tons	22	1.76	24	1.92	25	2.00	25	2.0	96	7.68
Hybrid Millets technology Demonstration Including Minor millets @ Rs.2000/Ha.	Ha.	30	0.60	30	0.60	40	0.80	40	0.80	140	2.80
Maize											
Distribution of Hybrid Maize @ Rs.75/- Kg. Or 50% subsidy (rainfed)	Tons	400	300.00	400	300.00	400	300.00	400	300.00	1600	1200.0
Distribution of Hybrid Maize @ Rs/75/-Kg or 50% subsidy (irrigated)	Tons	50	37.5	50	37.5	50	37.5	50	37.5	200	150.0
Pulses											
One Time Grant to TANWABWE or FIG group for Certified **pulses** seed production and distribution @ Rs.50000/- groups with the production of lot/groups	Nos.	50	25.00	…	…	…	…	…	…	50	25.00
Provision of Incentive for pulses certified seed production by TANWABE, FIG @ Rs.10/-kg. To be shared by TANWABE and Seed Growing farmers in the ratio of 25:75	Tons	500	50.00	500	50.00	500	50.00	500	50.00	2000	200.0
Seed distribution @ 50% subsidy (or) Rs.12/-kg. To Department TANWABE & FIG	Tons	1000	120.00	1000	120.00	1000	120.00	1000	120.00	4000	480.0

Table 6.6 Contd… **(Rs. in lakhs)**

Components	Unit	2008-09		2009-10		2010-11		2011-12		Total	
		Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.
Precision Farming using sprinkler @ 90% subsidy limited to Rs.15000/-	Nos.	300	45.00	300	45.00	300	45.00	300	45.00	1200	180.0
DAP 2% Spray with 100% subsidy	Ha	4500	9.0	..	..	..	..	…	…	4500	9.0
Distribution of Rain Gun @ 50% subsidy (or) Rs.15000/-unit	Nos.	5	0.75	5	0.75	5	0.75	5	0.75	20	3.00
Farmers Training 50 farms /2 days / Rs.15000/- Batch	Nos.	10	1.5	10	1.50	15	2.25	15	2.25	50	7.50
Oilseeds											
Distribution of Tarpaulin @ 50% subsidy or Rs.5000/No.	Nos.	20	1.00	20	1.00	20	1.00	20	1.00	80	4.00
Precision Farming on 10 Ha .cluster @ subsidy 90% or Rs.8.00 Lakhs / cluster	Nos.	4	32.0	4	32.0	4	32.0	4	32.0	16	128.0
Construction of Rural Godown and Marketing Centre for TANWABE/FIG for Stocking and distribution of Seeds and other Inputs @ Rs.10 lakhs/Godown	Nos.	15	150	…	…	…	…	…	…	15	150.0
Gingelly											
Distribution of Tarpaulins Subsidy @ 50% or Rs.5000/-No.	Nos.	10	0.50	10	0.50	10	0.50	10	0.50	40	2.00
Sunflower											
Distribution of Hybrid Sun flower @ 50% subsidy or Rs.150/-kg.	Tons	3	4.50	3	4.50	4	6.00	4	6.00	14	21.00
Hybrid Sun flower crop demonstration @ 50% subsidy or Rs.5000/Hac.whichever is less	Ha.	20	1.00	20	1.00	25	1.25	30	1.50	95	4.75

Table 6.6 Contd… **(Rs. in lakhs)**

Components	Unit	2008-09		2009-10		2010-11		2011-12		Total	
		Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.
Cotton											
Distribution of BT Cotton seeds through private subsidy @ 50% subsidy (or) Rs.375/-packet of 450 gram	Lakh No.	0.23	86.25	0.23	86.25	0.25	93.75	0.25	93.75	0.96	360.00
Distribution of Certified seeds @ Rs.20/-Kg.	Tons	10	2.00	10	2.00	10	2.00	10	2.00	40	8.00
Formation of FIG @ Rs.12500/- per Group for Training, ID Card, Library and Office Automation, District level meeting	Nos.	150	18.75	125	15.63	0	0.00	0	0.00	275	34.38
Establishment of Agri Clinics and Agri Business by unemployment Agri Groundwater @ Rs.2.50 lakh/Per No.(or) 25% subsidy	Nos.	5	12.50	5	12.50	0	0.00	0	0.00	10	25.00
Exposure visit to outside state (5 farmers/block) (10 days Rs.600/-day-farmer/30 farmers/Tour visit @ Rs.1.80 Lakh/visit	Nos.	4.00	7.20	4.00	7.20	4.00	7.20	4.0	7.20	16	28.80
Exposure visit to within state (50 farmers/Tour 5 days Rs.300/day Rs.1.50 Lakhs/visit	Nos.	2	3.00	2	3.00	2	3.00	2	3.00	8	12.00
Publicity of Propoganda Printing of Literatorers Display boards conducting press Tours Technology, Transfer through TV Radio and Others mass media @ Rs.2.00 lakhs		0	2.00	0	2.00	0	2.00	0	2.00	4	8.00
Video Conferencing facilities to District Head Quarters @ Rs.10 Lakhs per district		0	10.00	0	0.00	0	0.00	0	0.00	0	0.00

Table 6.6 Contd… **(Rs. in lakhs)**

Components	Unit	2008-09		2009-10		2010-11		2011-12		Total	
		Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.
Strengthening of FTC Conducting of Farmers Training @ 50 farmers/Batch 40 Trainings/annum @ Rs.20000/- Batch	Nos.	40	8.00	40	8.00	40	8.00	40	8.00	160	32.00
Purchase of LCD Protector, Copier, Digital Canera, Scanner, Computer, etc. @ Rs.2.5 Lakh/FTC		0	2.50	0	0.00	0	0.00	0	0.00	0	2.5
Exposure visit to Technical Officers to Other States 30 Officers/Batch @ 10 Batches Rs.1000/-day for 10 days	Nos.	0	0.0	0	0.0	0	0.0	0	0.0	0.0	0.0
Grand total			**1178.56**		**995.38**		**977.52**		**990.773**	**0.00**	**4142.23**

6.2. Horticulture

Since the vegetable crops and plantation crops accounted for the major share in the cropped area the department of horticulture has proposed some other interventions to increase the productivity of the crops under NADP. The details of interventions for the major crops are given in the succeeding tables. In addition project proposals have been given for three projects viz., increasing vegetable production, plantation crops and of extension support to increase the production of horticulture crops in Salem district.

6.1.1 Increasing Production of Vegetable and Plantation crops in Salem District

(i) Abstract

Tapioca is the major vegetable crop in Salem district followed by other major vegetables namely onion, tomato, bhendi, brinjal, greens and gourds. The allocation of area under vegetables is highly influenced by the prevailing market prices and hence the area is fluctuating year after year. The productivity of vegetables is also comparatively lower than the attainable average yield. As the area under vegetable crops is influenced by market price, the possibility of increasing the production can be increased by improving the productivity of vegetables. In addition, the district has the following advantages in growing of vegetables. They are; the prevailing temperature is suitable for vegetable cultivation in Salem District, Farmers in Salem District are well experienced in vegetable cultivation and marketing of their products to distant markets (Kerala) for getting remunerative prices, adequate transport facilities to move vegetables from farm to selling point are available. Moreover, Uzavar shandhais are functioning well in this district located around 20-25 km away form all the production centers and the farmers are provided with drip system assisted by the department under Micro Irrigation System with 50% subsidy to cope up with the water scarcity.

In this back drop, the major goal or objective of the project is to increase the area and productivity of vegetables and betel vine by 15 to 20 per cent in the next four years. The major interventions in this project are; provision of net house structure for nursery to produce healthy, pest and disease free, quality, well rooted seedlings for better

establishment, provision of net house structure and pandal installation to increase the vegetable production, supply of disease free setts to the tapioca growers from the TNAU / CTCRI Trivandrum, fertilizer and plant protection management in vegetable crops and betel vine crops to increase the productivity as well as the standard of living of the farming communities. To implement these programmes, it would require a total budget of Rs.189.55 lakhs for the year 2008-2012.

(ii) Budget

The component wise interventions and its budget for increasing the production of vegetable and plantation crops are provided in Table 6.7.

Table 6.7 Budget Estimate of Project on Increasing Production of Vegetable and Plantation Crops

(Rs. in Lakhs)

Sl. No	Component / Activities	2008-2009	2009-2010	2010-2011	2011-2012	Total
1	Net House - Nursery + Vegetable production	10.00	10.00	10.00	10.00	40.00
2.	Pandal for Vegetable Production	10.00	10.00	10.00	10.00	40.00
3	Package for plant protection	3.00	3.00	3.00	3.00	12.00
4	Humic Acid / E.M	0.20	0.20	0.20	0.20	0.80
5	Erection of net for production of disease free Tapioca seed materials	7.50	11.25	15.00	15.00	48.75
6	Farm waste shredder/Vegetable waste shredder	2.00	2.00	2.00	2.00	8.00
7	Support to Betel vine growers	10.00	10.00	10.00	10.00	40.00
	Total	**42.70**	**46.45**	**50.20**	**50.20**	**189.55**

(iii) Back ground

Tapioca is the major vegetable crop in the district with a normal area of 28000 ha and an average productivity of 30 tonnes/ha. The other major vegetables are Onion, Tomato, Bhendi, Brinjal, followed by Greens and Gourds. The area under vegetables is

highly influenced by the prevailing market prices and hence the area is fluctuating year after year. The productivity of vegetables is also comparatively lower than the attainable average yield. As the area under vegetable crops is influenced by market price, the possibility of increasing the production can be increased by improving the productivity of vegetables.

(iv) Project Rationale

1. The prevailing temperature is suitable for vegetable cultivation in Salem District.
2. Farmers in Salem District are well experienced in vegetable cultivation.
3. Farmers are experienced in marketing of vegetables to the near by districts and also near by state Kerala for getting good price for their vegetables.
4. Transport facilities are adequate to move vegetables from farm to selling point.
5. For easy selling of vegetables Uzhavar shandhais are located around 20-25 kilometers away form all the production centers.
6. In Salem District, 2723 farmers are provided with I.D cards for selling their Vegetables in Uzhavar shandhai.
7. Eventhough water scarcity occurs in some seasons, farmers can manage with drip system which is assisted by the department under Micro Irrigation System with 50% subsidy.
8. During March –June, the price of vegetables will be higher because the production is low when compared to the normal months. This is due to mainly less availability of water in the wells and also high temperature prevailing during those months.

(v) Project Strategy / Interventions

- Provision of net house structure for nursery: This will help to produce healthy, pest and disease free, quality, well rooted seedlings for better establishment in the main field.
- Net house structure and Pandal installation: This will help vegetable production during the lean months i.e., March – June.

- To overcome the incidence of mosaic disease in Tapioca, disease free setts are to be supplied to the tapioca growers from TNAU / CTCRI Trivandrum.

- Fertilizer management in vegetables for improved productivity.

- Organic method of cultivation: For producing pesticide residue free vegetables and betel leaves for consumption as well as to ensure the environmental and soil health, effective use of organic pesticides and fertilizers is required.

- Betel vine cultivating farmers are 95% lease farmers and their economic status is very low. In addition, betel vine cultivation is highly expensive than other crops and labour cost account for major share in the cost of cultivation. To overcome these problems farmers can be supported in terms of 50 % subsidy.

(vi) Project Goals

The proposed components under this project aim to increasing the area and productivity under vegetables and betel vine by 15 – 20 per cent.

(vii) Project Components

To achieve the set goals the following components are proposed for this district in vegetable crops and betelvine.

1. Net house structure for nursery and vegetable production.
2. Erection of pandal for vegetable production.
3. Package for plant protection ie. non Hazardous in nature.
4. Use of Humic Acid / E.M.
5. Erection of net for production of disease free Tapioca planting materials under seed farm conditions.

6.1.2 Increasing Production of Banana / Mango in Salem District

(i) Abstract

Salem district is having a normal rainfall of 1034.7mm and the temperature ranging from 30-40°C. The district is having water source mainly from the Cauvery river which facilitates the cultivation of fruit crops, especially Banana. Banana is one of the major fruit crop grown in Salem district and it necessitates the promotion of Banana in terms of increasing the productivity through technologies interventions. The parts of the district namely Kolathur, Mecheri, Sankagiri, Gangavalli, Peddanaickenpalayam and Salam blocks are the major Banana growing areas. The water availability and temperature prevailing in these blocks enables the Banana cultivation. Marketing facilities are also available in the local markets i.e. Uzhavar sandhai situated in and around 20-30 km away to all places and to distant markets either to nearby district / states. Though it has many advantages, banana production is affected by some of the factors. The major factors are; i) yield reduction due to torrential rain during north east monsoon and heavy winds. This will in turn reduce the profitability of the farmer. In this condition, provision of support at the time of bearing will reduce the production loss to some extent, ii) thrips damage and fruit rot reduces the quality of the fruit and price of banana which drastically affect the income of the farmer. Mango is one of the major fruit crop in Salem district and is being sold to local as well as distant markets. The farmers are facing labour problem at the time of peak harvesting season and also it lacks quality by natural harvest. To avoid seasonal delays and improve the quality of mango, mechanical harvesting may be promoted by supply of mango harvester under this project. With this back drop, the project has the major goal of increasing production and income to the Banana farmers to the tune of 20-25 per cent as against the present level. To achieve this objective the following interventions are suggested under NADP. They are; supply of bunch cover to reduce the damage of the fruit from thrips and fruit rot, usage of organic based pesticides, fertilizers, Sucker treatment in banana by giving 50 per cent subsidy for the corm injector and provision of staking poles; supply of mango harvester to the mango growers. To implement all these interventions the project would require a budget outlay of Rs.322.20 lakhs.

(ii) Budget

Table 6.8 Increasing Production of Banana / Mango

(Rs. in Lakhs)

Sl. No	Component / Activities	2008-09	2009-2010	2010-2011	2011-2012	Total
1	Banana Bunch Cover	5.0	5.0	5.0	5.0	20.00
2.	Supporting System for Banana	75	75	75	75	300.00
3	Banana Corm Injector	0.3	0.3	0.3	0.3	1.20
4	Mango Harvester	0.25	0.25	0.25	0.25	1.00
	Total	**80.55**	**80.55**	**80.55**	**80.55**	**322.20**

(iii) Background

Salem district is having a normal rainfall of 1034.7mm, the temperature prevailing is 30-40°C and the water source available in areas situated at the banks of Cauvery river which facilitates the cultivation of horticultural crops, especially banana and mango. Banana is one of the major crops grown in Salem district. To augment the export of Banana and to increase the yield technological intervention is needed. Hence, this project focuses on maintaining quality and improving production of both the crops namely banana and mango.

(iv) Project Rationale

The parts of the district namely Kolathur, Mecheri, Sankagiri,Gangavalli, Peddanaickenpalayam and Salam blocks are the major banana growing areas. The water availability and temperature prevailing in these blocks enables the banana cultivation. Marketing of products is easy either by meeting local demand by selling it in the Uzhavar sandhai or in distant markets. The transportation to neighbouring district and nearby states is also easier because of the availability of transport facilities.

(v) Project Strategy

Provision of support system at the time of bearing will reduce the production loss to the farmers due to heavy winds at time especially during May to August and torrential rainy days at the time of north east monsoon period.

The thrips damage and fruit rot to the fruits reduces the quality and price of the Banana which drastically affect the income of the farmer. The bunch cover is one such technology which will reduce this damage and adds colour and smoothness to the fruit. Hence it adds value to the fruit and fetches higher price for the produce.

Effective usage of organic based pesticides, fertilizers is to be introduced to avoid health hazards to the consumers.

To reduce the cost of cultivation of banana, banana corm injector is to be provided to the farmers @ 50 per cent subsidy for sucker treatment.

In Banana cultivation major portion of the cost is incurred for purchase of staking poles. To over come this, 50 per cent subsidy to be given to the Banana growers for the purchase of poles as back ended subsidy. This will be highly helpful to the Banana grower for purchasing other inputs like plant protection chemicals and fertilizers.

The mango farmers are facing labour problem at the time of peak harvesting season and also it lacks quality by natural harvest. To avoid seasonal delays and improve the quality of mango, mechanical harvesting is to promoted by supply of mango harvester under this project.

(vi) Project Goals

The proposed components will ensure increased production and increased income to the Banana / Mango farmers to the tune of 20-25 per cent as against the present level.

(vii) Project Components

The following components are proposed under this project.

1. Providing support system to banana crops (poles).
2. Use of Humic Acid / E.M.
3. Use of Banana bunch cover
4. Promotion of Mango harvester

(viii) Reporting

1. Monthly report of the progress made will be sent to the Dept. concerned for monitoring and evaluation of the progress.
2. Annual progressive report will be sent to the Dept. concerned for monitoring and evaluation of the progress.

6.1.3 Extension Support to Increase the Production of Horticulture Crops in Salem District

(i) Background

Salem District has 20 blocks. Under restructuring of Agriculture and allied Departments, the flow of extension personnel to the Horticulture sector has been increased to nearly 100 per cent Currently, each district is headed by a Deputy Director of Horticulture and each block is headed by an Assistant Director of Horticulture with Horticultural officers and Assistant Agricultural officers. This team forms a Block Technical Team in each block to implement the projects pertaining to the Horticulture. The personnel now in the Horticulture Department is basically new to the Department by virtue of restructure, who hitherto worked in Department of Agriculture need practical orientation in the horticultural schemes and they should be given exposure to the horticulture crops. There are no separate infrastructure facilities available at present in any of the schemes in all the blocks for Horticulture promotion.

There is no specific / separate horticultural sale outlets and information centers available as on date to distribute quality seed materials, seedlings etc., to the farming communities. The suggested components will ensure better technical support to the

farming community and thus help in increased production of horticultural crops in the district and will contribute to agricultural growth at the national level. Further farmers will also be enlightened or made aware of the new technologies / information / in Horticulture by way of interstate study tours / crop specific seminar / workshops etc.

(ii) Project Rationale

- Quality seeds, seedlings are to be distributed to the farming community in each block.
- Orientation of latest know-how to the extension personnel as well as farmers through workshops, seminars, demonstrations, exposure visits etc.,
- Since the vegetable cultivation is confined to smaller areas by farmers, the use of water source in lean months to be encouraged.
- In marketing of the produce, packaging component is to be improved / introduced (packaging materials) to increases the share of farmers income.
- Farmers associations already existing may be encouraged / improved to the level of agri-clinics by providing necessary infra-structure facilities to enable a better liaison between farming community and the extension wing.

(iii) Project Strategy

- Promotion of Sales outlet cum information centre will enhance a better contact between extension personnel and the farming community.
- The latest marketing techniques can be educated and thus the farming community will be gaining remunerative income by selling at right price and in appropriate places.
- Mega Demonstrations (10 Ha in size) may be organized by the extension personnel for dissemination of all the technologies in a specific location.
- Exposure visit to farms, farmers' workshop on crop specific nature will help in effective dissemination of technologies.

(iv) Project Goals

The trained personnel on latest technology in horticultural technology dissemination will pave way for increased area under horticultural crops to the tune of 10-15 per cent and production increase around 20 per cent by stabilizing the productivity.

(v) Project Components

The following components are enlisted to boost the extension as one time grant.

1. Sales outlet cum Information centre
2. 10 Ha mega Demonstration plot
3. Workshop (Crop specific)
4. Interstate study tour to Farmers
5. Exposure visit to Farmers / Extension personnel
6. Supply of plastic crates to transport the vegetable produces safely and easily handling

(vi) Reporting

1. Periodical monthly progress report.
2. Annual consolidated progressive report.

(vii) Budget

Table 6.9 Extension Support for Increasing Production of Horticultural Crops

(Rs. in lakhs)

Sl. No	Component / Activities	2008-09	2009-2010	2010-2011	2011-2012	Total
1	Sales outlet cum information centre	2.600	2.600	2.600	2.600	**10.400**
2.	District level Farmers workshop (one day)	2.000	2.000	2.000	2.000	**8.000**
3	Interstate exposure visit (5 days)	12.500	12.500	12.500	12.500	**50.000**
4	10 Ha. mega Demonstration plot	12.500	12.500	12.500	12.500	**50.000**
5	Plastic crates	2.500	3.750	6.000	7.500	**19.750**
6.	Tractor mounted steam boiler	2.500	2.500	2.500	2.500	**10.000**
	Total	**34.600**	**35.850**	**38.100**	**39.600**	**148.150**

Table 6.10 Detailed Budget and Action Plan Proposed for Horticulture Sector – 2008 – 2012

(Rs. in Lakhs)

S.No.	Activities	Unit cost	2008-09		2009-10		2010-2011		2011-12		Total	
			Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.
			Nos.	Rs. lakhs	Nos.	Rs. lakhs	Nos.	Rs. lakhs	Nos.	Rs. lakhs	Nos.	Rs. lakh
1	Net House structure											
	a. Nursery & Vegetable production	Rs.1.00 lakh/ 300 Sq.m	20	10	20	10	20	10	20	10	80	40
2	Pandal for vegetable production	Rs.1.00 lakh/ha	20	10	20	10	20	10	20	10	80	40
3	Package for plant protection	Rs.3000/ ha	200	3	200	3	200	3	200	3.00	800	12.00
4	Plastics Crates for Vegetable handling and transport	Rs.250/crate	2000	2.5	3000	3.75	4800	6	6000	7.5	15800	19.75
5	Farm waste shredder / vegetable waste Shredder	Rs.40000 / No.	10	2	10	2	10	2	10	2	40	8
6	Banana Bunch cover	Rs.10 /piece	100000	5	100000	5	100000	5	100000	5	400000	20
7	Humic acid / Effective E Microbes	Rs.400/litre	100	0.2	100	0.2	100	0.2	100	0.2	400	0.8

Table 6.10 Contd…

S.No.	Activities	Unit cost	2008-09		2009-10		2010-2011		2011-12		Total	
			Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.
			Nos.	Rs. lakhs	Nos.	Rs. lakhs	Nos.	Rs. lakhs	Nos.	Rs. lakhs	Nos.	Rs. lakh
8	Erection of net for production of disease free planting material of Tapioca (75% subsidy)	Rs.1.00 lakh / 300 sq.m	10	7.5	15	11.25	20	15	20	15	65	48.75
9	Tractor mounted steam boiler	Rs.50,000 / No.	10	2.5	10	2.5	10	2.5	10	2.5	40	10
10	Support system for crops											
	a. Banana	Rs.1.5 lakhs/ ha	100	75	100	75	100	75	100	75	400	300
11	Banana Corm injector	Rs.300/ No.	200	0.3	200	0.3	200	0.3	200	0.3	800	1.2
12	Mango harvester	Rs.500/ No.	100	0.25	100	0.25	100	0.25	100	0.25	400	1
13	District Level Farmers Workshop (250 farmers/worksho p) 100% subsidy	Rs.400/ farmer / day Rs.1 lakh / workshop	2	2	2	2	2	2	2	2	8	8
14	Inter State Exposure visit (5 days) 100% subsidy	Rs.5,000/ farmer	250	12.5	250	12.5	250	12.5	250	12.5	1000	50

Table 6.10 Contd…

S.No.	Activities	Unit cost	2008-09		2009-10		2010-2011		2011-12		Total	
			Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.
			Nos.	Rs. lakhs	Nos.	Rs. lakhs	Nos.	Rs. lakhs	Nos.	Rs. lakhs	Nos.	Rs. lakh
15	10 hectare mega demo plot for the districts	Rs.25.00 lakhs each	1	12.5	1	12.5	1	12.5	1	12.5	4	50
16	Sales outlet cum information centre		1	2.6	1	2.6	1	2.6	1	2.6	4	10.4
17	Support for betelvine	Rs.40,000 for 20 cents	50	10	50	10	50	10	50	10	200	40
	Grand total		**103074**	**157.85**	**104079**	**162.85**	**105084**	**168.85**	**106184**	**170.35**	**418421**	**659.90**

6.3 Animal Husbandry

Table 6.11 Budget Proposal – Animal Husbandry Sector – 2008 – 2012

(Rs. in Lakhs)

S No.	Scheme Components	Unit Cost	2008-2009		2009-2010		2010-2011		2011-2012		Grand Total	
			Unit	Cost	Unit	Cost	Unit	Cost	Unit	Cost	Unit	Cost
1	Popularizing chaff cutter at 50% of total cost of Rs.20,000 1/B1/yr for SHG / elite farmers (DAH)	0.1	20	2	20	2	20	2	20	2	80	8.00
2	Fodder production by SHGs 10 acre/B1/yr (DAH)	0.235	200	47	200	47	200	47	200	47	800	188.00
3	Establishment of 6x6x4 feed silo to ensile sugarcane tops at 75% of total cost of Rs.15,000 (DAH)	0.112	20	2.24	0	0	0	0	0	0	20	2.24
4	Popularization of fodder harvesting machine\ farmers at 50% of total cost of Rs.25,000 (DAH)	0.125	20	2.5	0	0	0	0	0	0	20	2.50
5	Popularizing mineral mixture to improve livestock production 1kg/ month for one year in one block (DAH)	0.006	7500	45	75000	45	7500	45	7500	45	30000	180.00
6	Mobile veterinary clinics (DAH)	5.832	3	17.50	0	0	0	0	0	0	3	17.50
7	Mobile veterinary diagnostic laboratory (DAH)	12	1	12	0	0	0	0	0	0	1	12.00
8	Identification and traceability of breedable bovine population (DAH)	0.0002	200000	40	0	0	0	0	0	0	200000	40.00
	Sheep and Goat											
1	Quality ram / buck production centre for distribution of quality germ plasm by SHGs 2 /B1/(DAH)'	0.5	10	5		5	10	5	10	5	40	20.00
2	Supply of rams and bucks to SHG / farmers 2/ block (DAH)	0.04	10	0.4	10	0.4	10	0.4	10	0.4	40	1.60
3	Semi-intensive goat farming to supply germ plasm by SHGs 25/block (DAH)	0.25	125	31.25	125	31.25	125	31.25	125	31.25	500	125.00
4	Prime lamb / kid production in intensive system	0.42	5	2.1	5	2.1	5	2.1	5	2.1	20	8.40
5	Control of parasitic diseases through treatment to enhance vaccine response			9.17	0	9.17	0	9.17	0	9.17	0	36.68
	Others											
1	Renovation of existing VDs (DAH)	5	37	185	0	0	0	0	0	0	37	185.00
	DAH- Total			**401.16**		**141.92**		**141.92**		**141.92**		**826.92**

2	Buffalo calf development programme (2000 calves / year) (DDD)	0.148	200	29.6	200	29.6	200	29.6	200	29.6	800	118.40
3	Mobile input units (One per 50 DCS) (DDD)	4.5	6	27	0	0	0	0	0	0	6	27.00
4	Supply of mineral mixture to the milch animals at subsidized cost (50%) (DDD)	0.005	2625	13.125	2625	13.125	2625	13.125	2625	13.125	10500	52.50
5	Supply of By-pass protein feed to the milch animals (360kgs / year / animal 50% subsidized cost of Rs.9/- per kg) (DDD)	0.033	250	8.25	250	8.25	250	8.25	250	8.25	1000	33.00
6	Portable milking machines for farmers)DDD	0.18	25	4.5	25	4.5	25	4.5	25	4.5	100	18.00
7	Chaff cutters for elite farmers (Small type) Rs.20,000 as 100% grant (DDD)	0.2	4	0.8	2	0.4	2	0.4	2	0.4	10	2.00
8	Bulk milk cooler (DDD)	30	1	30	0	0	0	0	0	0	1	30.00
9	Walk - in coolers (DDD)	30	1	30	0	0	0	0	0	0	1	30.00
10	Revival of dormant MPCs (DDD)	1	10	10	10	10	10	10	10	10	40	40.00
11	Fodder development activities for production of fodder seed / slips in dairy or chilling centres & land of DDD) acres (DDD)	2.1	9	18.9	0	0	0	0	0	0	9	18.90
12	Fodder development activities (500 acres in 100 IDF villages in each for 2 years and 1850 acres in farmers field (DDD)	0.235	25	5.875	25	5.875	25	5.875	25	5.875	100	23.50
13	Manufacturing facilities for milk khoa(DDD)	0.77	3	2.31	1	0.77	1	0.77	0	0	5	3.85
14	Manufacturing facilities for paneer(DDD)	1.02	1	1.02	1	1.02	0	0	0	0	2	2.04
15	Manufacturing facilities for ice cream(DDD)	1.12	2	2.24	2	2.24	0	0	0	0	4	4.48
16	Milk weighing machine for milk producers co-op. societies (DDD)	0.17	90	15.3	85	14.45	85	14.45	85	14.45	345	58.65
17	P.C. based automatic milk collection stations to IDF villages milk producers Co-operative societies (DDD)	1.75	11	19.25	10	17.5	10	17.5	10	17.5	41	71.75
18	MMPO laboratory (DDD)	56	0	0	1	56	0	0	0	0	1	56.00
19	Quality assurance lab strengthening (DDD)	10	1	10	0	0	0	0	0	0	1	10.00
20	Farmers study tour Rs.5,000/- per farmers	0.05	40	2	40	2	40	2	30	1.5	150	7.50
21	Skill development for technical staff (DDD)	0.05	35	1.75	35	1.75	35	1.75	35	1.75	140	7.00
22	Energy management system (DDD)	10	1	10	0	0	0	0	0	0	1	10.00
23	Orientation training / workshop for milk producers at society level (DDD)	0.2	4	0.8	4	0.8	4	0.8	4	0.8	16	3.20
	DDD-Total			**271.4**		**196.9**		**137.7**		**136.4**		**742.57**

S. No.	Scheme Components	Unit Cost	2008-2009		2009-2010		2010-2011		2011-2012		Grand Total	
			Unit	Cost	Unit	Cost	Unit	Cost	Unit	Cost	Unit	Cost
1	Strengthening of infrastructure for sheep at Mecheri sheep research station to distribute germ plasm (TANUVAS)	50	1	50	0	0	0	0	0	0	1	50.00
2	Strengthening of infrastructure for goat at Mecheri sheep research station to distribute germ plasm (TANUVAS)	25	1	25	0	0	0	0	0	0	1	25.00
3	Fodder development at Mecheri sheep research station to distribute seed (TANUVAS)	52	1	52	0	0	0	0	0	0	1	52.00
4	Strengthening of Avian disease laboratory at Thalaivasal for quick disease diagnosis (TANUVAS)	1.5	1	1.5	0	0	0	0	0	0	1	1.50
5	Establishment of model livestock village for educating farmers (TANUVAS)	9	1	9	1	9	1	9	1	9	4	36.00
6	Training programmes and village level campaign on livestock farming (TANUVAS)	0.3	11	3.3	11	3.3	11	3.3	11	3.3	44	13.20
7	Strengthening of training equipments for technology dissemination at VUTRC (TANUVAS)	15	1	15	0	0	0	0	0	0	1	15.00
8	Study tour of farmers to livestock and poultry research station 50 persons / batch (TANUVAS)	0.25	4	1	4	1	4	1	4	1	16	4.00
	TANUVAS - TOTAL			**156.80**		**13.30**		**13.30**		**13.30**		**196.70**
	Grand Total			**829.38**		**352.20**		**292.94**		**291.67**		**1766.19**

V. Annexure

A. Large Ruminants

a. Feed and Fodder Development

Abstract

Fodder deficiency is wide spread and in this drought prone Salem district it is about 87 percent. In spite of deficient fodder, the farmers do not utilize the alternative fodder resources effectively and do not attempt to increase the efficiency of nutrient utilization from available fodder. This project aims to reduce the pressure on green fodder requirement by utilizing the sugarcane tops, develop micro-level fodder units and increase the efficiency of nutrient utilization in the consumed feed and fodder. The project proposes to commercialize fodder production by involving the SHG, adoption of the technology of SCT ensiling and feeding and increase the efficiency of nutrient utilization by popularizing chaff cutters, supplementing mineral mixture and supplementing By-pass protein feed to milch animals. The project also proposes to supply fodder harvesting machine at 50% subsidized cost to the farmers to avoid labour problems in harvesting the fodder in right time and lowering of its nutritive value. The project also proposes to produce fodder seeds/ slips in dairy or chilling centres of the TCMPF in about 9.0 acres of land. The demand for fodder seed and slip will also to be met by establishing fodder seed development unit at the Mecheri Sheep Research Station of Tamil Nadu Veterinary and Animal Sciences University. The project will be implemented by the Department of Animal Husbandry, the Department of Dairy Development and the Tamil Nadu Veterinary and Animal Sciences University at a total cost of Rs.562.64 lakhs in four years.

Budget

Project	Total amount (Rs. in lakhs)
1. Popularizing chaff cutter @ 1/Bl/yr for SHGs/elite farmers at 50 % of total cost of Rs.20,000 (DAH)	8.00
2. Fodder production by SHGs @ 10 acre/Bl/yr (DAH)	188.00
3. Establishment of 6 x 6 x 4 feet silo to ensile sugarcane tops at 75 % subsidy total cost of Rs 15,000 (DAH)	2.24
4. Popularizing mineral mixture to improve livestock production @ 1kg/month with 100% subsidy (DAH)	180.00

5. Popularization fodder harvesting machine among farmers at 50% of total cost of Rs.0.25 lakh each (DAH)	2.50
6. supply of mineral mixture to the milch animals at 50% subsidized cost @ 18 kg/ year animal (DDD)	52.50
7. supply of by-pass protein feed to the milch animals (360kgs/ year/animal @ 50% subsidied cost of Rs.9/- per kg.) - (DDD)	33.00
8. chaff cutters for elite farmers (small type) @ Rs.20,000 as 100% grant (DDD)	2.00
9. Fodder development activities in farmers field at 100% grant (DDD)	23.50
10. Fodder production activities for production of fodder seed / slips in dairy or chilling centre (DDD)	18.90
11. Fodder development at Mecheri Sheep Research Station to distribute fodder seeds (TANUVAS)	52.00
Total	**562.64**

Background / Problem Focus

Severe green fodder deficiency and under utilization of available other fodder resources together with poor nutrient efficiency results in over dependence on supplemental compounded feed which increase the cost of production.

Project Rationale

Increasing fodder production and its nutrient efficiency will reduce feed cost on production and increase the net income

Project Strategy

- Involving SHG in fodder production
- Ensiling and feeding of sugarcane tops
- Introduction of fodder chaffers
- Supplementation with mineral mixture and By- pass protein to enhance nutrient efficiency.
- Popularizing fodder harvesting machines
- Establishing fodder seed / slips production unit at Dairy, Chilling centre and Mecheri Sheep Research Station

Project goal

To reduce fodder and nutrient demand and increase net profit to dairy farmers.

Project components

- Popularizing chaff cutters by providing to SHG/Elite farmers at 50% of the total cost of Rs.0.20 lakh each. A total of 80 chaffers will be distributed at the rate of one per block per year to the total cost of Rs.8.00 lakhs..
- Encouraging fodder production in irrigated condition by SHG at the rate of 10 acre per block per year with 100% subsidy on the total cost of Rs.0.20 lakh per acre. The SHG resorting to fodder production will be given training at the cost of Rs.3.500. This component will be implemented in 800 acres at the total cost of Rs.188.0 lakhs.

Unit cost of fodder production / acre

S.No.	Details	Amount (in Rs.)
I.	**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**
II.	**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 farm yard manure 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**

	Financial Requirement Per Self Help Group	**Rs. in Lakhs**
1.	Cost of training per SHG	0.035
2.	Cost of fodder cultivation	0.20
	Total Requirement per SHG	**0.235**

- The sugarcane farmers will be encouraged to ensile the Post-harvested green sugarcane tops to supplement their animals during summer. For digging the 6x6x4 cubic feed silo, 75% subsidy on the total cost of Rs.0.15 lakh will be provided. A total of 20 sugarcane farmers will be involved this project in one year at the total cost of Rs.2.24 lakhs.
- To popularize mineral mixture supplementation 12kg mineral mixture per year at the rate of 1kgper month will be supplied to a total of 30,000 cows in four years with 100% subsidy. The total cost for this proposal is Rs.180.00 lakhs.
- The fodder harvesting machine will be supplied to 20 farmers at 50% of the cost of Rs.25,000 each. The total cost is Rs.2.50 lakhs. These programmes will be implemented by the Department of Animal Husbandry.
- The Department of Dairy Department will distribute the mineral mixture to 10500 continuous milk pourers at the rate of 18kg for Rs. 500 for 4 years. The total cost will be Rs.52.50 lakhs.
- The Department of Dairy Development will distribute by – pass protein feed to high yielding milch animals(360kg/animal/year) at 50% subsidized cost of Rs 9/kg. A total of 1000 animals will be covered in 4 years at the total cost of Rs.33.00 lakhs.
- The department of Dairy Development will cultivate fodder in irrigated condition in 100 acres of land of private farmers. The cost will be Rs. 0.235 lakh per acre as 100 % subsidy. The total cost will be Rs.23.52 lakhs.
- The department of Dairy Development and Tamil Nadu Veterinary and Animal Sciences University will utilize land at dairy, chilling centres and Mecheri Sheep Research Station respectively to cultivate fodder for producing seeds and slips. The respective cost will be Rs.18.90 and 52.00 lakhs.

- The Department of Dairy Development will supply a total of 10 Chaff cutters (Small type) @ Rs.0.20 lakh each as 100% grant to the continuous milk pourers in 4 years. The total cost will be Rs.2.00 lakhs.
- The fodder development component at Mecheri Sheep Research Station will be Rs. in Lakhs

Land Development	: 15.00
Water harvesting system	: 9.00
Micro Irrigation System	: 6.00
Poly House for Fodder Nursery	: 3.00
Over Head Tank	: 14.00
Bore Well 2 No's	: 5.00
Total	**: 52.00**

Project	2008-2009	2009-2010	2010-2011	2011-2012	Total amount (Rs. in lakhs)
1. Fodder production by SHGs @ 10 acre/Bl/yr @ Rs. 0.235 lakh/ acre, 200 acre/year for 800 acres in 4 years (DAH)	47.00	47.00	47.00	47.00	188.00
2. Popularizing chaff cutter @ 1/Bl/yr for SHGs/elite farmers at 50 % of total cost of Rs.20,000 for 80 units in 4 years (DAH)	2.00	2.00	2.00	2.00	8.00
3. Establishment of 6 x 6 x 4 feet silo to ensile sugarcane tops at 75 % of total cost of Rs15,000 for 20 units (DAH)	2.24	0	0	0	2.24
4. Popularizing mineral mixture to improve livestock production @ 1kg/month/animal Rs. 600/- per animal for 30,000 animals (DAH)	45.00	45.00	45.00	45.00	180.00
5. Popularization fodder harvesting machine among farmers at 50% of total cost of Rs.0.25 lakh each for 20 units (DAH)	2.50	0	0	0	2.50

6. Supply of mineral mixture to the milch animals at subsidized cost (50%) @ 18 kg/ year @ Rs.500 per animal for 10,500 animals (DDD)	13.13	13.13	13.13	13.13	52.50
7. Supply of by-pass protein feed to the milch animals (360kgs/year/ animal @ 50% subsidised cost of Rs.9/- per kg.) for 1000 animals – (DDD)	8.25	8.25	8.25	8.25	33.00
8. Chaff cutters for elite farmers (small type) @Rs.20,000 as 100% grant for 10 farmers – (DDD)	0.80	0.40	0.40	0.40	2.00
9. Fodder development activities in farmers field @ Rs. 0.235 lakh/acre for 25 acres/year in four years – (DDD)	5.875	5.875	5.875	5.875	23.50
10. Fodder production activities for production of fodder seed / slips in dairy or chilling centre @ Rs. 2.1 lakhs/acre (Land Development Rs.0.70 lakh, implements / equipments – Rs. 0.10 lakh, store room – Rs. 0.20 lakh, facilities for irrigation – Rs. 0.50 lakh and recurring expenditure – Rs. 0.60 lakh) in 9 acres (DDD)	18.90	0	0	0	18.90
11. Fodder development at Mecheri Sheep Research Station to distribute fodder seeds @ Rs. 52 lakhs (TANUVAS)	52.00	0	0	0	52.00
Total	**197.695**	**121.655**	**121.655**	**121.655**	**562.64**

Implementation Chart of the Project

Title	2008-2009	2009-2010	2010-2011	2011-2012
1. Fodder production by SHGs @ 10 acre/Bl/yr (DAH)	✓	✓	✓	✓
2. Popularizing chaff cutter @ 1/Bl/yr for SHGs/elite farmers at 50 % of total cost of Rs 20,000 (DAH)	✓	✓	✓	✓
3. Establishment of 6 x 6 x 4 feet silo to ensile sugarcane tops at 75 % of total cost of Rs 15,000 (DAH)	✓			

4. Popularizing mineral mixture to improve livestock production @ 1kg/month (DAH)	✓	✓	✓	✓
5. Popularization fodder harvesting machine among farmers at 50% of total cost of Rs.0.25 lakh each (DAH)	✓			
6. Supply of mineral mixture to the milch animals at subsidized cost (50%) @ 18 kg/ year (DDD)	✓	✓	✓	✓
7. Supply of by-pass protein feed to the milch animals (360kgs/ year/animal @ 50% subsidised cost of Rs.9/- per kg.) – (DDD)	✓	✓	✓	✓
8. Chaff cutters for elite farmers (small type) @Rs.20,000 as 100% grant (DDD)	✓	✓	✓	✓
9. Fodder development activities in farmers field (DDD)	✓	✓	✓	✓
10. Fodder production activities for production of fodder seed / slips in dairy or chilling centre (DDD)	✓			
11. Fodder development at Mecheri Sheep Research Station to distribute fodder seeds (TANUVAS)	✓			

Reporting

Concerned project implementing agency will report the progress to respective financial authorities.

b. Genetic upgradation of large ruminants

Abstract

The population of buffalo is dwindling in this district due to reproductive Problems and long inter calving period as farmers often fail to identify the animals in heat. This causes heavy economic loss. The buffalo calves are also neglected resulting in malnutrition, stunted growth and attainment of late maturity. This project aims to demonstrate 100% conception rate through programmed breeding in buffaloes and indigenous cows, popularize supplemental feed strategy to buffalo calves to attain early sexual maturity apart from maintaining data base on breedable bovines in this district. The Project proposes to demonstrate heat synchronization in buffaloes, followed by AI, popularize concentrate feed supplementing strategy to buffalo calves of both sexes and maintain data base on breedable bovines for future planning. The project will be implemented by both the Department of Dairy Development and Department of Animal Husbandry at a total cost of Rs.273.20 lakhs in four years.

Budget

Project	Total amount (Rs. in lakhs)
1. Identification and traceability of breedable bovine population (DAH and DDD)	40.00
2. Programmed breeding of indigenous cattle and buffalo to increase conception rate (DDD)	114.80
3. Buffalo calf development programme (200 calves / year) - (DDD)	118.40
Total	**273.20**

Background / Problem focus

- The population of buffaloes is in decreasing trend in spite of their ability to convert crop residues into high quality milk. As buffaloes are silent heaters the farmers are unable to detect the heat and this results in very long inter calving period and loss of revenue.
- The buffalo calves of both sexes are highly neglected and very often affected with parasites and malnutrition resulting in stunted growth and late sexual maturity.

Project Rationale

Demonstration and popularizing heat synchronization in buffaloes and indigenous cows followed by AI to achieve 100% conception rate and nutritional supplementation of the buffalo calves will help the buffalo growers to adopt these technologies.

Project Strategy

- Identification and tagging of breedable cattle and buffaloes.
- Demonstration of heat synchronization followed by Artificial Insemination to improve the conception rate.
- Demonstrating the effect of supplemental feeding to the buffalo calves on their economic traits.

Project Goals

- To improve the conception rate and reduce inter calving period in buffaloes.
- To demonstrate improvement in economic traits on account of proper nutrition to buffalo calves.

Project Components

- All the breedable bovines that are brought for insemination will be tagged and the cow Index card (data base) for each tagged bovine will be maintained. A total of 2.00 lakhs breedable bovines will be thus identified and included in data base in one year . The project will be continued even after the completion of NADP. The cost per animal will be Rs.12 to cover the cost of Tag and Rs.8 for the issue of Blue Index card. The total cost will be Rs.40.00 lakhs. This component will be implemented both by the Department of Animal Husbandry and Department of Dairy Development.
- The Indigenous cattle and buffaloes totaling 16400 to cover about 10% of population at the rate of 4100 per year will be subjected to heat synchronization and subsequent A.I to achieve 100% conception rate. At the unit cost of Rs.700/- per animal a total of Rs.114.80 lakhs will be utilized in 4 years.
- In the Buffalo calves development programme at the rate of 200 calves per year a total of 800 calves of either sex will be supplied with supplemental concentrate feed upto 32 months age at 100% subsidy. The total cost will be Rs.118.40 lakhs. These components will be implemented by the Department of Dairy Development.

Project Cost and Financing

Project	2008-2009	2009-2010	2010-2011	2011-2012	Total amount (Rs. in lakhs)
1. Identification and traceability of breedable bovine population @ Rs.20/animals for 2,00,000 animals (DAH and DDD)	40.00	0	0	0	40.00
2. Programmed breeding indigenous cattle & buffalo to increase conception rate @ Rs.700/animal for 4100 animals/year for 4 years (DDD)	28.70	28.70	28.70	28.70	114.80
3. Buffalo calf development programme @ Rs.14800/ calf for 200 calves / year for 4 years (DDD)	29.60	29.60	29.60	29.60	118.40
Total	**98.30**	**58.30**	**58.30**	**58.30**	**273.20**

Implementation Chart of the Project

Project	2008-2009	2009-2010	2010-2011	2011-2012
1. Identification and traceability of breedable bovine population (DAH and DDD)	✓			
2. Programmed breeding indigenous cattle & buffalo to increase conception rate (DDD)	✓	✓	✓	✓
3. Buffalo calf development programme (200 calves / year) – (DDD)	✓	✓	✓	✓

Reporting

Concerned project implementing agency will report the progress to the respective financial authorities.

c. Improvement in livestock health services

Abstract

Disease outbreak and parasitic infestation are the major causes for economic loss in livestock sector. Providing health cover to animals in remote areas, insufficient facilities for providing off-campus health cover and quick disease diagnosis are the major impediments in providing foolproof health cover to livestock. This project aims to achieve fool proof and timely disease diagnosis and treatment even in inaccessible remote areas, better surveillance of disease outbreak etc. The project proposes to give major emphasis in controlling parasite diseases, establishment of Mobile Veterinary Clinic for off – campus treatment in remote areas, upgrading the existing Animal Disease Investigation Unit as Mobile Veterinary Diagnostic Laboratory and renovation of existing Veterinary dispensaries to provide better on-campus treatment. The total cost of this proposal is Rs.251.18 lakhs in 4 years and will be implemented by the Department of Animal Husbandry. The project also proposes mobile input units @ 1 unit per 50 DCS to be implemented by the Department of Dairy Development at the total cost of Rs.278.18 lakhs.

Budget (Rs. in lakhs)

Project	Total amount
1. Control of parasitic diseases through treatment to enhance vaccine response (DAH)	36.68
2. Mobile veterinary clinics (DAH)	17.50
3. Mobile veterinary diagnostic laboratory (DAH)	12.00
4. Renovation of existing Veterinary Dispensaries (DAH)	185.00
5. Mobile Inputs units (1/ 50 DCS) - (DDD)	27.00
Total	**278.18**

Background / Problem Focus

Parasitic diseases are the major causes for economic loss in Livestock sector. Parasitic infestation also reduces the vaccine response and enhances disease transmission. The parasitic infestation are highly prevalent in calves and small ruminants.

- Due to lack of sufficient facilities for sample collection, spot examination and quick diagnosis many ailments particularly at inaccessible and remote areas are under reported. This is one of the main constraints in controlling of Livestock diseases.

Project Rationale

Provision of timely and quick disease diagnostic facilities even in inaccessible and remote areas where livestock population is concentrated will not only control livestock disease outbreak but also reduce economic loss.

Project Strategy

- Providing foolproof off–campus Veterinary facilities through mobile veterinary clinics
- Strengthening of existing Animal Disease Investigating unit as Mobile Veterinary Diagnostic Laboratory
- Renovation of existing Veterinary dispensaries to provide on–campus quality Veterinary service to Livestock
- Providing Health Care and timely insemination services to the cows maintained by milk pourers by introducing mobile input routes.

Project Goal

- To achieve timely disease diagnosis, insemination and control of diseases even in inaccessible remote areas.
- To ensure better surveillance and prevention of disease out break.
- To minimize economic loss in Livestock sector due to diseases.

Project Components

- Control of parasitic diseases through treatment to increase vaccine response. The cost will be Rs.1.00 per small ruminant and Rs.3/- per calf. Four de-worming will be carried out annually at the cost of Rs.9.17 lakhs in each year.
- Establishment of mobile veterinary clinics having equipments like surgical kit, Obstetrical kit, Binocular microscopes, Liquid Nitrogen container, Thermos flask and a Bolero jeep. For each unit diesel worth of Rs 45000 will be provided. The total cost will be Rs 5.832 to each unit and the total cost will be Rs.17.50 lakhs. The staff for this will be sourced from the available manpower in the department
- Establishment of Mobile Veterinary Diagnostic Laboratory containing diagnostic equipments, refrigerator, centrifuge, microscope and other equipments to conduct postmortem examinations fitted in a vehicle the total cost will be Rs.12.00 lakhs.
- Renovation of existing 37 Veterinary dispensaries with basic facilities like fencing, bore wells water troughs and minor repair works at the cost of Rs 5.00lakhs for each dispensary at a total cost of Rs 185.00 lakhs
- Introduction of 6 mobile input units (Units cost Rs. 4.50 lakhs) at a total cost of Rs. 27.00 lakhs.

Project Cost and Financing

Project	2008-2009	2009-2010	2010-2011	2011-2012	Total amount (Rs. in lakhs)
1. Control of parasitic diseases through treatment to enhance vaccine response @ Rs.1/- per sheep or goat and Rs.3/- per calf below one year, Rs. 9.17 Lakhs/year, for 4 years (188682 calves, 371026 sheep and 497814 goats) - (DAH)	**9.17**	**9.17**	**9.17**	**9.17**	**36.68**
2. Mobile veterinary clinics @ Rs.5.832 Lakhs/unit (Jeep – Rs. 4.75 Lakhs, Equipments – Rs.0.30 lakh, LN2 container large and small – Rs. 0.35 lakh, Recurring Expenditure - Rs. 0.43 Lakh) for 3 units (DAH)	17.50	0	0	0	17.50
3. Mobile veterinary diagnostic laboratory @ Rs.12.00 Lakhs/unit (Vehicle - Rs.11.00 lakhs, microscope - Rs.0.50 lakh, refrigerator - Rs.0.25 lakh, centrifuge – Rs.0.15 lakh, post mortem kits and other chemicals and reagents - Rs.0.10 lakh) (DAH)	12.00	0	0	0	12.00
4. Renovation of existing Veterinary Dispensaries like fencing, water troughs, bore-wells, minor repair works etc. @ Rs.5.00 lakhs / institution for 37 dispensaries (DAH)	185.0	0	0	0	185.0
5. Mobile input unit @ Rs. 4.5 lakhs for 6 units (DDD)	27.00	0	0	0	27.00
Total	**250.67**	**9.17**	**9.17**	**9.17**	**278.18**

Implementing Chart of the Project

Project	2008-2009	2009-2010	2010-2011	2011-2012
1. Control of parasitic diseases through treatment to enhance vaccine response (DAH)	✓	✓	✓	✓
2. Mobile veterinary clinics @ 1/taluk (DAH)	✓			
3. Mobile veterinary diagnostic laboratory (DAH)	✓			
4. Renovation of existing Veterinary Dispensaries (DAH)	✓			
5. Mobile input unit (DDD)	✓			

Reporting

Concerned project implementing agency will report the progress to the respective financial authorities.

d. Improvement of infrastructure for milk procurement

Abstract

Current practice of laborious, time consuming and unhygienic hand milking of high yielders, measuring the procured milk instead of weighment, non-functional and dormant milk societies are the major contributing factors for low milk procurement in Co-operative milk societies. This project aims at increasing the milk procurement in Co-operatives, avoid unhygienic milk handling by milkmen, introduction of transparency in milk weighment and automation in milk Co-operative societies. The project proposes to provide portable milking machine to continuous milk pourers to the milk co-operatives at 100% subsidy. A total of 100 machines will be supplied to the milk pourers 4 years. For milk weighment electronic balances will be provided to 345 milk Co-operatives with 100% subsidy. P.C. based Automatic Milk collection Station will be installed in 41 milk Co-operatives. A total 40 dormant milk Co-operatives will be revived by providing basic essential infrastructure. The Project will be implemented by the Department of Dairy Development at a total cost of Rs.188.40 lakhs.

Budget

Project	Total amount (Rs. in lakhs)
1. Portable milking machines for farmers (DDD)	18.00
2. Milk weighing machine for milk producers co-op. societies (DDD)	58.65
3. P.C.based automatic milk collection stations to IDF villages milk producers cooperative societies (DDD)	71.75
4. Revival of dormant MPCS (DDD)	40.00
Total	**188.40**

Background / Problem focus

- Hand milking is time consuming, laborious and unhygienic, More over availability of skilled milk men is also problem now a days. With more and

more number of high yielding cows, the number of milking also has to be increased which Necessitate continuous engagement of milk man.

- The milk pricing depends on total solid content and hence any problem in milk weighment badly affects the return to farmers.
- Not – so – Transparent activities at milk collection centres and problem in maintaining summary of milk supplied on daily, monthly and yearly basis affects the confidence of milk pourers.
- Non-functional, dormant but potential milk societies for want of certain basic infrastructure forces the farmers to depend on private vendors resulting in exploitation.

Project Rationale

- Introduction and popularization of simple machine milking will not only minimize milkmen problem but also avoid in unhygienic milk handling.
- Introduction of electronic weighing machines at the milk procuring societies and vis-a vis transparency will not only reduce man power involvement and pilferage but also improve efficiency in milk procurement
- Installation of Automatic Milk collection Stations (AMS) will automatically measure weight of milk, fat content and total solid and give print out of payment slip to farmers. The AMC with personal computer will maintain complete record of the Dairy Co-operative together with all transactions.
- By providing essential milk procuring equipments and other infrastructure for record maintenance etc. the hitherto dormant milk societies could be revived and milk procurement increased. It will also free the farmers from the clutches of exploiting private vendors.

Project Strategy

- Popularizing machine milking by providing portable milking machine to a total of 100 milk pourers in 4 years period with 100% subsidy.
- Providing electronic milk weighing machines to a total of 345 Co-operative milk societies procuring more than 500 lt milk per day.
- Providing P.C. based Automatic Milk collection Station facility to a total of 41 milk producers Co-operative societies procuring more than 1000 lt per day.
- Revival of a total of 40 hitherto dormant but potential milk societies by providing basic and essential milk procuring infrastructure.

Project Goals

- To increase the milk procurement and reduce exploitation by private milk vendors.
- To minimize labour problem in milking, milk procurement and avoid unhygienic milk handling.
- To ensure transparency in milk weighment at milk collection centre.
- To introduce automation in milk procurement and improve efficiency of milk handling.

Project Components

- Supply of Portable simple milking machine costing Rs.0.18 lakh each to 100 milk pourers at 100% subsidy.
- Supply of electronic milk weighing machines costing Rs.0.17 lakh each to 345 Co-operative milk societies.
- Installation of PC based AMS having integrated milk weighing system, Electronic milk testing, Personal Computer with printer and battery with a capacity to analyze 120 – 150 milk samples per hour costing Rs.1.75 lakhs to each of 41 Co-operative milk societies.
- Reviving 40 dormant but potential milk societies each at the cost of Rs.1.00 lakh.

Project Cost and Financing

Project	2008-2009	2009-2010	2010-2011	2011-2012	Total amount (Rs. in lakhs)
1. Portable milking machines for farmers @ Rs. 0.18 lakh / unit, 25 units / year for 4 years (DDD)	4.50	4.50	4.50	4.50	18.00
2. Milk weighing machine for milk producers co-op.societies @ Rs.0.17 lakh/unit, for 345 units (DDD)	15.30	14.45	14.45	14.45	58.65

3. P.C. based automatic milk collection stations to IDF villages milk producers cooperative societies @ Rs. 1.75 lakhs / unit for 41 units (DDD)	19.25	17.50	17.50	17.50	71.75
4. Revival of dormant MPCS @ Rs. 1 lakh/unit, 10 societies / year for 4 years (DDD)	10.00	10.00	10.00	10.00	40.00
Total	**49.05**	**46.45**	**46.45**	**46.45**	**188.40**

Implementation Chart of the Project

Project	2008-2009	2009-2010	2010-2011	2011-2012
1. Supply of Portable Milking machine for farmers.(DDD)	✓	✓	✓	✓
2. Provision of electronic milk weighing machine for Co-operative milk societies (DDD)	✓	✓	✓	✓
3. Provision of P.C based AMS for Co-operative milk societies (DDD)	✓	✓	✓	✓
4. Revival of dormant Co-operative milk societies (DDD)	✓	✓	✓	✓

Reporting

Concerned project implementing agency will report the progress to respective financial authorities.

e. Strengthening the Infrastructure for Milk Processing

Abstract

The unhygienic handling of milk by the milk men and unclean milk production by few milk pourers due to lack of awareness introduces bacterial contamination in fluid milk. Further the odd hour milking and more time taken for transporting the contaminated milk to processing unit increases the bacterial load in milk and escalate the processing cost. This project aims to check the bacterial load in procured fluid milk at the milk collection centres and processed packed milk at retail ends. It further aims at converting the excess fluid milk to value added products. This project proposes to improve the infrastructure facilities both at Co-operative milk societies and District Co-operative Milk Producers Federation Dairy to achieve the above aims. The proposal includes establishing 5000 litres capacity bulk milk cooler

at villages, walk–in cooler at retail end, facility to manufacture ice-cream, milk khoa, and paneer. The project also proposes strengthening of the quality assurance laboratory at Salem dairy at a total cost of Rs.10.00 lakhs. A proposal on energy management system to utilize solar energy for reducing the fuel cost on processing is also included. The total cost of the project is Rs.90.37 lakhs. The Department of Dairy Development will implement this project.

Budget

Project	Total amount (Rs. in lakhs)
1. Bulk milk cooler (DDD)	30.00
2. Walk-in coolers (DDD)	30.00
3. Manufacturing facilities for milk khoa (DDD)	3.85
4. Manufacturing facilities for ice cream (DDD)	4.48
5. Manufacturing for Panneer (DDD)	2.04
6. Strengthening of quality assurance laboratory (DDD)	10.00
7. Establishment of Energy management systems (DDD)	10.00
Total	**90.37**

Background / Problem Focus

- The district of Salem Producers 4.36 lakh tonnes of milk annually through Co-operative Societies spread over the district.
- The milk procured from Co-operative Societies has to be chilled within half an hour of milking to check further multiplication of bacterial load. More over customary odd hour milking in late evening by the farmers necessitate storing of procured milk at the milk co-operatives before transportation next day.
- It is also necessary to convert the excess fluid milk into products which are in demand.
- The quality of the processed milk and products have to be assessed regularly
- The ever increasing fuel cost and processing increases the production cost of milk and milk products.

Project Rationale

In the district of Salem about 4.36 lakh tonnes of milk are collected annually from rural areas. By establishing milk coolers the fluid milk could be chilled and stored at milk collection centres and the walk -in -coolers will store the processed and packed milk. These measures will keep the bacterial load at minimum and reduce the processing cost. Further utilization of solar energy for milk processing will reduce the cost of process of milk.

Project Strategy

- Establishing bulk milk coolers along the rural operating milk routes to maintain quality of fluid milk.
- Locating walk–in-coolers at retail ends in urban areas to maintain quality of packed milk.
- Establishing Milk khoa, Panneer and ice cream manufacturing facilities at the District Co-operative milk producers union Dairy to utilize excess fluid milk.
- Strengthening the quality assurance laboratory at Salem to provide assessment of quality of the
- milk and milk products.
- Utilizing the solar energy for water heating units to reduce the processing cost.

Project Goal

- To check the bacterial load of unprocessed fluid milk procured in rural collection centres.
- To establish facilities to manufacture milk khoa, panneer and Ice cream.

Project Components

- Establishing one number of 5000 litres capacity bulk milk cooler in one of the milk collection centres of milk co-operative at the total cost of Rs.30.00 lakhs
- Establishing a Walk – in – Cooler in urban retail end at the total cost of Rs.30.00 lakhs.
- Establishing five Milk Khoa manufacturing units at the total cost of 3.85 lakhs in 4 years period at the District Co-operative Milk Producers Union Dairy.

- Establishing four ice cream manufacturing units at the total cost of Rs.4.48 lakhs in 4 years period at the District Co-operative Milk Producers Union Dairy.
- Establishing two paneer manufacturing units at the total cost of Rs.2.04 lakhs in 4 years period at the District Co-operative Milk Producers Union Dairy.
- Establishing one number of solar water heating unit of 5,000 litres capacity @ Rs.10.00 lakhs in the processing unit.
- Strengthening quality assurance laboratory at total cost of Rs.10.00 lakhs.

Quality Assurance Lab

Sl. No.	Name of the equipment	Amount in lakhs
1.	Incubator	0.35
2.	Hot air oven	0.35
3.	Water bath	0.35
4.	Auto clave	0.30
5.	Microscope	0.50
6.	Laminar air flow	0.50
7.	Refrigerator	0.35
8.	Air conditioner	0.35
9.	Analytical Balance	2.00
10.	Water Distillation Plant	0.35
11.	Glass ware	0.50
12.	Chemicals & Bacteriological media	0.50
13.	Furniture and work tables	0.50
14.	Colony counter	0.10
15.	PH, TDS meter	1.00
16.	Civil work	2.00
	Total	**10.00**

Project Cost and Financing

Project	2008-2009	2009-2010	2010-2011	2011-2012	Total amount
1. Bulk milk cooler @ Rs. 30 lakhs / unit (DDD)	30.00	0	0	0	30.00
2. Walk-in coolers @ Rs. 30 lakhs / unit (DDD)	30.00	0	0	0	30.00
3. Manufacturing facilities for milk khoa @ Rs.0.77 lakh/unit for 5 units (DDD)	2.31	0.77	0.77	0	3.85
4. Manufacturing facilities for ice cream @ Rs. 1.12 lakhs/unit for 4 units (DDD)	2.24	2.24	0	0	4.48

5. Manufacturing facilities for Paneer @ Rs. 1.02 lakhs / unit for 2 units (DDD)	1.02	1.02	0	0	2.04
6. Strengthening of quality assurance laboratory @ Rs. 10 lakhs / unit (DDD)	10.00	0	0	0	10.00
7. Establishment of Energy management systems @ Rs.10 lakhs (Solar water heating unit - 5000 litres – 1 unit) - (DDD)	10.00	0	0	0	10.00
Total	**85.57**	**4.03**	**0.77**	**0**	**90.37**

Implementing Chart of the Project

Project	2008-2009	2009-2010	2010-2011	2011-2012
1. Bulk milk cooler (DDD)	✓			
2. Walk-in coolers (DDD)	✓			
3. Manufacturing facilities for milk khoa (DDD)	✓	✓	✓	
4. Manufacturing facilities for ice cream (DDD)	✓	✓		
5. Manufacturing facilities for Paneer (DDD)	✓	✓		
6. Strengthening of quality assurance laboratory (DDD)	✓			
7. Establishment of Energy management systems (DDD)	✓			

Reporting

Concerned Project implementing agency will report the progress to respective financial authorities.

f. Establishment of MMPO Quality Control Laboratory

Abstract

The milk and milk products order (MMPO) 1992 mandates ensuring quality in milk and milk products. So it is imperative that regular inspection, sample collection and assessment of their quality be carried out. Hence it is necessary to establish a full pledged laboratory under the control of Registering Authority in adherence to rule 23 of MMPO to ensure safe, good quality milk and milk products confirming to prescribed standards. A MMPO quality control laboratory will be established at the Salem Dairy to assess the quality of milk and milk products. The cost of establishing

the laboratory is Rs.56.00 lakh. The Department of Dairy Development will implement this project.

Budget

Project	Cost (Rs. in lakhs)
Establishment of MMPO Quality Control Laboratory at Salem (DDD)	56.00

Background / Problem Focus

The Milk and Milk Products Order '92 was promulgated by the Government of India for maintaining and increasing supply of milk and milk products of the desired quality in the interest of the consuming public, by regulating the production, supply and distribution. The major objective of the Order is to ensure, quality of milk and milk products produced by the Units.

Project Rationale

As milk is being produced / handled in rural areas and transported to towns and cities for supply, there is ample opportunity for bacterial contamination, addition of neutralizers, preservatives and adulterants. At present many private dairies are also processing and supplying milk to urban consumers. The quality of their supplies may vary greatly, because of careless operation, willful adulteration by unscrupulous operators. The processing operation may also lack careful supervision and proper checks at their level carried out under improper sanitary / hygienic conditions.

Project Strategy

It is imperative that regular inspection, collection of samples from their premises, from market, analyze the samples to ensure, that the quality meets the standards prescribed under the law. Considering the above objectives, responsibility, volume of work and nature of functions it is suggested that a full pledged laboratory with specialized staff is to be established under the control of the registering authority in adherence to the rule 23 of MMPO. The MMPO quality control laboratory will

analyze and take up the analytical checks to ensure safe, good quality milk and milk products conforming to the prescribed standards.

At present in Tamil Nadu there are 17 Cooperative Dairies and 20 private dairies have obtained their Registration functioning. At this juncture to implement the MMPO92 effectively at regional level, it is proposed to establish MMPO quality control laboratory at Madurai initially. The man power may be met out from Dairy Development Department or drafting from other Departments with proper training.

Project Goals

- To ensure quality of Milk and Milk products in the interest of public.
- To avoid unscrupulous practice in the dairy sector.
- To prevent adulteration
- To enhance the quality to meet out the international standards.
- Analysis of statutory samples.
- Analysis of third party samples on cost basis.

Project Components

- Civil structure for 1000 sqr.ft at the rate of Rs.1200/- per sq.ft.
- Laboratory equipment

1.	Hot air oven Thermo regulated	-	3
2.	Auto clave (Horizontal and Vertical)	-	2
3.	Drier Thermo regulated	-	1
4.	Incubator (ambient to 50deg)	-	2
5.	Gerber Centrifuge (Electrically operated)	-	1
6.	Thermo regulated water bath	-	2
7.	Circulating thermo regulated water bath	-	1
8.	Steam water bath (8 hole insulated)	-	2
9.	Weighing machine Digital (Top pan)	-	1
10.	Laminar Airflow unit	-	1
11.	Centrifuge for SMP	-	1
12.	Gaiger Colony counter	-	1

13. Binocular Microscope with CCTV Monitor	-	1
14. Metler Micro weighing balance	-	1
15. Scarched particles analyzer	-	1
16. Moisture analyzer	-	1
17. PH meter	-	1
18. Refrigirator	-	1
19. Deep freezer	-	1
20.Millipore water purifying system	-	2
21. Hotplate	-	1
22. Inverter	-	1
23. Gas Stove with gas provision	-	1
24. Pressure cooker	-	1
25. Thermo regulated micro oven	-	1
26. Sample mixer	-	1
27. BOD incubator	-	1
28. Sampling kits for Milk and Milk Products	-	2
29. Misc. Equipments		

- Glass ware, glass ware apparatuses
- Chemicals and consumables
- Furniture and accessories
- Computer with printer and accessories
- Jeep for sample collection
- Training
- Jeep (Statutory samples of Milk & Milk products have to reach the bacteriological laboratory within few hours from the time of collection of samples under refrigeration temperature. Hence, Jeep has been proposed. The available driver will be utilized on redeployment basis).

Project Cost and Financing

Project	2008-2009	2009-2010	2010-2011	2011 - 2012	Total amount (Rs. in lakhs)
Establishment of MMPO Quality Control Laboratory at Salem @ Rs. 56 lakhs (DDD)	0	56.00	0	0	56.00

Implementation Chart of the Project

Title	2008-2009	2009-2010	2010-2011	2011-2012
Establishment of MMPO Quality Control Laboratory at Salem (DDD)		✓		

Reporting

Concerned Project implementing agency will report the progress to respective financial authorities.

B. Small Ruminants

a. Establishment of Quality Germ plasm Production Centres

Abstract

Inbreeding and non-availability of quality germ plasm are the major reasons for low productivity in small ruminants. The Government farms which are the major sources of germ plasm input do not cope up with the demand. The Project aims at establishing germ plasm production centres by SHG for distribution to other needy farmers at nominal rates. The project proposes to encourage the SHG / Elite farmers to start a total of 40 ram / buck production centres by providing 50% subsidy in Salem district in 4 years at a total cost of Rs.20.00 lakhs. The Project also proposes to supply quality rams / bucks to 40 organized farms at the rate of 2 animals per block at 100% subsidy which will be rotated for every 2 years at a total cost of Rs.1.60 lakhs. The cost of each animal is Rs.4000/-The Department of Animal Husbandry will implement the above projects at the total cost of Rs. 21.60 lakhs. The project proposes to strengthen the infrastructure for sheep and also for goat production at Mecheri Sheep Research Station, Pottaneri at a total cost of Rs. 75.00 lakhs. This project will be implemented by the Tamil Nadu Veterinary and Animal Sciences University.

Budget

Project	Total amount (Rs. in lakhs)
1. Quality ram / buck production centre for distribution of quality germ plasm by SHGs @ 2/Bl (DAH)	20.00
2. Supply of rams / bucks to SHGs / Elite farmers @ 2/Bl (DAH)	1.60
3. Strengthening of infrastructure for sheep at Mecheri Sheep Research Station to distribute germ plasm (TANUVAS)	50.00
4. Strengthening of infrastructure for Goat at Mecheri Sheep Research Station to distribute germ plasm (TANUVAS)	25.00
Total	**96.60**

Background / Problem Focus

The district of Salem possesses 3.71 lakh sheep and 4.97 lakh goats. However the economic traits in the small ruminants are poor due to heavy inbreeding and poor nutrition resulting in decreased meat production.

Project Rationale

Non-availability of quality male and female germ plasm has resulted in severe inbreeding in small ruminant production of the district. The farmers mainly depend on Government farms for the quality male germ plasm. However if the SHG / tribes/elite farmers are encouraged to establish germ plasm production centres, the inbreeding could be minimized and meat production increased.

Project Strategy

A number of Government and Non-Government Organizations are engaged in breeding of small ruminants though their number is not large. So there is need to rope in such organizations and encourage others in small ruminant breeding on scientific lines for production of rams and bucks so that such organizations can supplement the efforts of Government farms in meeting the requirement of breeding stock.

Project Goal

- To supply quality GermPlasm to needy farmers.
- To avoid inbreeding.
- To increase meat production.

Project Components

- Providing 50% subsidy in the total cost of Rs.1.00 lakh to start 20+1 ram / buck production centres farm by SHG /Elite farmers / tribes at the rate of 2 units per block. The total cost include

Unit cost for quality ram / buck production centre in lakhs **Rs.**

Cost of animals (20+1)	:	0.53
Land Development	:	0.06
Renovation of Civil structure	:	0.10
Minor irrigation	:	0.05
Equipments	:	0.04
Fodder Production	:	0.10
PM facility	:	0.04
Working Capital	:	0.08
Total	**:**	**1.00**

- Supply of Rams / Bucks at 100% subsidy to SHG / Elite farmers / Tribes having sheep or goat farm at the rate of 2 per block. The cost of each animal is Rs. 4,000 and a total of 40 animals will be supplied in four year of the project at the total cost of Rs.1.60 lakhs.
- The Sheep Unit at Mecheri Sheep Research Station, Pottaneri will be strengthened by including 1000 female and 50 male animals at the cost detailed below:

Particulars	Cost
Purchase of 1000 female animals @ Rs.3000/-	30.00
Purchase of 50 male animals @ Rs.4000/-	2.00
Animal sheds & buildings	5.00
Land development, Fencing, Irrigation, Water, Electricity, Pastures	5.00
Field Survey for selection of animals	2.00
Miscellaneous items	4.00
Recurring expenses	2.00
Total	**50.00**

The Goat unit at Mecheri Sheep Research Station, Pottaneri will be strengthened by including 500 Does and 25 Bucks at the cost detailed below:

Particulars	Cost
Cost of Animal	
a. Bucks (25) @ Rs.3000/-	0.75
b. Does (500) @ Rs.2500/-	12.50
Land Development	
a. Fencing	1.00
b. Wasteland and pasture development	1.50
Renovation of civil structure	2.50
Post mortem facility and laboratory	1.00
Minor irrigation structures	
Deepening of bore well, Submersible pumps, pipelines & renovation of overhead tank etc.,	1.05
Equipment	
Feed troughs & water pails	0.21
Chaff cutter	0.25
Animal Handling facility, Veterinary equipments	0.50
Cost of fodder cultivation	2.00
Working Capital	
a. Salary of Manager	0.84
b. Feeding for one cycle	0.72
c. Veterinary aid & labour	0.30
Total	**25.12** **Say 25.00**

Project Cost and Financing

Project	2008-2009	2009-2010	2010-2011	2011-2012	Total amount (Rs. in lakhs)
1.Quality ram / buck production centre for distribution of quality germ plasm by SHGs @ Rs. 1 lakh /unit with 50% subsidy for 10 units / year for 4 years (DAH)	5.00	5.00	5.00	5.00	20.00
2.Supply of rams / bucks to SHGs / Elite farmers @ Rs. 4000 for 10 animals / year for 4 years (DAH)	0.40	0.40	0.40	0.40	1.60
3.Strengthening of infrastructure for sheep at Mecheri Sheep Research Station to distribute germ plasm @ Rs. 50 lakhs (TANUVAS)	50.00	0	0	0	50.00
4.Strengthening of infrastructure for Goat at Mecheri Sheep Research Station to distribute germ plasm @ Rs. 25 lakhs (TANUVAS)	25.00	0	0	0	25.00
Total	**80.40**	**5.40**	**5.40**	**5.40**	**96.60**

Implementing Chart of the Project

Project	2008-2009	2009-2010	2010-2011	2011-2012
Quality ram / buck production centre for distribution of quality germ plasm by SHGs @ 2/Bl (DAH)	✓	✓	✓	✓
Supply of rams / bucks to SHGs / Elite farmers @ 2/Bl (DAH)	✓	✓	✓	✓
Strengthening of infrastructure for sheep at Mecheri Sheep Research Station to distribute germ plasm (TANUVAS)	✓			
Strengthening of infrastructure for Goat at Mecheri Sheep Research Station to distribute germ plasm (TANUVAS)	✓			

Reporting

Concerned Project implementing agency will report the progress to respective financial authorities.

b. Popularization of Scientific Small Ruminant Farming Systems

Abstract

The district of Salem possesses 8.69 lakh heads of sheep and goat which are maintained only on extensive system. In this system of management, the animals get good nutrition only for 3-4 months in a year and later, particularly during summer, the farmers resort to distress sale for want of fodder. The growth rate, dressing percentage and meat quality in these animals will be poor and fetch poor return. The semi intensive and Intensive systems of management have been evolved as an alternate to extensive system in which the animals get year round nutrition, good growth rate, dressing percentage, meat quality etc., This project aims to educate the farmers and popularize the semi-intensive and intensive management systems. The SHG/Tribes/Elite farmers who opt for semi intensive system of management for 20+1 unit will be given subsidy of Rs.0.25 lakh in the total cost of Rs. 0.50 lakh per unit by waiving the margin money and bank loan while availing the bankable schemes. A total of 500 units (20+1) will be established in 4 years at the total cost of Rs.125.00 lakhs. The project also proposes to popularize the prime ram lamb / he kid production under intensive system of management by providing 50% subsidy in the total cost of Rs.8.40 lakh to SHG / Tribes / Elite farmers. A total of 20 units will be established in four years. Each unit will have 0+40 ram lambs / the kids in 2 batches of 0+20 each. The Department of Animal Husbandry will implement these projects at the total cost of Rs.133.40 lakhs in one year.

Budget

Project	Total amount (Rs. in lakhs)
1. Semi- intensive goat farming to supply germ plasm by SHGs @ 25 / block (DAH)	125.00
2. Prime lamd/Kid production (0+40)unit at 50% of total cost 0f Rs 0.42 lakh (DAH)	8.40
Total	**133.40**

Background / Problem Focus

The small ruminants in this district are maintained on Extensive system in which the animals receive good nutrition only for 3-4 months of monsoon and later

due to poor nutrition, their production goes down. Farmers resort to distress sale of their stock. This necessitates popularizing alternate systems of small ruminant production.

Project Rationale

By switching over to Semi intensive or Intensive systems of management with scientific interventions the animals receive year – round good nutrition and maintain good production potential with better cost benefit ratio. In these systems the available crop residues could also be effectively utilized.

Project Strategy

Semi Intensive System

The SHG / Tribes will be encouraged to start semi intensive small ruminant farming. The margin money and bearing loan to start the farm will be covered under subsidy from this project while availing bankable schemes. For 20+1 unit the total cost will be Rs.0.50 lakh of which margin money and bank loan will be Rs.0.125 and 0.125 lakh respectively. The beneficiaries at the rate of 25 per block will be covered and thus a total of 500 farms will be started in 4 years at the cost of Rs.125.00 lakhs.

Intensive System

Weaned ram lamb / kids will be intensively managed for 180 days and finished for meat purpose in prime lamb / prime kid production system. The number of units (0+40 in two batches of 0+20) will be one per block with 50% subsidy in cost of Rs.0.84 lakh. The total cost of this project is Rs.8.40 lakhs for 4 years.

Project Goal

To popularize scientific and proven alternate management systems like semi-intensive and intensive systems in small ruminants production with improved cost benefit ratio.

Project Components

- Providing Rs.0.25 lakh as subsidy in the bank loan (0.125 lakh) and Margin money (0.125 lakh) while availing bankable schemes to start 20+1 unit under semi-intensive system to SHG/Tribes selected at the rate of 25 per block.
- Providing 50% incentive in the total cost of Rs.0.84 lakh to start Prime ram lamb / he kid production centre in intensive management system (0+40 unit in 2 batches of 0+20) grown each batch for 6 months. The total cost will be

Cost of 20x2 batch lambs / kids	:	0.32
Housing 20 x 15sq.ft x Rs. 80	:	0.24
Equipments	:	0.04
Manual Chaffer (150-200kg /hr)	:	0.10
Feed cost (0.150 kg x180dx40xRs.8)	:	0.05
Fodder cultivation in 0.25 ac	:	0.05
Miscellaneous	:	0.04

Total	**:**	**0.84**

Project Cost and Financing

Project	2008-2009	2009-2010	2010-2011	2011-2012	Total amount (Rs. in lakhs)
1. Semi- intensive goat farming to supply germ plasm by SHGs @ Rs. 0.50 lakh/ unit with 50% subsidy for 125 units/ year for 4 years (DAH)	31.25	31.25	31.25	31.25	125.00
2. Prime ram lamb/ he Kid production (0+20 units in 2 batches (0+40) at 50% of total cost of Rs 0.84 lakh, 5 units/year for 4 years (DAH)	2.10	2.10	2.10	2.10	8.40
Total	**33.35**	**33.35**	**33.35**	**33.35**	**133.40**

Implementation Chart of the Project

Project	2008-2009	2009-2010	2010-2011	2011-2012
1. Semi- intensive goat farming to supply germ plasm by SHGs @ Rs. 0.50 lakh/ unit with 50% subsidy for 125 units/ year for 4 years (DAH)	✓	✓	✓	✓
2. Prime ram lamb/ he Kid production (0+20 units in 2 batches (0+40) at 50% of total cost of Rs 0.84 lakh, 5 units/year for 4 years (DAH)	✓	✓	✓	✓

Reporting

Concerned Project implementing agency will report the progress to respective financial authorities.

C. Strengthening of infrastructure to promote extension services

Abstract

Extension services are the linkages between Researchers and Farmers for transfer of technologies. In order to document the transferable technologies and transferring the same in a farmer – friendly mode the existing out-dated technology transfer aids be replaced with updated modern gadgets. The Project proposes to adopt one village each year to establish it as Model Livestock Village which will act as an open –air laboratory for other farmers to visit and learn. The model village will be developed to have self – sufficiency in fodder production and adopt new scientific technologies in farming systems. The Livestock in this village will have optimum and commendable Productive and Reproductive traits with zero disease outbreaks. The entire household possessing Livestock will be trained on livestock farming. The project also proposes to strengthen the existing audio visual aids in the training centre with modern, updated gadgets to articulate the message effectively to farmers. The model Livestock villages establishment and strengthening of training equipments to facilitate effective capacity building programmes will be taken up in all the four years. The Project also propose to strengthen the Avian Disease Diagnostic Laboratory at Thalaivassal with essential equipment for quick disease diagnosis in Poultry at the cost of Rs.1.50 lakhs. The Tamil Nadu Veterinary and Animal Sciences University will implement this project through its Training Centre located at Salem with total cost of Rs.52.50 lakhs for 4 years.

Budget

Project	Total amount (Rs. in lakhs)
1. Establishment of model livestock village to educate farmers (TANUVAS)	36.00
2. Strengthening of Training equipments for Technology dissemination at VUTRC (TANUVAS)	15.00
3. Strengthening of Avian Disease Diagnostic Laboratory at Thalaivassal (TANUVAS)	1.50
Total	**52.50**

Background / Problem focus

Extension services are the tools for Technology transfer in time to improve the socio economic condition of farmers. For better services, the extension unit need better audio visual aids, and demonstration units to provide conducive atmosphere for the farmers to learn.

Project Rationale

Documentation and remoulding of the Technologies in farmers friendly mode and transferring the same to farmers in an acceptable way requires modern electronic infrastructure.

Project Strategy

- Establishing Model Livestock Village for demonstration to farmers. This will act as an open laboratory for farmers to learn. The village will have self sufficiency in fodder, High yielding animals, integrated farming system, Livestock information centre etc.
- Strengthening the training equipments in the existing Training centres with modern updated electronic gadgets.
- Providing essential Disease Diagnostic equipments to Avian Disease Diagnostic Laboratory, Thalaivasal.

Project Goal

- To document transferable Technologies and transfer in farmers – friendly mode for adoption.
- To provide conducive learning atmosphere to farmers in Training centres.

Project Components

- One village in each year will be adopted and developed into a model livestock village which will have the followings:
    - Micro level fodder units.
    - Existing cows will be managed to have optimum productive and reproductive trails
    - Intensive scientific rearing of sheep and goat units.
    - Genetic up gradation of ND goats with Artificial insemination with Boer semen.
    - Integrated Livestock farming systems.
    - Clean milk production
    - Farming systems with other Poultry species.
    - Technology backed Backyard Poultry.

- Strengthening of Training equipments for conducting capacity building and Technology dissemination programmes at the Veterinary University Training Centre, Dharmapuri with Slide Projector, Projection screen, Digital camera, Lap Top, LCD Projector, DVD Player Vehicle mounted with Television and other audio visual aids for conducting off-campus Training and village level campaigns, Shamina, Handi Cam, Photo Copier, Fax and Chairs to farmers Trainees

- **ADDL Thalaivasal**

Sl. No.	Particulars	Amount (Rs. in Lakhs)
1.	Bacteriological incubator	0.25
2.	Centrifuge	0.25
3.	Moisture analyser	0.20
4.	Variable volume micro pipette	0.30
5.	Digital Ph Meter	0.05
6.	Computer for documentation and data anlysis	0.45
	Total	**1.50**

Project Cost and Financing

Project	2008-2009	2009-2010	2010-2011	2011-2012	Total amount (Rs. in lakhs)
1. Establishment of model livestock village to educate farmers @ Rs. 9.00 lakhs/ unit in 4 villages (TANUVAS)	9.00	9.00	9.00	9.00	36.00
2. Strengthening of Training equipments for Technology dissemination at VUTRC (Slide Projector, Projection screen, Digital camera, Lap Top, LCD Projector, DVD Player Vehicle mounted with Television and other audio visual aids for conducting off-campus Training and village level campaigns, Shamina, Handi Cam, Photo Copier, Fax and Chairs to farmers Trainees) - (TANUVAS)	15.00	0	0	0	15.00
3. Strengthening of Avian Disease Diagnostic Laboratory at Thalaivassal (TANUVAS)	1.50	0	0	0	1.50
Total	**25.50**	**9.00**	**9.00**	**9.00**	**52.50**

Implementation Chart of the Project

Project	2008-2009	2009-2010	2010-2011	2011-2012
1. Establishment of model livestock village to educate farmers (TANUVAS)	✓	✓	✓	✓
2. Strengthening of Training equipments for Technology dissemination at VUTRC (TANUVAS)	✓			
3. Strengthening of Avian Disease Diagnostic Laboratory at Thalaivassal (TANUVAS)	✓			

Reporting

Concerned Project implementing agency will report the progress to respective financial authorities.

D. Capacity Building and Technology Transfer Programmes

Abstract

Extension services provide the much needed information resource and develop the skill of Livestock growers to adopt newer technologies. Capacity building is a continuous process having the components of Training, Village level meetings, Demonstrations, Learning by seeing etc., The project aims to update the livestock growers with recent scientific interventions and develop their skill to adopt them. This project proposes to conduct year – round off-campus and on-campus training programmes, village level campaigns on scientific system of Livestock farming, conducting skill development programmes to technical staff, workshops and exposure visit. All the programmes proposed will be implemented for 4 years at a total cost of Rs.34.90 lakh. While all the trainings to farmers and study tour to Research Stations will be conducted by the Tamil Nadu Veterinary and Animal Sciences University through its training centre at Salem. The skill developmental programmes, study tour for milk pourers of Co-operative societies and workshop for milk producers at society level will be implemented by the Department of Dairy Development.

Budget

Project	Total amount (Rs. in lakhs)
1. Training programmes and village level campaign on livestock (TANUVAS)	13.20
2. Study tour of farmers to livestock and poultry research station @ 50 persons/batch with the cost of Rs 0.25 lakh /batch (TANUVAS)	4.00
3. Farmers study tour @ Rs.5000/- per farmer (DDD)	7.50
4. Skill development for technical staff (DDD)	7.00
5. Orientation training / workshop for milk producers at society level (DDD)	3.20
Total	**34.90**

Background / Problem focus

Extension Services are the tools for Technology transfer and capacity building to the Livestock growers. The Extension services provide the much needed information resource to the Livestock growers to update their technical skill.

Project Rationale

Continuous updating of Technical skill is needed to the livestock growers for application of scientific interventions in Livestock farming systems to improve the production.

Project Strategy

- Conducting off -campus and on -campus Training programmes and village level campaigns on scientific system of Livestock farming.
- Conducting skill development programmes for Technical staff.
- Conducting farmers study tour to expose them to various organized farms and Research Stations.
- Providing orientation Training / Workshop for milk pourers at society level.

Project Goal

- To update the Livestock growers with recent scientific interventions.
- To provide a platform to Livestock growers for interaction with Researchers to update their skills.
- To Transfer viable Technologies for adoption to increase Livestock Production.

Project Components

- Conducting 32 Training programmes and 12 village level campaigns on Livestock Production to farmers at a total cost of 13.20 lakh.
- Conducting exposure visit to Research Stations in 4 batches of 50 farmers in each batch / year at a total cost of Rs. 4.00 lakh.
- Conducting study tour to 40 continuous milk pourers annually to organized dairy farms and Dairies at a total cost of Rs.7.50 lakh.
- Conducting skill development programmes for 140 Technical staff of milk societies in four years at a total cost of Rs.7.00 lakh
- Conducting 4 workshops annually for 4 years to milk pourers at society level at a total cost of Rs.3.20 lakh.

Project Cost and Financing

Project	2008-2009	2009-2010	2010-2011	2011-2012	Total amount (Rs. in lakhs)
1. Training programmes and village level campaign on livestock @ Rs. 3.30 lakhs per year for conducting 8 training programmes and 3 village level campaigns for 4 years (TANUVAS)	3.30	3.30	3.30	3.30	13.20
2. Study tour of farmers to livestock and poultry research station @ 50 persons/batch with the cost of Rs 0.25 lakh/batch for 4 batches per year for 4 years (TANUVAS)	1.00	1.00	1.00	1.00	4.00
3. Farmers study tour @ Rs.5000/- per farmer for 150 farmers in 4 years (DDD)	2.00	2.00	2.00	1.50	7.50
4. Skill development for technical staff @ Rs.5000 per staff for 140 staff (DDD)	1.75	1.75	1.75	1.75	7.00
5. Orientation training / workshop for milk producers at society level @ Rs. 0.2 lakh per training, 4 trainings per year for 4 years (DDD)	0.80	0.80	0.80	0.80	3.20
Total	**8.85**	**8.85**	**8.85**	**8.35**	**34.90**

Implementation chart of the project

Project	2008-2009	2009-2010	2010-2011	2011-2012
1. Training Programme and village level campaign	✓	✓	✓	✓
2. Study Tour of farmers to Research Stations	✓	✓	✓	✓
3. Study Tour to milk pourers Co-operative Milk Societies	✓	✓	✓	✓
4. Skill development programme for Technical staff	✓	✓	✓	✓
5. Workshop for Milk Producers at Society Level	✓	✓	✓	✓

Reporting

Concerned Project implementing agency will report the progress to respective financial authorities.

6.4 FISHERIES SECTOR

Table 6.12 Budget Proposal – Fisheries Sector – 2008 – 2012

(Rs. in Lakhs)

Sl. No	Components	Implementing Agency	Unit cost Rs.in lakh)	Total	2008-09		2009-10		2010-11		2011-12		Total cost (Rs.in lakh)
				units	Units	cost	Units	cost	Units	cost	Units	cost	
1	**Fish Seed Production**												
	a. Repair and renovation	Fisheries Department	0.0150	2500m2	2500m2	37.50							37.50
	b. Creation of additional nursery space	Fisheries Department	0.03	10000m2	2500m2	75.00	2500	75.00	2500	75.00	2500	75.00	300.00
	c. Cage culture of seeds with 90% subsidy	Fisheries Department	0.13	20 No	20	2.64							2.64
	d. Private participation with 50% subsidy	Fisheries Department	15.00	4Ha	1	15.00	1	15.00	1	15.00	1	15.00	60.00
2	**Expansion of fish culture**												
	a. Supply of fish seeds with 50% subsidy	Fisheries Department	0.01	7500 Ha	2000Ha	10.00	1500	7.50	2000	10.00	2000	10.00	37.50
	b. Private fish farming with 50% subsidy	Fisheries Department	1.00	40 Ha	10 Ha	10.00	10	10.00	10	10.00	10	10.00	40.00
	c. Introduction of fish culture in cages with 90% subsidy	Fisheries Department	2.10	20.00	5.00	10.50	5	10.50	5	10.50	5	10.50	42.00
3	**Infrastructure development in harvest and post harvest sector**												
	a. Supply of fishing implements with 90% subsidy	Fisheries Department	0.18	300.00	100.00	18.00	100	18.00	100	18.00			54.00

Sl. No	Components	Implementing Agency	Unit cost Rs.in lakh)	Total units	2008-09		2009-10		2010-11		2011-12		Total cost (Rs.in lakh)
					Unit	cost	Unit	cost	Unit	cost	Unit	cost	
	b. Development of landing centre with 100% grant	Fisheries Department	10.00	4.00	1.00	10.00	1	10.00	1	10.00	1	10.00	40.00
	c. Setting up of flake ice units at landing centres and marketing centres (90%subsidy)	Fisheries Department	2.25	8.00	2.00	4.50	2	4.50	2	4.50	2	4.50	18.00
	d. Supply of insulated Ice boxes (50 Kg capacity) 90% subsidy	Fisheries Department	0.02	1000.00	250.00	4.50	250	4.50	250	4.50	250	4.50	18.00
	e. Supply of insulated vans with 100% grant to MDFCMS	Fisheries Department	10.00	1.00	1.00	10.00							10.00
	f. Supply of mopeds with insulated ice boxes (50% subsidy)	Fisheries Department	0.15	50.00	20.00	3.00	20.00	3.00	10	1.50			7.50
	g. Setting up of modern fish stall	TNFDC	10.00	6.00	2.00	20.00	2.00	20.00	2	20.00			60.00
	Desilting of Kannankurichi Mookaneri, ElamBiroji and Servai puthur lake	Fisheries Department	5/Ha	6.00	2.00	10.00	2.00	10.00	2	10.00			30.00
	Fisheries - Total					**240.64**		**188.00**		**189.00**		**139.50**	**757.14**

4	**Capacity building through training (Fisheries Dept. and TANUVAS)**												
	a. Trainers training @ Rs. 5000 / unit - 5 members	TANUVAS	0.50	12.00	3.00	1.50	3.00	1.50	3	1.50	3	1.50	6.00
	b. Farmers training @ Rs. 1200 / unit - 1 member	TANUVAS	0.01	400.00	100.00	1.00	100	1.00	100	1.00	100	1.00	4.00
5	**Research and Development (TANUVAS)**												
	a. Breeding of endemic ornamental fishes (100% grant) Regional Training Centre	TANUVAS	60.00	1.00	1.00	60.00							60.00
	b. River ranching of native fish varieties	TANUVAS	10.00	1.00	1.00	10.00							10.00
	TANUVAS - Total					**72.50**		**2.50**		**2.50**		**2.50**	**80.00**
	Grand - Total					**313.14**		**190.50**		**191.50**		**142.00**	**837.14**

V. Project

Fish Seed Production

Repair and renovation

Abstract

The existing facilities available for fish seed production are in a dilapidated status and need to be rectified by suitable renovation of the damaged structures.

Budget : Rs. 37.50 lakhs

Background / Problem Focus

Fish seed production and rearing is being taken up in the government Fish Farm located in Mettur. The total area of the Government fish farm is 15 acres.

Project Rationale : To promote quality fish production

Duration : 1 year

Area of Implementation : Mettur

Project Cost & Financing

Unit cost	0.015 lakhs * broodstock, nursery & rearing tank repair
No. of units	2500m^2
Total cost	37.50 lakhs

Implementation chart of the project

S.No	Particulars	2008-09	2009-10	2010-11	2011-12
1.	Preparation of plan and estimate and execution	√			
2.	Seed stocks	√			
3.	Tender floating Completion of repair work Stocking fish seeds		√ √		√

b) Creation of additional nursery space

Abstract

The total seed requirement is 60.00 lakh. For this an additional nursery area of 10,000m2 is to be created at the existing fish seed farm at Mettur Dam.

Budget : Rs.300.00 lakh

Background/Problem Focus

To produce 60 lakh fingerlings per annum, this 10,000m2 area of additional nursery is essential. Hence an additional nursery is required.

Project Rationale

To overcome this problem, proposal for additional fish seed rearing centre at Mettur is inevitable. In the unutilized area of available farm, we can create additional rearing space by constructing new nurseries.

Project strategy

- To strengthen the Government Fish Seed Farm at Mettur dam
- To increase the seed production to fulfill the requirements of the district.
- To increase the fish production to the optimum level.

Project Goals

- To create additional facility for seed production
- To make use of the vacant space for fish seed production unit
- To attain fish seed production of 60.00 lakh per annum
- To fulfill the present gap of fingerlings requirement is 55.00 lakh at present level.

Project components

- ❖ Fish seed production hatcheries and nurseries-seed production

Project Cost and Financing

The cost towards construction of additional nurseries in vacant space of existing Mettur Fish Seed Farm is as follows: -

Unit cost	;	Rs.75,00,000/-
No. of units	:	1 ha.
Total cost	:	Rs.300,00,000/-
Duration	:	4 years

1.	Construction /repairing the existing nursery pond	30 lakhs
2.	Cost of pumps, motor and pipes	20 lakhs
3.	Cost of fencing, lighting, lab and coolie	15 lakhs
4.	Cost of management- feed, brood stock, medicines etc.	10 lakhs
	Total	**75 lakhs**
	For 4 units	**Rs.300.00 Lakhs**

Implementation Chart of the Project

S.No	Particulars	2008-09	2009-10	2010-11	2011-12
1.	Construction of the fish seed farm	√			
2.	Stock of seeds and operation		√	√	√

Reporting

The project will be implemented by the Department of Fisheries.

c) Cage culture of Seeds with 90% Subsidy

Abstract

It is proposed to promote rearing of seeds in cages by extending 90% subsidy for purchase of cages. A total of 20 units of cages will be provided to fishers at a cost of 2.64 lakh.

Budget : Rs.2.64 lakh

Background/Problem Focus

The district show sudden spurt in fish seed demand soon after the onset of the North East monsoon. Fish seed rearing in cages will help maintaining the seed stock to meet the seed requirements at times of emerging situations. Cage culture also offers additional income to the farmers.

Project Rationale

To produce 2 lakh fingerlings in a year farmers in a year a subsidy of 90% of the total budget of Rs.2.64 lakhs for the procurement of 20 cages

Project Strategy

- Making use of the open water system for fish seed rearing in cages
- Expecting more recovery of the fish seeds from the open water system
- Meeting the fish seeds requirements in time
- Enhancing to seed production in the larger water bodies
- Ensuring quality fish seeds for stocking
- Additional income to the fish farmers

Project Goals

- To make use of the open water system for fish seed rearing in cages
- To get more recovery of the fish seeds from the open water system
- To meet the fish seeds requirements in time
- To enhance to seed production in the larger water bodies
- To ensure quality fish seeds for stocking

Project Components

- Identification of interested fish farmers for availing subsidy -50%
- Cage fabrication and fish seed stocking
- Rearing, fish feed, monitoring of the programme

Project Cost and Financing

Subsidy per unit : Rs.15,200/-

Number of units : 20

- Project cost - Rs. 2.64 lakh

1.	Unit Cost (Fabrication of cage)	0.13 lakh
2.	Total Unit	20 Nos.
3.	Total cost	2.64 lakh

Implementation Chart

Sl. No.	Particulars	2008-09	2009-10	2010-11	2011-12
1.	Fabrication of cages and supply	√	√	√	√
2.	Seed stocking and rearing in cages and restocking in the water bodies or selling	√	√	√	√

Reporting

The functioning and progress of the work will be periodically monitored by State Fisheries Department Officials and reviewed by the Commissioner or Joint Director of Fisheries

d) Fish Farming with Private Participation in Seed Rearing with 50% Subsidy

Abstract

It is proposed to promote rearing of seeds by private farmers by extending 50% subsidy. A total of 4 ha farm will be supported at a cost of Rs. 60.00 lakh.

Budget : Rs.60.00 lakh

Background / Problem Focus

- Cauvery river flows across the district and has major beneficiary of river system
- Inadequate infrastructure development causing problems to attain self Sufficiency in seed production
- Fish seed production / Rearing is not adequate. The fish seed demand is mostly met Import from other Districts / States near by.

- ❖ Fish seed production / rearing in private sector has been not encouraged to minimize intake from neighboring States.
- ❖ Fish culture activity shall be encouraged by extending 50% subsidy on inputs.

Project Rationale

- ❖ Infrastructure development to attain self sufficiency in seed production
- ❖ Fish seed production / rearing in private sector should be encouraged to minimize import from other States.
- ❖ Fish culture activity shall be encouraged by extending 50% subsidy on inputs.

Project Strategy

Mismatch of major carp breeding season and water availability period in tanks. Inadequate infrastructure facilities for seed rearing and fish marketing. So seed of carps in enhance.

Project Goals

- ❖ To increase good quality fish Seed and fish production capacity
- ❖ To expand fish culture in hitherto unutilized water bodies.
- ❖ To produced 10 lakh crab seeds every year.

Project Components

Repair / Renovation of Carp nurseries, Provision of bore well, Water supply arrangement, Crap seeds and 50% subsidy.

Project Cost and Financing

Unit cost - 15,00,000.00

a. Subsidy for pond renovation per ha.	3,00,000.00
b. Chinese hatchery	6,00,000.00
c. Pumps and motor	1,00,000.00
d. Nursery pond preparation	3,00,000.00
e. Broodstock preparation	1,00,000.00
f. Management cost	1,00,000.00
Total	**15,00,000.00**
Total 15,00,000 x 4	**60,00,000.00**

Implementation chart of the project

S.No	Particulars	2008-09	2009-10	2010-11	2011-12
1.	Rearing of seeds	√	√	√	√
2.	Completion of civil works	√	√	√	√

Reporting

The project will be implemented by Department of Fisheries.

Expansion of Fish Culture

a) Supply of Fish Seeds with 50% Subsidy

Abstract

It is proposed to cover 7500 ha of water bodies additionally to bring under fish culture by extending subsidy assistance for stocking fingerlings. Hitherto unutilized water bodies will be stocked @ 5000 fingerlings per ha. The cost of 1000 fingerlings will be Rs.500 and farmers will be supplied @ 50% of the cost of fingerlings @ 50% subsidy to the fish farmers.

Budget : Rs. 37.50 lakhs

Project Rationale

To augment the fish productivity of existing water bodies and utilizing the so far unutilized water bodies for fish culture

Project Cost and Financing

1.	Unit Cost (Supply of fish seed)	0.1 lakh
2.	Total Unit	7500Ha
3.	Total cost	37.50

Implementation Chart of the Project

S.No	Particulars	2008-09	2009-10	2010-11	2011-12
1.	Supply of Fish Seeds	√			
2.	Stock of Fingerlings		√	√	√

Reporting

The project will be implemented by Department of Fisheries.

b) Private fish Farming with 50% Subsidy

Abstract

It is proposed to create 40 ha of farm ponds in the district through private participation by extending 50% subsidy for construction of farm ponds. The construction cost for 1 Ha of farm pond is 2 lakh and 1 lakh subsidy will be provided for 1 Ha farm pond construction.

Budget : Rs. 40.00 lakhs

Project Rationale

Unit Cost 50% Subsidy per ha.

Subsidy for seed cost	:	10,000.00
Pond clearing & preparation	:	4,000.00
Fertiliser & manure	:	4,000.00
Electricity & feed	:	52,000.00
Management cost, net& lab	:	30,000.00
Total	:	1,00,000.00
40 ha x 1lakh	:	40 lakhs

Implementation chart of the project

S.No	Particulars	2008-09	2009-10	2010-11	2011-12
1.	Selection of fish farmer & Fish pond construction	√			
2.	Supply of Fish Seeds		√	√	√

c) Introduction of fish culture in cages with 90% subsidy

Abstract

It is proposed to promote cage culture of fishes by extending 90% subsidy for purchase of cages. A total of 20 units of cages will be provided to fishers at a cost of 2.1 lakh per cage.

Budget : Rs. 42.00 lakh

Project Cost and Financing

Unit cost 90% subsidy per ha.

Subsidy for cage construction & installation	:	100,000.00
Seed, feed & medicine	:	40,000.00

Management cost, net& lab	:	50,000.00
Harvesting & marketing	:	20,000.00
Total	**:**	**2,10,000.00**

No.of cages to be provided	:	20 Nos.
Total cost 2.1lakh x 20	:	42 lakhs @ 90% subsidy

Implementation Chart of the Project

S.No	Particulars	2008-09	2009-10	2010-11	2011-12
1.	Selection of site and farmers	√			
2.	Cage fabrication		√		
3.	Fish culture by stocking in cages			√	√

Reporting

The project will be implemented by Department of Fisheries.

3) Infrastructure Development in Harvest and Post Harvest Sector

a) Supply of fishing implements with 90% subsidy

Abstract

It is proposed to extend 90% subsidy assistance to the fishermen for the purchase of fishing implements like FRP coracle and nets.

Budget : Rs. 54. 00 lakh

Project Cost and Financing

Unit cost (purchase of coracle and net)	:	0.18 Lakh
Total units	:	300 units
Total cost	:	54.00 lakh
Total cost 18,000 x 300 units	:	54 lakhs

Implementation chart of the project

S.No	Particulars	2008-09	2009-10	2010-11	2011-12
1.	Tender floating June	√			
2.	Finalization of tender July		√		
3.	Supply of fishing implements August		√	√	√

b) Development of landing centre with 100% grant

Abstract

Fish is a perishable commodity. In most of the reservoir there is no proper hygienic fish landing facilities. Hence it is proposed to develop fish landing centres with fish marketing facilities. The proposed landing centre will have fish landing area, net drying place, modern retail outlet. The total cost would be Rs. 10 lakh per landing centres. It is proposed to established 2 units in thereservoirs.

Budget : Rs. 40 lakh

Project cost and financing

Unit Cost for Development of Landing Centre

a. Repair and renovation of fish stall : 3,00,000.00

b. Providing sanitary facility & waste disposal : 2,00,000.00

c. Providing ice plant & chilling facility : 5,00,000.00

Total 10,00,000.00

Total units : 4 units

Total cost : Rs. 40 lakh @ Rs. 40 lakh per unit

Implementation chart of the project

S.No	Particulars	2008-09	2009-10	2010-11	2011-12
1.	Preparation of plan and estimate	√			
2.	Tender floating & Completion of construction of landing Centre	√	√	√	√

c) Setting up of Flake Ice Units at Landing Centres and Marketing Centres (90% Subsidy)

Abstract

Fish is a perishable commodity. In most of the landing centers and marketing centers there is no adequate ice available for chilling of fish. It is proposed to install flake ice units with capacity of 100 kg/day with 90% subsidy. The total cost would be Rs.10 lakh

Budget : Rs. 18 lakhs

Project Cost and Financing

Unit cost at 90% subsidy

a. subsidy for renovation of ice plant machineries : 1,00,000.00

b. subsidy for flake ice machine & refrigeration systems : 1,25,000.00

Total : 2,25,000.00

Total units : 8 units

Total cost : Rs.18 lakh @ Rs.2.25 lakh per unit (90% subsidy rate)

Implementation Chart of the Project

S.No	Particulars	2008-09	2009-10	2010-11	2011-12
1.	Preparation of plan	√			
2.	Tender & Completion of construction of landing Centre	√	√	√	√

d) Supply of insulated Ice boxes (50Kg capacity) 90% subsidy

Abstract

Fish being a highly perishable commodity needs to be chilled immediately and stored in insulated boxes. It is proposed to supply ice boxes of 50 kg capacity to 1000 fishermen. The total cost would be 18 lakh.

Budget : Rs. 18 lakh

Project Cost and Financing

Unit cost	:	.02 lakh
Total units	:	1000 units
Total cost (.02 X 1000unit)		
(90% subsidy rate)	:	Rs. 18 lakh

Implementation Chart of the Project

S.No	Particulars	2008-09	2009-10	2010-11	2011-12
1.	Purchase and supply of insulated ice boxes	√	√	√	√

e) Supply of insulated vans with 100% grant to MDFCMS

Abstract

For hygienic transportation of fish from landing center to marketing center in chilled condition, it is proposed to provide insulated van (2 tons capacity) to the Mettur Dam Fishermen Cooperative Marketing society with 100% grant. The total cost of the project would be Rs. 10.00 lakh.

Budget : Rs. 10.00 lakh

Project Cost and Financing

Unit cost	:	10 lakh
Total units	:	1 unit
Total cost(cost of one van with insulation	:	Rs. 10.00 lakh

f) Supply of Mopeds with Insulated Ice Boxes (50% subsidy)

Abstract

Fish is a perishable commodity. The farmer / fishermen will get good price if the fish marketed quickly after the catch. Quick transportation of fishes caught facilitate the fishermen to get fair price.

Budget : Rs. 7.5 lakh

Project Rationale

Unit cost (moped with icebox)	:	Rs. 0.15lakh/ unit
Total No. of units	:	50
Total cost (50 x 0.15 lakh)	:	Rs. 7.5 lakh

g) Setting up of modern fish stall

Abstract

It is proposed to setup modern retails outlet in places such as Salem (4 Nos), Attur (1No), Mettur (1 No.) the unit cost will be Rs. 10.00 lakh and a total amount of Rs. 60 lakh is required. The unit cost is given below

Budget : Rs. 60.00 lakh

Background / Problem Focus

The modern fish retail outlet will be used to keep the excess stock until selling.

Project Rationale

To avoid fish spoilage & loss of quality & revenue.

Project Strategy

The facility will be established at Salem dt..

Project Goals

To avoid loss of revenue this outlet will be established.

Project Components

Total Units	-	6
I year 2008-2009	-	two retail market
II year 2009-2010	-	two retail market
III year 2010-2011	-	two retail market

Project cost and financing

S.No	Details	Cost (in lakh)
1.	Land development for 750 Sq.ft. including water facilities, compound wall, drainage grill gates and flooring etc.	2.00
2.	Fabrication and Installation of modern fish stall (Alco panel structure)	6.00
3.	Fish storage cabin	1.00
4.	Glass display cabinet	1.00
	Total	**10.00**

6 units x 10,00,000 : 60,00,000.00

Implementation Chart of the Project

S. No	Particulars	2008-09	2009-10	2010-11	2011-12
1.	Purchase and supply of insulated ice boxes	√	√	√	√

Reporting

By Department of Fisheries

4) Capacity building through training (Fisheries Dept. and TANUVAS)

a) Trainers training @ Rs. 5000 / unit – 12 members

Abstract

Salem district has vast potential for inland fish culture. The training will include both theory and practical on different technologies such as scientific fish culture practices ornamental, fish breeding, hygienic handling ad marketing, cage culture fin fishes will be undertaken. A total number of 12 persons will be trained at an estimated cost of Rs. 6 lakh @ of Rs. 50,000 per trainee.

Budget : Rs. 6.00 lakhs

Project Cost and Financing

Total officials to be trained : 12

Total cost : Rs. 6.00 lakh @ Rs. 50,000/ trainee

b) Farmers training @ Rs. 1200 / unit – 1 members

Abstract

Salem district has vast potential for inland fish culture.The proposed training will include both theory and practical on differenct technologies such as ornamental fish breeding, hygienic handling and marketing, cage culture of fin fishes will be undertaken. A total number of 400 persons will be trained at an estimated cost of Rs. 1 lakh @ of Rs.1, 000 per trainee.

Budget : Rs. 4.00 lakh

Project Cost and Financing

Total farmers	:	400 @ 100 farmers per year
Total cost	:	Rs. 4.00 lakh @ Rs.1,000 trainee

5) Research and Development (TANUVAS)

a) Breeding of Endemic Ornamental Fishes (100% Grant Regional Training Centre

Abstract

The native ornamental fish species has good potential in export market. To harness the potential of endemic ornamental fishes, it is proposed to establish one breeding and rearing unit at Mettur Dam exclusively for this purpose under R&D. The success of breeding of endemic ornamental fish will pave way for the development of native species.

Budget : Rs. 60.00 lakh

Project Cost and Financing

Unit Cost	:	Rs. 60.00 lakh (cost of construction of hatchery building, lab equipment, live feed unit, brood stock procurement & nursery rearing)

b) River ranching of native fish varieties

Abstract

River Cauvery, the major river of Tamilnadu that flows in this district has many native fish species which forms a major riverine fishery in Tamilnadu. . Due to drastic reduction in regular flows in this river, competition for river water use among the various stake holders and excessive fishing pressure on the dwindling fishery resources have drastically affected the fishery resources of this river Hence, it is proposed to construct barrages across the river system in 2-3 places in this district in order to provide water storage zones so as to conserve the parent stock of native fish species

Budget : Rs. 10.00 lakh

Project Cost and Financing

Unit cost (cost of hatchery equipments & other equipment) : Rs. 10.00 lakh

Total cost : Rs. 10.00 lakh

Project Rationale

Conservation of the eco system and livelihood security for the community.

Project Strategy

a) Construction of barracks at selected places across the river to store water which will serve as a conservation zone for the parent stock of several native fish species. Conduction periodical institutional and off-campus training programmes.

b) Regular ranching of selected species of fish and candidate freshwater prawn species to improve the fishery resources

c) Establishment of hatchery facilities for production of selected fish/prawn species.

Project Goals

To conserve and improve the dwindling fishery resources of Cauvery river and to provide livelihood opportunities for inland fisherfolk.

Implementation Chart of the Project

S. No	Particulars	2008-09	2009-10	2010-11	2011-12
1.	Seed production & river ranching	√	√	√	√

6) Desilting of Kannaankurichi, Mookaneri, Elam Biroji and Servaiputhur lake

Abstract

In order to meet out the demand of freshwater fishes of this district, its proposed to renovated the existing damaged nurseries at KAnnaankurichi Mookaneri, Elam Biroji and Servaiputhur lake.

Budget : Rs. 30.00 lakh (for 6ha)

Background / Problem focus

At present there are two Government fish seed production centres in this district. One at Mettur Dam and another at Kannaankurichi Mookaneri, Elam Biroji and Servaiputhur lake which able to produce only 17.50 lakh fingerlings per year. Therefore it is proposed to desilt Kannaankurichi Mookaneri, Elam Biroji and Servaiputhur lake in order to increase water holding capacity and fish production.

Project Rationale

Desilting of Kannaankurichi Mookaneri, Elam Biroji and Servaiputhur lake to increase the water holding capacity and improve fish production

Project Strategy

To increase the fish production through desilting of Kannaankurichi Mookaneri, Elam Biroji and Servaiputhur lake

Project Goals

Desilting of Kannaankurichi Mookaneri, Elam Biroji and Servaiputhur lake in order to increase the water holding capacity so that year around fish production can be done.

Project Components

Desilting of Kannaankurichi Mookaneri, Elam Biroji and Servaiputhur lake

Project Cost and Financing

Project cost : Rs. 30.00 lakh @ Rs. 5 lakh /per ha. (desilting, bund strengthening, inlet, outlet provision)

Implementation Chart of the Project

Kannaankurichi Mookaneri, Elam Biroji and Servaiputhur lake will be Desilted during 11th five year plan period to increase water holding capacity.

6.5 Agricultural Engineering

The Department has proposed various projects under National Agricultural Development Programme, for four years (2008 – 2012) which comprised of Land development, Soil and water conservation and Agricultural mechanization provided under Stream I & Stream II. The schemes will be implemented in all 20 Blocks in Salem district for Rs.2614.97 lakhs. The details proposals are presented below.

Stream I

6.5.1 Introduction of Newly Developed Agricultural Machinery / Implements

(i) Abstract

Few decades ago, farming community engaged only agricultural labourers for the entire agricultural operations. Gradually, the invention of agricultural machinery / implements led to adoption of machinery in a small scale that too in selected pockets. The Govt. also, in its part, taking into consideration the less wages being paid to the agricultural labourers and the shortage of labourers, explored ways and means of further motivating the farmers towards mechanized farming to a larger extent by introducing suitable subsidies towards the purchase of Agricultural machinery / implements. Some milestones have been reached towards that objective. This Project envisages further popularization and adopting of labour saving package for timely operation through agricultural implements and reducing post harvest losses for improving income and value addition.

(ii) Budget

The **total cost** of this package for the entire project period workouts to Rs.393.30 lakhs including the subsidy portion @ 75 per cent for gender friendly equipments and 50 per cent for other machineries and implements for Rs. 204.65 Lakhs which will be widely distributed in all 20 Blocks of Salem district.

(iii) Background /Problem Focus

Agricultural operations, at present, mainly depend on manual labour. Agricultural labourers currently tend to go in for various other jobs / work where they get higher income and generally the labourers feel that agricultural operations are harder than other operations. Hence this leads to acute shortage of agricultural labourers,

(iv) Project Rationale

By resorting to suitable interventions like introduction of newly developed agricultural machinery and implements by way of supplying them at subsidized rates. This makes continuous adoption of mechanized farming, in the long run. This will largely help in overcoming the problem of labour shortage and also in timely agricultural operations and in the reduction of the recurrent cost of agricultural operations to a major extent. This will indirectly result in the enhancement in the farmers' income and higher productivity.

(v) Project Strategy

This project of supplying agricultural machinery / implements to the farming community at subsidized rates is programmed as follows:

1. Collecting applications from the needy farmers / Self Help Groups for farmers for their requirement of machinery / implement, manufactured by the company of their choice.
2. Coordinating with the bankers to arrange for loans for non subsidy portion.
3. Arrangement with the approved manufacturing companies / dealers for the supply of machinery / implement and release of subsidy.
4. MOU between the supplier and the Government for warranty and after sales service.

(vi) Project Goals

1. Supply and demonstration of agricultural implements for the various farm operations from seedbed preparation to harvest thereby increasing the efficiency of farm operations for better productivity.
2. Popularization of post harvest technologies for the production of value added products.

(vii) Project Components

The following machinery / implements are being popularized among the farmers. The list covers, 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, Groundnut Decordicator, Chisel Plough, Power Weeder - Oleo Mac, Ratoon Manager, Multi Crop Thrasher (Tractor PTO), Knapsac Power operated Hyd. Sprayer, Shredder (Tractor PTO operated), Power Operated Chaff Cutter, Japanese Yanmar 6 Row Transplanter with Nursery raising system, Japanese Yanmar 8Row Transplanter with Nursery raising system, Korean 4 - Row walk behind Transplanter, Combine Harvester - Tractor Operated, Combine Harvester -Self Propelled, Maize Combine Harvester, Point Scale for Tapioca and Gender Friendly equipments.

(viii) Project Cost and Financing

The **Project cost** of this package for the entire project period workouts to Rs. 393.30 lakhs for Machineries and implements which will be widely distributed in all 20 Blocks of Salem district. The total subsidy of this package works out to Rs.204.65 Lakhs for the project period. Non subsidy portion will be borne by the individual beneficiary / Self Help Group for farmers and the subsidy portion may be shared by the State and Centre.

(ix) Implementation Chart of the Project

The project is programmed to be implemented in a staggered manner over a span of 4 years commencing from 2008-2009. The implementation of the project shall involve the implementing agency, viz. Agricultural Engineering Department, the District Administration, the manufacturers of the machinery, banking institutions and local bodies.

(x) Reporting

The monitoring and evaluation of the project shall be handled by the competent agency as fixed by the Government.

6.5.2 Innovative Water Harvesting Structure

(i) Abstract

Rainwater harvesting and recycling for supplemental irrigation is the basic need for increasing agricultural productivity in drylands. It also enhances the use of other agricultural inputs/ technologies to a higher level by providing improved soil moisture regime during critical stages of crop growth. Farm ponds are considered to be the suitable structure to store excess rain water from dryland farm plots and to store it sufficiently for a long time (say 3 to 4 months) so as to give supplemental irrigation during critical stage of crop growth at times of failure or non – receipt of rainfall . This technique should be given prime importance particularly in the present context of erratic distribution of rainfall in dryland eco-system.

As the plastic lining films technologies have emerged in recent years, it is important to identify and develop durable plastic lining materials suited for different soils and depth of storages. The films available are LDPE, HDPE, PVC, EPDM (Ethylene propylene Diane Monomer) and CSPE (Chlorsulfonated polythene). The laying technologies are fine tuned and model scale experiments in farmer's fields with dryland horticultural systems revealed that there is potential scope to use this lining technology for effective water storage in entire crop season and could be used for supplemental irrigation. As the power is the constraint in dry lands, the supplemental irrigation is possible through portable sprinkler system during critical stages of crop growth.

Likewise Rejuvenating Existing Percolation Ponds with recharge shafts enhances the groundwater level in the zone of influence.

(ii) Budget

The total cost of this package for the entire project period workouts to Rs. 180.00 lakhs with 100 per cent subsidy for Recharge shaft in existing percolation ponds and 90 per cent for Lined farm ponds with mobile sprinkler which works out to Rs.168.00 Lakhs which will be widely distributed in all 20 Blocks of Salem district.

(iii) Background /Problem Focus

1. Erratic distribution of rainfall with recurring droughts and crop failures.
2. Poor soil moisture regime in critical stages of growth and poor soil fertility.

(iv) Project Rationale

By resorting to suitable interventions like introduction of innovative water harvesting structures like Rejuvenating the existing Percolation Ponds with recharge shaft and lined Farm Ponds can be considered to be the suitable structure to store excess rain water from dryland farms and to store it sufficiently for a long time (say 3 to 4 months) so as to give supplemental irrigation during critical stage of crop growth at times of failure or non – receipt of rainfall. Rainwater harvesting and recycling for supplemental irrigation is the basic need for increasing agricultural productivity in drylands.

(v) Project Strategy

This project of construction of lined farm pond with mobile sprinkler and rejuvenating of percolation pond with recharge shaft is to be implemented in the following ways:

1. Identifying the needy and feasible areas in consultation with farmers.
2. Coordinating with the direct and indirect beneficiaries of the proposed works and also with the local bodies.
3. Arranging for the collection of the beneficiaries' contribution portion.
4. Executing the works in cooperation with the local beneficiaries.
5. Handing over the works to the local beneficiaries / local bodies.
6. Monitoring and Evaluation.

(vi) Project Goals

1. Enhancing water use efficiency in dry lands.
2. Improvement in groundwater recharge.
3. Moisture conservation and supplemental irrigation.
4. Enhancing crop yield.

(vii) Project Components

It includes Lined Farm Pond with Mobile sprinkler and Rejuvenation of Percolation Ponds with2 Recharge shaftes.

(viii) Project Cost and Financing

The **total cost** of this package for the entire project period workouts to Rs. 180.00 lakhs including the subsidy portion @ 100% for Recharge shaft in existing percolation ponds and 90% for Lined farm ponds with mobile sprinkler for Rs. 168.00 Lakhs. Beneficiary contribution @ 10% will be collected from beneficiaries and the 90 - 100% subsidy portion may be shared by the State and Centre.

(ix) Implementation Chart of the Project

The project is programmed to be implemented in a staggered manner over a span of 4 years commencing from 2008-2009. The implementation of the project shall involve the implementing agency, *viz.* Agricultural Engineering Department, the District Administration and water user groups.

(x) Reporting

The monitoring and evaluation of the project shall be handled by the competent agency as fixed by the Government.

6.5.3 Promoting the Concept of Mechanised Villages

(i) Abstract

In Salem District, Major dryland crops sown are Groundnut and Millets. Farmers are facing difficult during their farm operation from preparation of field to harvest of the crop due to acute shortage of labourers. At present, more machineries and implements are available for all operation specially designed for Groundnut. For groundnut machineries like, Rotavator, Ridger, Raised bed seed drill, Groundnut digger (Harvester), stripper and Decordicator etc., are not available in the same area. Hence 3 model villages which are growing groundnut as major are selected and the machineries suitable for groundnut

operation are given to the Self-Help Group of farmers as one package. These machineries are hired to the users at a convenient rate as decided by the group. The maintenance cost of these machineries is met out by the hire charges collected.

(ii) Budget

The **total cost** of this package for the entire project period workouts to Rs. 10.56 lakhs of which the subsidy portion (@ 75 %) for all machineries for groundnut will be Rs.7.92 Lakhs.

(iii) Background /Problem Focus

Agricultural operations, at present, mainly depend on manual labour. Agricultural labourers currently tend to go in for various other jobs / work where they get higher income and generally the labourers feel that agricultural operations are harder than other operations. Hence this leads to acute shortage of agricultural labourers.

(iv) Project Rationale

Resorting to suitable interventions like introduction of newly developed agricultural machinery and implements by way of supplying them at subsidized rates to facilitate continuous adoption of mechanized farming, in the long run. This will largely help in overcoming the problem of labour shortage and also in timely agricultural operations and in the reduction of the recurrent cost of agricultural operations to a major extent. This will indirectly result in the enhancement in the farmers' income and higher productivity.

(v) Project Strategy

This project of supplying agricultural machinery / implements to the farming community at subsidized rates is programmed as follows:

1. Collecting applications from the needy farmers / Self Help Groups for farmers for their requirement of machinery / implement, manufactured by the company of their choice.

2. Coordinating with the bankers to arrange for loans for non subsidy portion.

3. Arrangement with the approved manufacturing companies / dealers for the supply of machinery / implement and release of subsidy.

4. MOU between the supplier and the Government for warranty and after sales service.

(vi) Project Goals

1. Supply and demonstration of agricultural implements for the various farm operations from seedbed preparation to harvest thereby increasing the efficiency of farm operations for better productivity.

2. Popularization of post harvest technologies for the production of value added products.

(v) Project Components

Groundnut machineries like, Rotavator, Ridger, Raised bed seed drill, Groundnut digger (Harvester), stripper and Decordicator are given as one package.

(vi) Project Cost and Financing

The total cost of 3 Groundnut mechanized village as one package @ Rs.3.52 Lakhs for each mechanized village for the entire project period workouts to Rs. 10.56 lakhs of which the subsidy portion (@ 75 %), will be Rs.7.92 Lakhs. Beneficiary contribution @ 25 per cent will be collected from user group and the remaining 75 per cent subsidy portion may be shared by the State and Centre.

(vii) Implementation Chart of the Project

The project is programmed to be implemented in a staggered manner over a span of 4 years commencing from 2008-2009. The implementation of the project shall involve the implementing agency, *viz.* Agricultural Engineering Department, the District Administration and water user groups.

(viii) Reporting

The monitoring and evaluation of the project shall be handled by the competent agency as fixed by the Government.

6.1.4 Restoration of Existing Water Bodies

(i) Abstract

To maintain water use efficiency, restoration of water bodies like Farm Wells, Checkdams, Percolation ponds, Tanks etc., is very important. In Salem district, most of the areas depend on well irrigation. During heavy rains, wells are damaged due to caving in of side walls, thus affecting the water holding capacity of wells as well as farm pumpsets. Cost of damage could not be borne by the poor farmers. During the last flood which occurred in 2005, more than 5000 applications were received from farmers for relief for restoring their damaged wells. It becomes a continuous problem when heavy rain pours. Hence, restoration of farm wells is a must for continuous irrigation. To arrest caving-in of side walls, steining wall is necessary for a farm well to protect this water body. For maintaining the pumping level, repairing of pumpsets and also to reduce labour cost, cranes attached with motor beds are provided to the needy farmers. When the farm pumpsets happens to be damaged, dovetailing of State scheme like replacement of old pumpsets may be utilized.

(ii) Budget

The total cost of this package for the entire project period workouts to Rs. 600.00 lakhs for 2000 wells and 400 cranes including the subsidy portion of Rs.540.00 Lakhs @ 90 per cent as subsidy which will be widely distributed in all 20 Blocks of Salem district.

(iii) Background /Problem Focus

During heavy rains, wells are damaged due to caving in of side walls, thus affecting the water holding capacity of wells as well as farm pumpsets. Cost of damage could not be borne by the poor farmers. During the last flood which occurred in 2005, more than 5000 applications were received from farmers for seeking relief for restoring their damaged wells. It becomes a continuous problem when heavy rain pours in.

(iv) Project Rationale

When frequent flood occurs, more number of wells will be damaged, thus making more wells not usable, thereby reducing irrigation area which in turn affects productivity.

(v) Project Strategy

This project of supplying agricultural machinery / implements to the farming community at subsidized rates is programmed as follows:

1. Collecting applications from the needy farmers.
2. Coordinating with the bankers to arrange for loans for non subsidy portion.
3. Execution by the beneficiary himself.
4. Evaluation made by the agency as fixed by the Government.

(vi) Project Goals

Restoration and maintenance of the important water source ie, Farm wells thereby enabling the good management of irrigation.

(vii) Project Components

Supply of all the machineries / implements such as Well Steining Walls and Cranes for Motors.

(viii) Project Cost and Financing

The **Project cost** of this package for the entire project period workouts to Rs. 600.00 lakhs for 2000 wells and 400 cranes with the subsidy portion of Rs.540.00 Lakhs (@ 90 per cent as subsidy). Non subsidy portion @ 10 per cent will be contributed by the beneficiary either in cash or kind. The subsidy portion may be shared by the State and Centre.

(ix) Implementation Chart of the Project

The project is programmed to be implemented in a staggered manner over a span of 4 years commencing from 2008-2009. The implementation of the project shall involve the implementing agency, *viz.* Agricultural Engineering Department, the District Administration, the beneficiary, and banking institutions.

(x) Reporting

The monitoring and evaluation of the project shall be handled by the competent agency as fixed by the Government.

STREAM - II

6.5.5 Popularization of Agricultural Mechanization through Conventional Machinery / Equipments

(i) Abstract

Few decades ago, farming community engaged only agricultural labourers for the entire agricultural operations. Gradually, the invention of agricultural machinery / implements led to adoption of machinery in a small scale that too in selected pockets. The government also, on its part, taking into consideration the less wages being paid to the agricultural labourers and the shortage of labourers, explored ways and means of further motivating the farmers towards mechanized farming to a larger extent by introducing suitable subsidies towards the purchase of conventional Agricultural machinery / implements like Power Tiller, Rotavator, Cultivators, Offset disc harrow and Disc plough. This Project envisages further popularization and adoption of labour saving package for timely operation through agricultural implements and reducing post harvest losses for improving income and value addition.

(ii) Budget

Total cost of this package	-	Rs. 343.20 Lakhs (480 Nos).
Subsidy Portion@ 25%	-	Rs. 85. 80 Lakhs

(iii) Background /Problem Focus

Agricultural operations, at present, mainly depend on manual labour. Agricultural labourers currently tend to go in for various other jobs / work where they get higher income and generally the labourers feel that agricultural operations are harder than other operations. Hence this leads to acute shortage of agricultural labourers,

(iv) Project Rationale

Resorting to suitable interventions like introduction of newly developed agricultural machinery and implements by supplying them at subsidized rates possible makes continuous adoption of mechanized farming in the long run. This will largely help in overcoming the problem of labour shortage and also in timely agricultural operations and in the reduction of the recurrent cost of agricultural operations to a major extent. This will indirectly result in the enhancement in farmers' income and higher productivity.

(v) Project Strategy

This project of supplying agricultural machinery / implements to the farming community at subsidized rates is programmed as follows:

1. Collecting applications from the needy farmers / Self Help Groups of farmers for their requirement of machinery / implement, manufactured by the company of their choice.
2. Coordinating with the bankers to arrange for loans for non subsidy portion.
3. Arrangement with the approved manufacturing companies / dealers for the supply of machinery / implement and release of subsidy.
4. MOU between the supplier and the Government for warranty and after sales service.

(vi) Project Goals

Supply and demonstration of agricultural implements for the various farm operations from seedbed preparation to harvest thereby increasing the efficiency of farm operation for better productivity.

(vii) Project Components

Supply of Power Tiller, Rotavator, Cultivator, Off-set Disc Harrow and Disc Plough are suggested in this project.

(viii) Project Cost and Financing

The **Project cost** of this package for the entire project period workouts to Rs. 343.20 lakhs for 480 machineries & implements which will be widely distributed in all 20 Blocks of Salem district. The total subsidy of this package works out to Rs.85.80 Lakhs for the project period. Non subsidy portion will be borne by the individual beneficiary / Self Help Group of farmers and the subsidy portion may be shared by the State and Centre.

(ix) Implementation Chart of the Project

The project is programmed to be implemented in a staggered manner over a span of 4 years commencing from 2008-2009. The implementation of the project shall involve the implementing agency, viz. Agricultural Engineering Department, the District Administration, the manufacturers of the machinery, banking institutions and local bodies.

(x) Reporting

The monitoring and evaluation of the project shall be handled by the competent agency as fixed by the Government.

6.5.6 Water Harvesting Structure

(i) Abstract

Rainwater harvesting and recycling for supplemental irrigation is the basic need for increasing agricultural productivity in drylands. It also enhances the use of other agricultural inputs/ technologies to a higher level by providing improved soil moisture regime during critical stages of crop growth. Rain water harvesting structures like Checkdams, Percolation Ponds, Village Tanks are provided to collect the excess runoff and allow it to recharge the ground water. To increase the percolation capacity, recharge shafts are also provided in needy places to increase the recharging capacity of the water bodies. Farm ponds are considered to be the suitable structure to store excess rain water from dryland farm plots and to store it sufficiently for a long time (say 3 to 4 months) so

as to give supplemental irrigation during critical stage of crop growth at times of failure or non – receipt of rainfall . This technique should be given prime importance particularly in the present context of erratic distribution of rainfall in dryland eco-system. Collection wells are also proposed nearby gully areas to collect the excess runoff water at needy places.

(ii) Budget

Total cost of this package	-	Rs. 734.00 Lakhs (1240 Nos).
Subsidy Portion@ 90-100%	-	Rs. 714.00 Lakhs

(iii) Background /Problem Focus

1. Erratic distribution of rainfall with recurring droughts and crop failures.
2. Poor soil moisture regime in critical stage growth and poor soil fertility.

(iv) Project Rationale

Rain water harvesting structures like Checkdams, Percolation Ponds, Village Tanks are provided to collect the excess runoff and allow it to recharge the ground water. To increase the percolation capacity, recharge shafts are also provided in needy places to increase the recharging capacity of the water bodies. Farm ponds are considered to be the suitable structure to store excess rain water from dryland farm plots and to store it sufficiently for a long time (say 3 to 4 months) so as to give supplemental irrigation during critical stage of crop growth at times of failure or non – receipt of rainfall . This technique should be given prime importance particularly in the present context of erratic distribution of rainfall in dryland eco-system. Collection wells are also proposed nearby gully areas to collect the excess runoff water at needy places.

(v) Project Strategy

This project of construction of lined farm pond with mobile sprinkler and rejuvenating of percolation pond with recharge shaft is to be implemented in the following ways:

1. Identifying the needy and feasible areas in consultation with farmers.
2. Coordinating with the direct and indirect beneficiaries of the proposed works and also with the local bodies.
3. Arranging for the collection of the beneficiaries' contribution portion.
4. Executing the works in cooperation with the local beneficiaries.
5. Handing over the works to the local beneficiaries / local bodies.
6. Monitoring and Evaluation.

(vi) Project Goals

1. Enhancing water use efficiency in dry lands.
2. Improvement in groundwater recharge.
3. Moisture conservation and supplemental irrigation.
4. Enhancing crop yield.

(vii) Project Components

- Farm Pond - Unlined
- Checkdam – Minor, Medium, Major
- Percolation Pond
- Recharge Shaft
- New Village Tank
- Collection Well

(viii) Project Cost and Financing

The **total cost** of this package for the entire project period works out to Rs.734.00 lakhs with 100 per cent subsidy for Water harvesting structures like percolation ponds, checkdams, village tank and 90 per cent for unlined farm ponds and collection wells works out to Rs.714.00 Lakhs. Beneficiary contribution @ 10 per cent will be collected from beneficiaries and the 90 – 100 per cent subsidy portion may be shared by the State and Centre.

(ix) Implementation Chart of the Project

The project is programmed to be implemented in a staggered manner over a span of 4 years commencing from 2008-2009. The implementation of the project shall involve the implementing agency, *viz.* Agricultural Engineering Department, the District Administration and water user groups.

(x) Reporting

The monitoring and evaluation of the project shall be handled by the competent agency as fixed by the Government.

6.5.7 Soil Conservation Works

(i) Abstract

Soil and water are the Nation's two most vital natural resources. The way, we manage these resources, will determine our present and future welfare. Conservation and proper use of soil and moisture on our agricultural lands, grazing grounds, forests and waste lands is the key to make our land more productive, our people healthier and our Nation Stronger. Soil conservation is then a permanent land improvement measure fundamental to increased crop production. Compartmental bund acts as a barrier to the flow of water and retards its velocity. The bund intercepts the runoff, allows water to spread as far back as needed and provides an opportunity for the run off to percolate down the soil profile , thus increasing the soil moisture status. It not only prevents the runoff and conserves the water but also prevents the washing away of soil and with it all the plant nutrients in the soil and manures applied to the field. Land shaping and terrace support wall are soil conservation structures constructed to prevent the erosion of soil from the deep slopes and to conserve the optimum moisture required for plant growth. Deep slope area is shaped into mild slope lands which help to reduce the velocity of runoff water and allow the water to percolate into the field itself.

(ii) Budget

Total cost of this package	-	Rs. 574.00 Lakhs
Subsidy Portion@ 90-100%	-	Rs. 525.60 Lakhs

(iii) Background /Problem Focus

1. Most part of Salem have undulated terrain with average slope of 5-10%.
2. Soil erosion is one of the most important problems in Salem. Most of the blocks in Salem have poor to extremely poor soil productivity because of this soil erosion.

(iv) Project Rationale

Soil conservation scores over most of the other land improvement and agricultural practices, in that,

- The land is put to the use, by which it can give the most it is capable of,
- The soil is conserved and improved even while it is being used,
- It requires only a comparatively small investment and that, too, only once at the initial stage, when the soil conservation is implemented and almost no expenditure to maintain the works, and
- The crop production is not only increased but such increase is also sustained over the years.

(v) Project Strategy

- This project of construction of compartmental bunding, Land shaping and Terrace support wall is to be implemented in the following ways:
- Identifying the needy and feasible areas based on the Land Capability Classification and in consultation with farmers.
- Arranging for the collection of the beneficiaries' contribution portion either in cash or kind.
- Executing the works in cooperation with the local beneficiaries.
- Handing over the works to the local beneficiaries .
- Monitoring and Evaluation.

(vi) Project Goals

- To maintain the fertility of the land.
- Improvement in soil moisture.
- Arresting the fertile top soil and other nutrients in the field itsef.
- Enhancing crop yield.

(vii) Project Components

- Compartmental Bunding
- Land Shaping
- Terrace Support Wall

(viii) Project Cost and Financing

The **total cost** of this package for the entire project period workouts to Rs. 574.00 lakhs of which Rs.525.60 Lakhs will be the subsidy portion of 90 per cent. Beneficiary contribution @ 10 per cent will be collected from beneficiaries and the 90 per cent subsidy portion may be shared by the State and Centre.

(ix) Implementation Chart of the Project

The project is programmed to be implemented in a staggered manner over a span of 4 years commencing from 2008-2009. The implementation of the project shall involve the implementing agency, *viz.* Agricultural Engineering Department, the District Administration and water user groups.

(x) Reporting

The monitoring and evaluation of the project shall be handled by the competent agency as fixed by the Government.

6.5.8 Water Management Works

(i) Abstract

Irrigation is the artificial application of water to the soil for the purpose of crop production. Irrigation water is supplied to supplement the water available from rainfall

and the contribution to the soil moisture from ground water. Water, being a limited resource, its efficient use is basic to the survival of the ever increasing population of the world. In Salem district, most area is under well irrigation. The farmers are generally irrigating their fields through open channels by which 20% of water is lost as conveyance loss. Hence pipe line is needed for them. This system offers many advantages over the open channels in water conveyance and distribution. In some area, the well is located on the lower part of the land. Farmers find it very difficult to irrigate their fields at a higher elevation than the well. Hence, based on the availability of the electricity, they practice to store the water from the borewell / well in a Mud Tank which is constructed at the higher elevation in their land. Then, they irrigate their field, through conventional method from the mud tank whenever needed. Heavy conveyance and storage loss happened in this practice. They need Ground level reservoir and pipe line system instead of mud tank and conventional irrigation.

(ii) Budget

Total cost of this package	-	Rs. 410.00 Lakhs
Subsidy Portion@ 90-100%	-	Rs. 369.00 Lakhs

(iii) Background /Problem Focus

- Open channel irrigation makes conveyance loss of irrigation water @ 20%.
- Poor management and distribution of water.
- Unavoidable intermittent and untime power supply.

(iv) Project Rationale

The farmers are generally irrigating their fields through open channels by which 20 per cent of water is lost as conveyance loss. Hence pipe line is needed for them. This system offers many advantages over the open channels in water conveyance and distribution. In some area, the well is located on the lower part of the land. Farmers find it very difficult to irrigate their fields at a higher elevation than the well. Hence, based on the availability of electricity they practice to store the water from the borewell/ well in a

Mud Tank which is constructed at the higher elevation in their land. Then, they irrigate their field, through conventional method from the mud tank whenever needed. Heavy conveyance and storage loss occurred in this practice. They need Ground level reservoir and pipe line system instead of mud tank and conventional irrigation.

(v) Project Strategy

This project of PVC pipeline system and Ground Level Reservoir (GLR) may be implemented in the following ways:

- Identifying the needy and feasible areas in consultation with farmers.
- Arranging for the collection of the beneficiaries' contribution portion either in cash or kind.
- Executing the works in cooperation with the local beneficiaries.
- Handing over the works to the local beneficiaries.
- Monitoring and Evaluation.

(vi) Project Goals

- Optimum utilization of available water
- Avoiding seepage losses
- Ensuring required quantity of water at right time for all the crops raised
- Enhancing crop yield

(vii) Project Components

- PVC Pipe Laying
- Ground Level reservoir
- Fertigation Assembly

(viii) Project Cost and Financing

The **total cost** of this package for the entire project period workouts to Rs. 410.00 lakhs of which Rs.369.00 lakhs will be the subsidy portion. Beneficiary contribution @ 10 per cent will be collected from beneficiaries and the 90 per cent subsidy portion may be shared by the State and Centre.

(ix) Implementation Chart of the Project

The project is programmed to be implemented in a staggered manner over a span of 4 years commencing from 2008-2009. The implementation of the project shall involve the implementing agency, *viz.* Agricultural Engineering Department, the District Administration and water user groups.

(x) Reporting

The monitoring and evaluation of the project shall be handled by the competent agency as fixed by the Government.

Action Plan

The summary of budget and detailed interventions (year wise and component wise) proposed under for NADP is presented in Table 6.13 and 6.14.

Table 6.13 Budget Abstract for Agricultural Enginering Projects - 2008-2012

(Rs. in lakhs)

S. No	Name of Package	Subsidy in %	Project Cost in	Subsidy Amount in Rs. Lakhs
1	**STREAM - I**			
I	Introduction of Newly Developed Agricultural Machinery / Implements	50%, 75%	393.30	204.65
II	Innovative Water Harvesting Structures	90 – 100%	180.00	168.00
III	Promoting the concept of Mechanized Villages	75%	10.56	7.92
IV	Restoration of existing water bodies	90%	600.00	540.00
	STREAM – I TOTAL		**1183.86**	**920.57**
2	**STREAM - II**			
I	Popularization of Agricultural Mechanization through conventional Machinery / Equipments	25%	343.20	85.80
II	Water Harvesting Structures	90 – 100%	734.00	714.00
III	Soil Conservation Works	90%	584.00	525.60
IV	Water Management Works	90%	410.00	369.00
	STREAM – II TOTAL		**2071.20**	**1694.40**
	NADP 2008-12 GRAND TOTAL		**3255.60**	**2614.97**

Table 6.14 Detailed Budget and Action Plan Proposed under Agricultural Engineering Sector – 2008 – 2012

(Rs in Lakhs)

Sl. No	Details	Proposed subsidy	Cost/ Unit Rs. Lakh	Total		2008 - 09		2009 - 10		2010 - 11		2011 - 12	
				No. of Units	Subsidy	No. of Units	Subsidy	No. of Units	Subsidy	No. of Units	Subsidy	No. of Units	Subsidy
	STREAM - I												
I	**Introduction of Newly Developed Agricultural Machinery / Implements**												
1	Mini combined Harvester TNAU Model	50%	2.50	**8**	**10.00**	2	2.50	2	2.50	2	2.50	2	2.50
2	Multi Crop Thrasher (High Capacity)	50%	2.10	**10**	**10.50**	3	3.15	3	3.15	2	2.10	2	2.10
3	Power Weeder with attachment (All models)	50%	1.00	**16**	**8.00**	4	2.00	4	2.00	4	2.00	4	2.00
4	Power Thrasher	50%	1.00	**10**	**5.00**	2	1.00	3	1.50	2	1.00	3	1.50
5	Paddy Transplanter	50%	1.40	**20**	**14.00**	5	3.50	5	3.50	5	3.50	5	3.50
6	Post Hole Digger	50%	0.85	**20**	**8.50**	5	2.13	5	2.13	5	2.13	5	2.13
7	Shredder (Heavy)	50%	1.00	**20**	**10.00**	5	2.50	5	2.50	5	2.50	5	2.50
8	Shredder (Medium)	50%	0.40	**30**	**6.00**	7	1.40	8	1.60	8	1.60	7	1.40
9	Maize Husker Sheller	50%	0.90	**10**	**4.50**	2	0.90	3	1.35	2	0.90	3	1.35
10	Coconut De-husker	50%	0.60	**10**	**3.00**	3	0.90	2	0.60	2	0.60	3	0.90
11	Groundnut Decordicator	50%	0.35	**12**	**2.10**	3	0.53	3	0.53	3	0.53	3	0.53
12	Chisel Plough	50%	0.12	**20**	**1.20**	5	0.30	5	0.30	5	0.30	5	0.30
13	Power Weeder - Oleo Mac	50%	0.65	**8**	**2.60**	2	0.65	2	0.65	2	0.65	2	0.65
14	Ratoon Manager	50%	1.00	**20**	**10.00**	5	2.50	5	2.50	5	2.50	5	2.50
15	Multi Crop Thrasher (Tractor PTO)	50%	1.25	**20**	**12.50**	5	3.13	5	3.13	5	3.13	5	3.13
16	Knapsac Power operated Hyd. Sprayer	50%	0.20	**200**	**20.00**	50	5.00	50	5.00	50	5.00	50	5.00

Table 6.14 Contd…

Sl. No	Details	Proposed subsidy	Cost/ Unit Rs. Lakh	Total		2008 - 09		2009 - 10		2010 - 11		2011 - 12	
				No. of Units	Subsidy	No. of Units	Subsidy	No. of Units	Subsidy	No. of Units	Subsidy	No. of Units	Subsidy
17	Shredder (Tractor PTO operated)	50%	0.85	**10**	**4.25**	2	0.85	3	1.28	2	0.85	3	1.28
18	Power Operated Chaff Cutter	50%	0.30	**40**	**6.00**	10	1.50	10	1.50	10	1.50	10	1.50
19	Jappanese Yanmar 6 Row Transplanter with Nursery raising system	50%	7.50	**1**	**3.75**	0	0.00	1	3.75	0	0.00	0	0.00
20	Jappanese Yanmar 8Row Transplanter with Nursery raising system	50%	10.50	**1**	**5.25**	0	0.00	1	5.25	0	0.00	0	0.00
21	Korean 4 - Row walk behind Transplanter	50%	2.00	**4**	**4.00**	1	1.00	1	1.00	1	1.00	1	1.00
22	Combine Harvester - Tractor Operated	50%	12.00	**1**	**6.00**	0	0.00	0	0.00	1	6.00	0	0.00
23	Combine Harvester - Self Propelled	50%	16.00	**1**	**8.00**	0	0.00	0	0.00	0	0.00	1	8.00
24	Maize Combine Harvester	50%	16.00	**1**	**8.00**	0	0.00	0	0.00	0	0.00	1	8.00
25	Point Scale for Tapioca	50%	0.15	**100**	**7.50**	25	1.88	25	1.88	25	1.88	25	1.88
26	Gender Friendly equipments	75%	0.08	**400**	**24.00**	100	6.00	100	6.00	100	6.00	100	6.00
II	**Innovative Water Harvesting Structures**												
1	Lined Farm Pond with Mobile sprinkler	90%	3.00	**40**	**108.00**	10	27.00	10	27.00	10	27.00	10	27.00

Table 6.14 Contd…

Sl. No	Details	Proposed subsidy	Cost/ Unit Rs. Lakh	Total		2008 - 09		2009 - 10		2010 - 11		2011 - 12	
				No. of Units	Subsidy	No. of Units	Subsidy	No. of Units	Subsidy	No. of Units	Subsidy	No. of Units	Subsidy
2	Rejuvenation of Percolation Ponds with 2 Recharge shaftes	100%	1.00	**60**	**60.00**	15	15.00	15	15.00	15	15.00	15	15.00
III	**Control of Sea water Intrusion**												
1	Recharge shafts to prevent sea water intrution in coastal areas	100%											
IV. Promoting the Concept of Mechanized villages													
1	Distribution of crop based package of Agrl. Machinery on cluster basis in the Adopted villages												
	a. Paddy	75%	31.06	**0**	**0.00**	0	0.00	0	0.00	0	0.00	0	0.00
	b. Groundnut	75%	3.52	**3**	**7.92**	0	0.00	1	2.64	1	2.64	1	2.64
	c. Maize	75%	19.91	**0**	**0.00**	0	0.00	0	0.00	0	0.00	0	0.00
V	**Other Works (Restoration of existing water bodies)**												
1	Well Steining Walls	90%	0.25	**2000**	**450.00**	500	112.50	500	112.50	500	112.50	500	112.50
2	Provisions of Cranes for Motors	90%	0.25	**400**	**90.00**	100	22.50	100	22.50	100	22.50	100	22.50
	Total Stream I Cost			**3496**	**920.57**	**871**	**220.30**	**877**	**233.22**	**872**	**227.79**	**876**	**239.27**

Table 6.15.Budget details of Agricultural Engineering of Stream II Project

Sl No	Details	Sub sidy	Cost / Unit Rs Lakh	Total		2008 - 09		2009 - 10		2010 - 11		2011 – 12	
				No. of Units	Sub sidy	No. of Units	Sub sidy	No. of Units	Sub sidy	No. of Units	Sub sidy	No. of Units	Sub sidy
	STREAM - II												
I. Popularization of Agricultural Mechanization through Conventional Machinery / Equipments													
1	Power Tiller	25%	1.16	160	46.40	40	11.60	40	11.60	40	11.60	40	11.60
2	Rotavator	25%	0.90	120	27.00	30	6.75	30	6.75	30	6.75	30	6.75
3	Cultivator	25%	0.16	120	4.80	30	1.20	30	1.20	30	1.20	30	1.20
4	Off-set Disc Harrow	25%	0.47	20	2.35	5	0.59	5	0.59	5	0.59	5	0.59
5	Disc Plough	25%	0.35	60	5.25	15	1.31	15	1.31	15	1.31	15	1.31
II	Water Harvesting Structures												
1	Farm Pond - Unlined	90%	0.50	80	36.00	20	9.00	20	9.00	20	9.00	20	9.00
2	Checkdam - Minor	100%	0.30	80	24.00	20	6.00	20	6.00	20	6.00	20	6.00
3	Checkdam - Medium	100%	0.75	80	60.00	20	15.00	20	15.00	20	15.00	20	15.00
4	Checkdam - Major	100%	1.00	80	80.00	20	20.00	20	20.00	20	20.00	20	20.00
5	Percolation Pond	100%	3.25	40	130.00	10	32.50	10	32.50	10	32.50	10	32.50
6	Recharge Shaft	100%	0.30	400	120.00	100	30.00	100	30.00	100	30.00	100	30.00
7	New Village Tank	100%	1.50	80	120.00	20	30.00	20	30.00	20	30.00	20	30.00
8	Collection Well	90%	0.40	400	144.00	100	36.00	100	36.00	100	36.00	100	36.00

Table 6.15 Contd…

Sl No	Details	Sub sidy	Cost / Unit Rs Lakh	Total		2008 - 09		2009 - 10		2010 - 11		2011 – 12	
				No. of Units	Sub sidy	No. of Units	Sub sidy	No. of Units	Sub sidy	No. of Units	Sub sidy	No. of Units	Sub sidy
III	**Soil Conservation Works**												
1	Compartmental Bunding	90%	0.03	4000.00	108.00	1000.00	27.00	1000.00	27.00	1000	27.00	1000.00	27.00
2	Land Shaping	90%	0.10	1160.00	104.40	310.00	27.90	275.00	24.75	300.00	27.00	275.00	24.75
3	Terrace Support Wall	90%	0.30	1160.00	313.20	310.00	83.70	275.00	74.25	300.00	81.00	275.00	74.25
IV	**Water Management Works**												
1	PVC Pipe Laying	90%	0.15	600.00	81.00	150.00	20.25	150.00	20.25	150.00	20.25	150.00	20.25
2	Ground Level reservoir	90%	0.80	400	288.00	100	72.00	100	72.00	100	72.00	100	72.00
3	Fertigation Assembly	90%	0.12	0	0.00		0.00		0.00		0.00		0.00
	Stream II Total				1694.4		**430.80**		**418.20**		**427.20**		**418.20**

6.6 Agricultural Marketing and Agri Business

Strengthening of Agricultural Marketing and Agribusiness Development in Tamil Nadu through NADP Funding

(i) Current Status of Agribusiness

Agriculture, as a primary sector provides livelihood to 56% of the population and contributes around 13 per cent 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 are 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 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.

(ii) 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 achieved 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.

(iii) 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 who 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.

(iv) 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 agri -food system) and service providers from the public, private and nongovernmental organizations (NGO) sectors.

Farmers fail to link among themselves through effective producer organizations to be 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 and so unable 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.

Most Service Provider 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 proved 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.

(v) 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 agri-food 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.

(vi) 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.

(vii) 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 physical infrastructure.

(viii) 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.

(ix) 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

(i) 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.

(ii) Project Strategy:

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

(iii) Project Goals

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

(iv) Project Components

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

(v) Project Cost and Financing

Arranging / organizing 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 64 commodity groups in four commodities for marketing of agricultural commodities in Salem district over the period of four years. This will require resources of Rs.14.62 Lakhs for the period of four years. The details are presented in Annexure.

(vi) 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

(i) 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 marketable surplus and do not 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.

(ii) Project Strategy

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

(iii) Project Components

1. Organizing meeting with farmers, large scale buying firms, crop insurance companies and banks.
2. Identification of willing / co operating Farmers/ commodity clusters
3. Organizing 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.

(iv) Project Cost and Financing

Arranging / organizing Commodity Groups involve several rounds of meeting with large number of farmers and traders, train them in 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 Salem district for marketing of

agricultural commodities in Tamil Nadu over the period of four years. This will require resources of Rs.4.83 lakhs for the period of four years.

(v) 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

(i) 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.

(ii) 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.

(iii) Project Components

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

(iv) 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 Salem district over the period of four years. This will require resources of Rs. 27.06 Lakhs for the period of four years.

(v) 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

(i) 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 goods 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 regime.

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.

(ii) Project Cost and Financing

In this project it is proposed to arrange for 16 buyers sellers meet in Salem district over the period of four years. This will require resources of Rs.3.68 Lakhs for the period of four years.

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

(i) Project Rationale

The goal of 4 per cent 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 per cent 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 to other areas, where new technologies are implemented 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.

(ii) Project Strategy

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

(iii) 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.

(iv) 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 within the state and outside the state by extension functionaries

(v) Project Cost and Financing

Visit of important markets, where new opportunity for marketing of the commodity and consumer preference i.e., exposure visit to 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. 25.423 Lakhs for the period of four years. The details are presented in Annexure.

(vi) 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

(i) 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 an urgent need to strengthening of market extension centre at each district/ block level with LCD projectors and lap top computer including internet facilities.

(ii) Project Strategy

Strengthening of market extension centre at each district/ block level for capacity building and dissemination of marketing information.

(iii) 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.

(iv) Project Components:

Strengthening of market extension centre at each district/ block level.

(v) 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 Salem district over the period of four years. This will require resources of Rs.5.0 Lakhs for the period of four years.

(vi) 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)

6.6.7 Capacity Building of Farmers' Skill

(i) 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. 24.84 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.

(ii) 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.

(iii) Project Components

Organizing 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.

(iv) Project Cost and Financing

In this project it is proposed to organize about 216 trainings under Capacity Building of Farmers Skill for marketing of agricultural commodities in Salem district over the period of four years. This will require resources of Rs.24.84 Lakhs for the period of four years.

(v) 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 Strengthening of Selected Market Infrastructure (equipments) through NADP Funding

(i) 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 6.16 which reflects the need for improvement in the market infrastructure in coming years.

Table 6.16 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
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).

(ii) 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

(iii) Project Cost and Financing

In this project it is proposed to strengthen market infrastructure in Salem district over the period of four years. This will require resources of Rs.2.99 Lakhs for the period of four years.

(iv) 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 Establishment of Price Surveillance Mechanism through NADP Funding

(i) 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.

(ii) 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.

(iii) 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 Salem district over the period of four years. This will require resources of Rs. 0.46 Lakhs for the period of four years.

(iv) Reporting

1. Quarterly progress reports to be sent to the Deputy Director (Agricultural Marketing and Agri Business) by the concerned Agricultural Marketing (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. Strengthening of Regulated Market and Uzhavar Shandies Publicity through NADP Funding

(i) Rationale

Arrivals to market yards of regulated markets is only about 15 per cent 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.

(ii) Project Components

Hoardings, publicity through F.M. radio, posters, folders, wall paintings, and village cultural programmes will form the components.

(iii) 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.23.0 Lakhs over the period of four years.

(iv) 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)

(v) Project Cost

The total cost for development of agricultural marketing so as to increase the profitability of farmers would be Rs.131.903 Lakhs for this district for the next four years.

(vi) 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.

(vii) 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.

(viii) 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, able to adapt better 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.

Table 6.17 Budget Proposal under Agricultural Marketing and Agribuisness– 2008 - 2012

(in Rs.)

S. No	Components	2008- 2009			2009- 2010			2010 - 2011			2011 - 2012			
		Unit cost	Phy.	Fin.	Unit cost	Phy	Fin.	Unit cost	Phy	Fin.	Unit cost	Phy	Fin.	Total
1	**Commodity Group Formation**													
	Maize	20000	5	100000	22000	5	110000	24000	5	120000	26000	5	130000	460000
	Groudnut	20000	7	140000	22000	7	154000	24000	7	168000	26000	7	182000	644000
	Tomato	20000	2	40000	22000	2	44000	24000	2	48000	26000	0	0	132000
	Cotton	20000	3	60000	22000	3	66000	24000	2	48000	26000	2	52000	226000
2	**Market Intelligence Dissemination**													
	Block level meetings	10000	5	50000	11000	5	55000	12000	5	60000	13000	5	65000	230000
	Printing of leaflets	2	5000	10000	3	5000	15000	4	5000	15000	5	5000	20000	60000
	MI Forecast Board	10000	7	70000	11000	0	0	12000	0	0	13000	0	0	70000
	Village meeting	10000	50	500000	11000	50	550000	12000	50	600000	13000	50	650000	2300000
	Purchase of marketing materials	10000	1	10000	11000	1	11000	12000	1	12000	13000	1	13000	46000
3	**Facilitation of Contract Farming**													
	CF-Maize	15000	5	75000	16500	5	82500	18000	5	90000	19500	5	97500	345000
	Tomato	15000	2	30000	16500	2	33000	18000	2	36000	19500	2	39000	138000
4	**Trainings on**			0			0							0
	Grading	10000	5	50000	11000	5	55000	12000	5	60000	13000	5	65000	230000

Table 6.17 Contd…. **(Rs.)**

S. No	Components	2008- 2009			2009- 2010			2010 - 2011			2011 - 2012			
		Unit cost	Phy.	Fin.	Unit cost	Phy	Fin.	Unit cost	Phy	Fin.	Unit cost	Phy	Fin.	Total
	Market Intelligence	10000	20	200000	11000	20	220000	12000	20	240000	13000	20	260000	920000
	Post Harvest	10000	10	100000	11000	10	110000	12000	10	120000	13000	10	130000	460000
	GAP Food Safety	10000	5	50000	11000	5	55000	12000	5	60000	13000	5	65000	230000
	Value addition - Training	10000	10	100000	11000	10	110000	12000	10	120000	13000	10	130000	460000
	Demonstration	10000	2	20000	11000	2	22000	12000	2	24000	13000	2	26000	92000
	Turmeric	10000	2	20000	11000	2	22000	12000	2	24000	13000	2	26000	92000
5	**Exposure Visit to Markets**													
	Within State	20000	5	100000	22000	5	110000	24000	5	120000	26000	5	130000	460000
	Outside	75000	2	150000	82500	2	165000	90000	2	180000	97500	2	195000	690000
	Visit to National Markets	150000	2	300000	165000	2	330000	181500	2	363000	199650	2	399300	1392300
6	**Arrangement of buyer seller meetings**	20000	4	80000	22000	4	88000	24000	4	96000	26000	4	104000	368000
7	**Streng. of market extension centre**	250000	2	500000	275000	0	0	300000	0	0	325000	0	0	500000

Table 6.17 Contd…. **(Rs.)**

S. No	Components	2008- 2009			2009- 2010			2010 - 2011			2011 - 2012			
		Unit cost	Phy.	Fin.	Unit cost	Phy	Fin.	Unit cost	Phy	Fin.	Unit cost	Phy	Fin.	Total
8	**Streng. of village shandies**	0	0	0	0	0	0	0	0	0	0	0	0	0
9	**Market price surveillance**	10000	1	10000	11000	1	11000	12000	1	12000	13000	1	13000	46000
10	**Publicity - regulated market**	500000	1	500000	550000	1	550000	600000	1	600000	650000	1	650000	2300000
11	**Market infrastructure activities**			0			0							0
	Mar Infra Mobile Mar	20000	2	40000	22000	2	44000	24000	2	48000	26000	2	52000	184000
	Mini PH Loss Plastic Crates	500	50	25000	550	50	27500	600	50	30000	650	50	32500	115000
	Total		**5210**	**3330000**		**5201**	**3040000**		**5200**	**3294000**		**5198**	**3526300**	**13190300**

Table 6.18 Agricultural Marketing Summary of Budget under NADP (2008-2012)

S.No	Components	Total Budget (Rs.)
1	**Commodity group formation**	
	Maize	460000
	Groundnut	644000
	Tomato	132000
	Cotton	226000
2	**Market Intelligence dissemination**	
	Block level meetings	230000
	Printing of leaflets	60000
	MI Forecast Board	70000
	Village meeting	2300000
	Purchase of marketing materials	46000
3	**Facilitation of contract farming**	
	CF Maize	345000
	Tomato	138000
4	**Training programmes**	
	Grading	230000
	Market Intelligence	920000
	Post Harvest	460000
	GAP Food Safety	230000
	Value addtion - Training	460000
	Demonstration	92000
	Turmeric	92000
5	**Exposure visit to markets**	
	Within State	460000
	Outside	690000
	Visit to National Markets	1392300
6	Arrangement of buyer seller meetings	368000
7	Strengthening of market extension centre	500000

S.No	Components	Total Budget (Rs.)
8	Strengthening of village shandies	…
9	Market price surveillance	46000
10	Publicity - regulated market	2300000
11	**Market infrastructure activities**	
	Marketing Infrastructures – Mobile Markets	184000
	Mini PH Loss Plastic Crates	115000
	Total	**13190300**

6.7 Sericulture

Various components of the interventions under sericulture proposed to be implemented under NADP from 2008-09 to 2011-12 are presented in Table 6.19.

(i) Action Plan

Under NADP, it is proposed to supply rearing equipments (Netrika) to the silkworm rearing beneficiaries to gain more benefit. The detailed action plan proposed under NADP for the four years is presented in Table 6.19.

Table 6.19 Detailed Budget of Action Plan Proposed for Sericulture Sector – 2008 - 2012

Sl. No.	Details	2008-09		2009-10		2010-11		1011-12		Total	
		Nos.	Amount	Nos.	Amount	Nos.	Amount	Nos.	Amount	Nos.	Amount
1.	Provision of inputs and micro nutrients (Azatobactor, Azospyrillum, Ammonium Sulphate) for better mulberry leaf yield value Rs.2000/- per farmer	300	600000	300	600000	300	600000	300	600000	1200	2400000
2.	Training of Sericulturists (At Farmers Training Centre, Nathakarai) (3 days) Details (10 Batches @ 30 trainees per batch) Stipend to Farmers @ Rs.100/- per day (Rs.100 x 30 x 3 days x 10 batches = Rs.90000/-) Institute Fees Rs.100/- per Day (Rs.100 x 30 x 3 days x 10 batches = Rs.90000/-) Expert Trainer Fees Rs.500/- per day 2 Trainers per day for 2 days (Rs.1000 x 2 days x 10 batches = Rs.20000/-) Field visit 1 Day Disinfectants @ Rs.400 x 30 x 10 = Rs.120000/-	300	320000	300	320000	300	320000	300	320000	1200	1280000
3.	Demonstration Plots (Preparation of Nursery, Leaf picking, Silkworm rearing)	10	10,000	10	10,000	10	10,000	10	10,000	40	40,000
4.	Arrangement of Exhibitions		10,000		10,000		10,000		10,000	40	40,000
5.	Supply of Netrikas for Cocoon harvest to farmers (Rs.50 x 200 netrika x 300 farmers= Rs.3000000/-)	300	3000000	300	3000000	300	3000000	300	3000000	1200	12000000
	Total	**900**	**3940000**	**900**	**3940000**	**900**	**3940000**	**900**	**3940000**	**3600**	**15760000**

6.8 Public Works Department (PWD)

Public Works Department is actively participating in the development of the district. The department has proposed various works to be undertaken to augment the irrigation sources like canals and tanks in different taluks of Salem district with the extent of area to be benefited in implementation of the programme.

The action plan proposed under NADP along with total outlay for implementation of the schemes in each year are presented in Table 6.20 to 6.23. The total outlay for implementation is estimated to be Rs.450 lakhs for the four years.

Table 6.20 Action Plan proposed for the Financial Year 2008-2009 –PWD

Sl. No.	Name of work	Taluk	Extent of Area to be benefited in (Ha)	Estimate cost (Rs. lakhs)
1.	Rehabilitation and improvements to distributaries at mile 7/3-210 and 10/1-234 of East Bank Canal	Edappadi	196.57	20.00
2.	Reconstruction of sluices, surplus weir and desilting Kullampatty Tank in Arasiramani village of Sankari Taluk in Salem District	Sankari	66.40	20.00
3.	Formation of a new tank in Perumpallam odai in Kaveripuram village of Mettur Taluk	Mettur	85.020	30.00
4.	Rehabilitation and improvements to Kothaneri tank in Lakkampatti village of Mettur taluk	Mettur	176.760	15.00
5.	Rehabilitation and improvements to Madurakaliamman koil odai tank in Poolampatty village of Edappadi taluk	Edappadi	184.210	15.00
6.	Rehabilitation and improvements to Palamedu anicut to Kottakullapudaiyan supply channel in Kodayampatty village of Omalur taluk	Omalur	59.554	10.00
7.	Rehabilitation and improvements to Nachinampatty tank in Nachinampatty village of Omalur taluk	Omalur	41.330	15.00
	Total			**125.00**

Table 6.21 Action Plan proposed for the Financial Year 2009-10 -PWD

Sl. No.	Name of work	Taluk	Extent of Area to be benefited in (Ha)	Estimate cost (Rs. lakhs)
1.	Rehabilitation and improvements to distributaries at mile 11/7-516 and 13/7-081of Mettur East Bank Canal	Edappadi & Sankari	191.38	40.00
2.	Rehabilitation of II Brand Canal of 1416 distributary of East Bank Canal	Sankari	118.78	20.00
3.	Rehabilitation and improvements to irrigation channel from LS 0M to 2500M in Thumbalkattupallam tank in Alamarathupatti village of Mettur tank	Mettur	258.700	10.00
4.	Rehabilitation and improvements to irrigation channel from LS 0M to 2000 M in Semmalai Sivilikaradu tank in Tharkadu village of Mettur taluk	Mettur	130.770	10.00
5.	Rehabilitation and improvements to Vadamaneri tank and Vadamaneri anicut to Vadamaneri tank supply channel in Kadayampatti village of Omalur taluk	Omalur	186.430	10.00
6.	Rehabilitation and improvementrs to Gundakkal tank in Kadayampatty village of Omalur taluk	Omalur	44.340	15.00
	Total			**105.00**

Table 6.22 Action Plan proposed For the Financial Year 2010 -2011 -PWD

Sl. No.	Name of work	Taluk	Extent of Area to be benefited in (Ha)	Estimate cost (Rs. lakhs)
1.	Rehabilitation and improvements to distributaries at mile 12/5 of Mettur East Bank Canal	Edappadi	221.46	25.00
2.	Reconstruction of surplus weir and desilting Ponnusamudram tank in Arasiramani village of Sankari Taluk in Salem District	Sankari	52.63	20.00
3.	Rehabilitation and Improvements to irrigation channel from LS 2501M to tail end in Thumbalkattupallam tank in Alamarathupatti village of Mettur taluk	Mettur	258.700	10.00
4.	Rehabilitation and improvements to irrigation channel from LS 2001M to tail end in Semmalai Sivilikaradu tank in Tharkadu village of Mettur taluk	Mettur	130.770	10.00
5.	Rehabilitation and improvements to Godupallam tank and Irrigation channel in Kongarapatty village of Omalur taluk	Omalur	74.900	10.00
6.	Rehabilitation and improvements to Nachinampatti tank and supply channel in Nachinampatti village of Omalur taluk	Omalur	41.330	20.00
	Total			**95.00**

Table 6.23 Action Plan proposed For the Financial Year 2010 -2011 -PWD

Sl. No.	Name of work	Taluk	Extent of Area to be benefited in (Ha)	Estimate cost (In lakhs)
1.	Rehabilitation and improvements to distributary at mile 13/2 of Mettur East Bank Canal	Edappadi	505.66	25.00
2.	Rehabilitation and improvements to the distributary at mile 19/3 of East Bank Canal in Sankari Taluk in Salem district	Sankari	2170.04	20.00
3.	Rehabilitation and improvements to irrigation channel from L.S.0M to tail end and head sluice of Kothaneri tank in Lakkampatti village of Mettur taluk	Mettur	176.760	30.00
4.	Rehabilitation and improvements to irrigation channel in Madurakaliamman koil odai tank in Poolampatti village of Edappadi taluk	Edappadi	184.210	20.00
5.	Rehabilitation and improvements to Kottai Kullapudaiyan tank in Kadayampatti village of Omalur taluk	Omalur	71.120	15.00
6.	Rehabilitation and improvements to Periyasakkilichi eri and supply channel in K.N.Pudur village of Omalur taluk	Omalur	42.510	15.00
	Total			**125.00**

Table 6.24 Public Works Department - Budget Abstract under NADP (2008-2012)

Sl. No.	Financial Year	No. of works	Budget (Rs. Lakhs)
1.	2008-2009	7	125.00
2.	2009-2010	6	105.00
3.	2010-2011	6	95.00
4.	2011-2012	6	125.00
	Total	**25**	**450.00**

ANNEXURE I

SENSITIZATION MEETING HELD AT SALEM – COVERAGE BY LOCAL DAILIES

தினகரன் Dated 05-06-2008

விவசாயிகளின் வருமானத்தை பெருக்க புதிய திட்டம்

சேலம் மாவட்டத்தில் அமல்

சேலம், ஜூன் 5: விவசாயிகளின் வருமானத்தை பெருக்கநேரியவேளாண்மை மேம்பாட்டு திட்டம் செயல்படுத்தப்பட உள்ளது. இதுகுறித்த ஆலோசனை கூட்டம் சேலத்தில் நேற்று நடந்தது. சேலம் மாவட்ட ஆட்சியர் மதிவாணன் தலைமை வகித்தார். அவர் பேசியதாவது:

தேசிய வேளாண்மை மேம்பாட்டு திட்டம் 2007–08ம் ஆண்டிற்கு சேலம், தர்மபுரி, கோவை, திண்டுக்கல், திருப்பூர், நாமக்கல், பெரம்பலூர், ராமநாதபுரம், விழுப்புரம் ஆகிய மாவட்டங்களில் செயல்படுத்தப்பட உள்ளது.

வேளாண்மை மற்றும் அதன் சார்பு துறைகள், மாவட்ட முன்னோடி வங்கிகள் ஆகியவை மூலம் வேளாண் உற்பத்தி மற்றும் உற்பத்தி இறனை அதிகப்படுத்தி விவசாயிகளின் வருமானத்தை பெருக்குவதே இத்திட்டத்தின் நோக்கம்.

இத்திட்டத்தை சிறப்பாக செயல்படுத்த, அனைத்து துறைகளை சார்ந்த கிராம அளவிலான அடிப்படை புள்ளி விவரங்கள் சேகரிக்க வேண்டும்; கிராம அளவிலான விவசாயிகளின் தேவைக்கு ஏற்ப செயல் திட்டம் தயாரிக்க வேண்டும்.

வேளாண்மை மற்றும் அதைச்சார்ந்த துறைகளின் மூலம் உற்பத்தி மற்றும் வருமானத்தை பெருக்கும் விதத்தில் புதிய திட்டங்கள் தயாரிக்க வேண்டும்; இக்கருத்துக்களை அடிப்படையாக கொண்டு கிராம அளவிலான தேவைகளை அறிந்து, துறை வாயிலான செயல் திட்டம் தயாரிக்க வேண்டும்.

விவசாயிகளுக்கு பயன் அளிக்கும் இத்திட்டத்தை சிறந்த முறையில் செயல்படுத்தும் வகையில் விவசாயிகள் பயன்படுத்திக் கொள்ள வேண்டும். இவ்வாறு ஆட்சியர் மதிவாணன் கூறினார். முன்னதாக வேளாண்மை இணை இயக்குநர் ஜகேன் வரவேற்றார். ஏத்தாப்பூர் மரவள்ளி மற்றும் ஆமணக்கு ஆராய்ச்சி நிலைய தலைவர் வெங்கடேசன், தமிழ்நாடு வேளாண் பல்கலை இணை பேராசிரியர் அங்கயக்கண்ணி, வேளாண்மை துணை இயக்குநர் மாணிக்கம், உதவி இயக்குநர் சுப்ரமணியம், தோட்டக்கலைத்துறை உதவி இயக்குநர் இன்பராஜ், மாவட்ட ஊராட்சி தலைவர் சுரேஷ்குமார் ஆகியோர் கலந்துகொண்டு பேசினர். 200க்கும் மேற்பட்ட உள்ளாட்சி பிரதிநிதிகள் கலந்து கொண்டனர்.

THE HINDU DATED 05-06-2008

CLASSIFIEDS MART Pages 6 & 8
More Regional Advertisements: Page 6 & 8

Erode Yesterday 34/23 | Namakkal Yesterday 33/23 | Salem Yesterday 34/23

Conditional max temp/min temp in Celsius;

Salem Today

A fresh cool morning. A warm & humid day. A spell of rain/t'shower is possible during the evening/night. High 34°C, low 23°C. RH max 86%.

Salem Tomorrow

A cool cloudy morning. The afternoon remain warm & humid. One or two spells of rain/t'shower is expected. High 34°C, low 23°C. RH max 87%.

Read RH as Relative Humidity

RE

BRIEFLY

Power shutdown tomorrow

SALEM: As Tamil Nadu Electricity Board (TNEB) will undertake maintenance works in its sub station at Udayapatti, there will be no power supply in the following places between 9 a.m. and 4 p.m. on June 6.

The places are: Udayapatti, Vidya Nagar, Ammapet, Ponnammapet, Thillai Nagar, Valasaiyur, Ayothiapattinam, Mettupatti, Thathanur, Veeranam, AN Mangalam, Selliampalayam, Eripudur, Minnampalli, Gorimedu, Kannankurichi, Chinna Tirupathi and Kondapa Naickenpatti.

Exercise to prepare plan under NAD scheme begins

Collector holds inter-active session with officials, scientists

Special Correspondent

SALEM: The preliminary exercise to prepare an action plan under the National Agriculture Development Scheme (NAD) in the district has begun.

An inter-active session with officials, agriculture scientists, technocrats and representatives of local bodies was organised here on Wednesday in which Collector N. Mathivanan, while stressing the importance of such schemes in the district, asked the participants to involve themselves totally to make it a successful one.

He detailed various steps of the scheme such as collecting basic data at village level, planning as per the requirement of farmers, preparing new schemes to tone up the production and income from farm and farm-allied activities and implementation through various departments etc.

Objective

Later a comprehensive action plan for the district would be prepared. Its objective was to enhance the farm production and farmers livelihood by implementing schemes that would benefit the farmers in the locality.

The scheme is being implemented in Salem, Coimbatore, Dharmapuri, Dindigul, Krishnagiri, Namakkal, Perambalur and Ramanathapuram.

The scheme is being implemented in Salem, Coimbatore, Dharmapuri, , Krishnagiri and Namakkal,

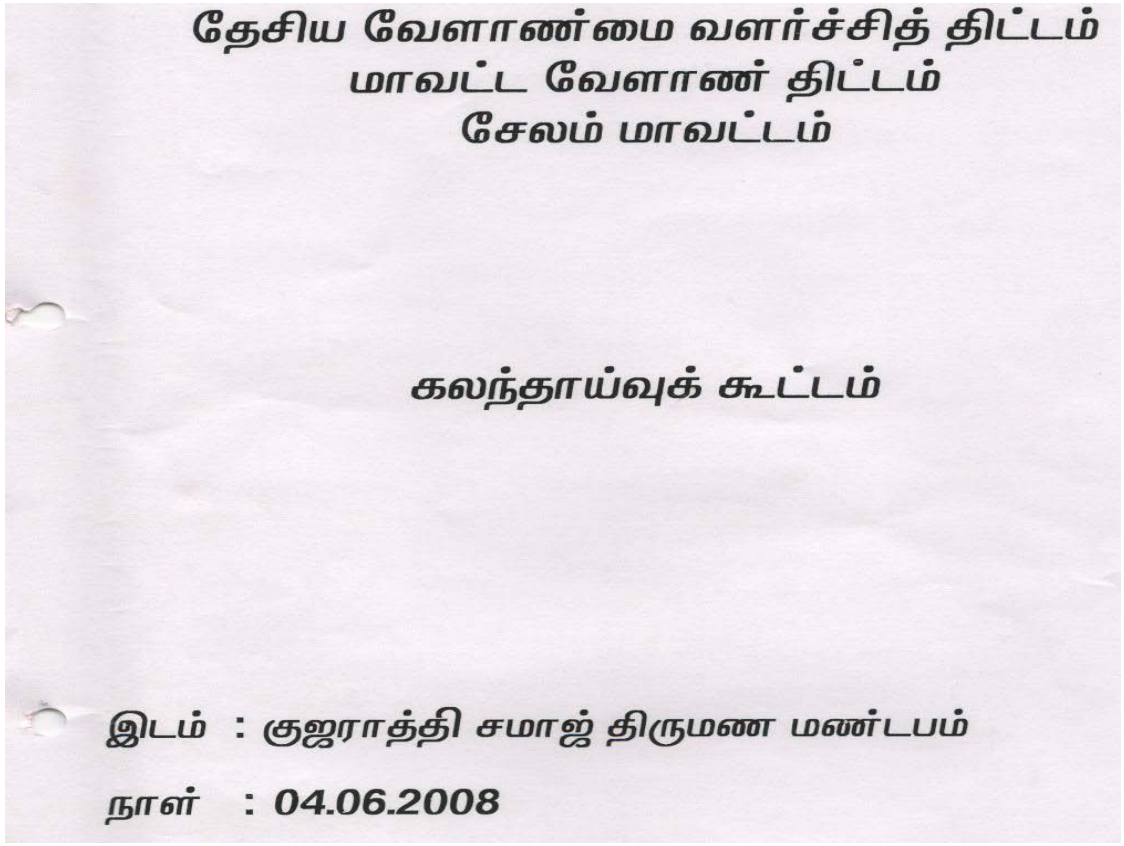
Joint Director (Agriculture) K. Janagan presided over it.

Later an inter-active session also was conducted in which officials including S. Venkatesan (TNAU, Ethapur), M. Anjugam (TNAU, Coimbatore), M. Periyasamy (Agricultural Engineering), A. P. Subramaniam (Agricultural Marketing) and S. Karunanidhi (PA to Collector, Agriculture), participated.

ALL EARS: *A section of local body representatives at the national agriculture development inter-active session in Salem on Wednesday.* — PHOTO: P. GOUTHAM

ANNEXURE II

LIST OF PARTICIPANTS IN THE SENSITIZATION MEETING



தேசிய வேளாண்மை வளர்ச்சித் திட்டம்
மாவட்ட வேளாண் திட்டம்
சேலம் மாவட்டம்

கலந்தாய்வுக் கூட்டம்

இடம் : குஜராத்தி சமாஜ் திருமண மண்டபம்

நாள் : 04.06.2008

பங்கேற்பாளர்கள் பட்டியல்

வ.எண்	பெயர் மற்றும் முகவரி	கையொப்பம்
1	T. உமாமகேஸ்வரி Chairman ஆலோசனை	4/6/08
2	R. சந்திரா Chairman வாழப்பாடி	R. Chandra 4/6/2008
3	ம. நாராயணன் Chairman அலோசனியாபட்டணம்	
4	R. ராஜேந்திரன் Chairman காடையாம்பட்டி	R. Rajendran
5	காந்திமதி Chairman சிறுவலூர்	K. காந்திமதி
6	பழனியம்மாள் Chairman இந்தம	P. Palaniammal.

பங்கேற்பாளர்கள் பட்டியல்

வ.எண்	பெயர் மற்றும் முகவரி	கையொப்பம்
7	J. துரைராஜ் S/o ஜெகநாதன் செங்கல் காடையாம்பட்டி	J. [signature]
8	K.K. பழனிசாமி S/o. வெங்கடசாமி கண்ணாமூச்சி தலைவர் கொளத்தூர்	K.K. [signature]
9	R. கண்ணன் தலைவர் திருவாச்சூர் பஞ்சாயத்து தலைவாசல்	[signature]
10	தங்கம்மாள் தலைவர் தேவியாகுறிச்சி தலைவாசல்	த. தங்கம்மாள்
11	பேச்சாயி தலைவர் ஊனத்தூர் தலைவாசல்	ம. பேச்சாயி
12	மாரிமுத்து தலைவர் சங்கீதபட்டி ஆத்தூர்	மாரிமுத்து
13	A.S. ரவி தலைவர் மன்னார்பாளையம் வாழப்பாடி	A.S. [signature]
14	T. வேடப்பன் தலைவர் பாப்பம்பாடி தாரமங்கலம்	[signature]

பங்கேற்பாளர்கள் பட்டியல்

வ.எண்	பெயர் மற்றும் முகவரி	கையொப்பம்
15	A. காசி தலைவர் ராமநாயக்கன்பாளையம் ஆத்தூர்	[illegible]
16	அய்யாவு தலைவர் பச்சைமலை கெங்கவல்லி	அ. அய்யாவு
17	P. பாலகிருஷ்ணன் தலைவர் கோவேரிபட்டி அக்ரஹாரம் சங்ககிரி	P. பாலகிருஷ்ணன்
18	R. சாந்தி தலைவர் செக்கிரிப்பட்டி மே. நா. பாளையம்	R. சாந்தி
19	M. கோவிந்தராசன் தலைவர் சிக்கம்பட்டி ஆத்தூர்	M. Govindarasu
20	G. பாப்பாத்தி தலைவர் மாவட்ட ஊராட்சி குழு திட்டக்குழு உறுப்பினர் கொளத்தூர்.	G. pappathi
21	R. தங்கவேல் துணைத்தலைவர் மண்மலை கெங்கவல்லி	[illegible]
22	S. மோகன் கவுன்சிலர் உலிபுரம் கெங்கவல்லி	[illegible]

பங்கேற்பாளர்கள் பட்டியல்

வ.எண்	பெயர் மற்றும் முகவரி	கையொப்பம்
23	M. பழனி தலைவர் உளிபுரம் கொங்கணவல்	ம. பழனி
24	K. மல்லிகா தலைவர் சங்ககிரி மகுடஞ்சாவடி	k, malliga
25	R. மாணிக்கம் தலைவர் இருகாலூர் சங்ககிரி	R. மாணிக்கம்
26	T. வசந்தா தனபால் தலைவர் உத்தம சோழபுரம் வீரபாண்டி	D. வசந்தா தனபால்
27	M. சௌந்தரராஜன் தலைவர் சின்னகவுண்டம்பாளையம் மகுடஞ்சாவடி	[illegible]
28	R. அமுதா தலைவர் சாணாரப்பட்டி உடையாபட்டி நங்கவள்ளி	R. Amutha
29	E. கனகம் தலைவர் வெள்ளாளபுரம் பஞ்சாயத்து கொங்கணாபுரம்	E. கனகம்
30	A. அலமேலு தலைவர் டேனிஷ்பேட்டை காடையாம்பட்டி	A. அலமேலு

பங்கேற்பாளர்கள் பட்டியல்

வ.எண்	பெயர் மற்றும் முகவரி	கையொப்பம்
31	M. சோமசுந்தரம் தலைவர் கணவாய்புதூர் முதல்நிலை ஊராட்சி காடையாம்பட்டி	[illegible]
32	R. சுமித்ரா தலைவர் தென்னம்பிள்ளையூர் பெ. நா. பாளையம்	R.சுமித்ரா
33	C. மலர்கொடி தலைவர் பனைமடல் பெ. நா. பாளையம்	C.மலர்கொடி
34	A. கந்தசாமி தலைவர் தேக்கல்பட்டி வாழப்பாடி	A.Kandasamy
35	பி. ராணி தலைவர் கோரணம்பட்டி கொங்கணாபுரம்	பெ.[illegible]
36	ப. ராமன் தலைவர் கோனசமுத்திரம் கொங்கணாபுரம்	P.Raman
37	~~உடையாப்பட்டி~~ R. முத்துக்கவுண்டர் தலைவர் நக்காயூர் கொங்கணாபுரம்	R.[illegible]
38	S. பெரியசாமி தலைவர் பெரியேரி தலைவாசல்	S.[illegible]

பங்கேற்பாளர்கள் பட்டியல்

வ.எண்	பெயர் மற்றும் முகவரி	கையொப்பம்
39	V. மணி தலைவர் உம்மிலிக்கம்பட்டி கொடையாம்பட்டி	V. மணி
40	R. ரத்தினம் தலைவர் பன்பாக்கி அமைதூர்	R. Rathinam
41	ஜெ. ஜெனமே ஜெயராஜ் தலைவர் சிறுமலைக்கோட்டை வாழப்பாடி	[illegible]
42	A. கோவிந்தராஜ் தலைவர் ஒதிவாகுர் அ. பட்டணம்	A. [illegible]
43	K. பழனிசாமி தலைவர் மாதிநாய்க்கன்பட்டி அ. பட்டணம்	K. பழனிசாமி
44	R. லட்சுமி தலைவர் வைகுந்தம் மகுடஞ்சாவடி	R. லட்சுமி
45	M. ஜெயராணி மாதையன் ஆ. தாதையூர் மகுடஞ்சாவடி	C. Madhaiyan
46	அமுதா வெங்கடேஸ்வரன் தலைவர் கன்யாணகிரி வெ. பாபாளி	P. [illegible]

பங்கேற்பாளர்கள் பட்டியல்

வ.எண்	பெயர் மற்றும் முகவரி	கையொப்பம்
47	P. பழனிசாமி தலைவர் வைத்தியகவுண்டன்புதூர் பெ.நா.பாளையம்	P. [illegible]
48	~~R. [illegible]~~ N. ராஜ்குமார் தலைவர் மண்ணவாடி கொளத்தூர்	N. [illegible]
49	N. லட்சுமி தலைவர் அக்கரபாளையம் வீரபாண்டி	N.லட்சுமி
50	A. கார்த்திகேஜ் தலைவர் நகரபுதூர் கெங்கவல்லி	A.கார்த்திகேஜ்
51	T.C. மாதேஷ் ~~[illegible]~~ தலைவர் தொளசம்பட்டி ஓமலூர்	[illegible]
52	G. சுமித்ரா லக்ஷ்மணன் தலைவர் வடக்குகாடு பெ.நா.பாளையம்	G.S.[illegible]
53	S. கலையரசி செந்தில்குமார் தலைவர் கல்லேரிப்பட்டி பெ.நா.பாளையம்	S.Kalaiarasi
54	K. சுமதி கொளஞ்சி தலைவர் தலைவர் ஆறகளூர் தலைவாசல்	K.[illegible]

பங்கேற்பாளர்கள் பட்டியல்

வ.எண்	பெயர் மற்றும் முகவரி	கையொப்பம்
55	G. சின்னம்மாள் தலைவர் சின்னாகவுண்டனூர் சங்ககிரி	G. சின்னம்மாள்
56	P. சாந்தி தலைவர் சங்கிநாயக்கன்பட்டி சங்ககிரி	P. சாந்தி
57	M. கோமதி தலைவர் அகலந்தூர் சங்ககிரி	M. கோமதி
58	இ. சுமதி தலைவர் மாவலூர் தலைவாசல்	I. Sumathi
59	பா. கீதா பாலன் மாவட்ட திட்டக்குழு உறுப்பினர் எடப்பாடி	பா. கீதா
60	M. செல்லம்மாள் தலைவர் சிறுகேசி தலைவாசல்	செல்லம்மாள்
61	S. ராஜம்மாள் தலைவர் புளியங்குறிச்சி தலைவாசல்	S. Rajammal.
62	S. மகேஸ்வரி தலைவர் அம்மம்பாளையம் ஆத்தூர்	S. Mahe[illegible]

பங்கேற்பாளர்கள் பட்டியல்

வ.எண்	பெயர் மற்றும் முகவரி	கையொப்பம்
63	R. லட்சுமி தலைவர் மஞ்சினி ஆத்தூர்	R.Lakshmi
64	R. அமுதா தலைவர் சீலியம்பட்டி ஆத்தூர்	R.அமுதா
65	S. கவிதா தலைவர் காட்டுவேப்பிலைப்பட்டி வாழப்பாடி	S.Kavitha
66	மா. வசந்தா தலைவர் சோமம்பட்டி வாழப்பாடி	மா. வசந்தா
67	D. ராஜாமணி தலைவர் வெள்ளையூர் தலைவாசல்	D ராஜாமணி
68	P. S. S. ராஜேந்திரன் தலைவர் வேம்படிதாளம் வீரபாண்டி	[illegible]
69	வேதநாதன் தலைவர் சோளக்கோம்பை வாழப்பாடி	V. வேதநாதன்
70	செந்தில் முருகமணி தலைவர் ஜ சந்திரபிள்ளைவலசு வாழப்பாடி	[illegible]

பங்கேற்பாளர்கள் பட்டியல்

வ.எண்	பெயர் மற்றும் முகவரி	கையொப்பம்
71	வி. ஜெகநாதன் ஊராட்சிமன்ற உறுப்பினர் கிராம [illegible] விராலிப்பட்டி	V. [illegible]
72	K. திருஞானவேல் ஊராட்சி மன்ற தலைவர் கிராம [illegible] விராலிப்பட்டி	K திருஞானவேல்
73	R. ராமமாணிக்கம் தலைவர் [illegible] சங்ககிரி	[illegible]
74	S. P. A. வேலுசாமி தலைவர் [illegible] சங்ககிரி	[illegible]
75	R. ராஜலிங்கம் தலைவர் [illegible] பாடிப்பட்டி	R. Rajal[illegible]
76	R. வரதராஜன் தலைவர் திருவாம்பட்டி [illegible]	R. Varadarajan
74	R. நாராயணன் தலைவர் கட்டப்பட்டி [illegible]	[illegible]
78	M. திருசிவலிங்கம் தலைவர் [illegible] எர்ணாபுரம் [illegible]	M. [illegible]

பங்கேற்பாளர்கள் பட்டியல்

வ.எண்	பெயர் மற்றும் முகவரி	கையொப்பம்
79	M. வைத்திலிங்கம் தலைவர் வேப்பமா காடையாம்பட்டி	[signature]
80	R. கலாவதி தலைவர் கொத்தாம்பாடி ஆத்தூர்	[signature]
81	கு. செல்வம் தலைவர் மானாபுரம் மேச்சேரி	[signature]
82	காசி தலைவர் ஆலப்பட்டி மேச்சேரி	R காசி
83	கெம்பி. தலைவர் எம். என். பட்டி மேச்சேரி	K.கெம்பி
84	வளர்மதி தலைவர் தென்னங்குடிபாளையம் ஆத்தூர்	V.Valarmathi
85	உ. ரா. இராஜலிங்கம் தலைவர் [illegible] தலைவாசல்	[signature]
86	S. சின்னையன் தலைவர் சிறுப்பாக்கம் தலைவாசல்	[signature]

பங்கேற்பாளர்கள் பட்டியல்

வ.எண்	பெயர் மற்றும் முகவரி	கையொப்பம்
87	திரு. வட்கம் தலைவர் அரசநத்தம் ஆத்தூர்	[illegible]
88	R. பார்வதி தலைவர் மல்லியகரை ஆத்தூர்	R.Paarvathi
89	P. முருகேசன் தலைவர் வேப்பநத்தம் தலைவாசல்	P.முருகேசன்
90	A. ராமன் தலைவர் [illegible] [illegible]	[illegible]
91	கிருஷ்ணன் தலைவர் [illegible] கெங்கவல்லி	[illegible]
92	திரு கோபால் தலைவர் திம்மநாயக்கன்பட்டி பனமரத்துப்பட்டி	G.[illegible]
93	V. சிவன் வினோத் ஆரியபாளையம் பெ.நா.பாளையம்	Vinoth
94	சண்முகம் தலைவர் S. பாப்பாரப்பட்டி வீரபாண்டி	C.[illegible]

பங்கேற்பாளர்கள் பட்டியல்

வ.எண்	பெயர் மற்றும் முகவரி	கையொப்பம்
95	எம். முத்துமணி தலைவர் மாரமங்கலம் [illegible]	M. முத்துமணி
96	S. அய்யாசு தலைவர் அன்னதானப்பட்டி சங்ககிரி	S Ayyan
97	C. செல்வம் தலைவர் மேல்நாடு, பெரியகவுண்டம்பட்டி செ. நா. பாளையம்	C. செல்வம்
98	C. P. ஜெயராமன் தலைவர் சின்னமநாய்க்கன்பாளையம் வாழப்பாடி	C.P. Jay
99	V. சுப்ரமணியம் தலைவர் [illegible] கொங்கவல்லி	V. சுப்ரமணியன்.
100	[illegible] [illegible] ஆத்தூர்	[illegible]
101	வெ. ராமலிங்கம் தலைவர் வளையமாதேவி ஆத்தூர்	V. Ramalingam
102	பரமசிவம் ஒருங்கிணைப்பாளர் ஆண்டிப்பட்டி அ. பட்டணம்	பரமசிவம்

பங்கேற்பாளர்கள் பட்டியல்

வ.எண்	பெயர் மற்றும் முகவரி	கையொப்பம்
103	E. சித்தன் தலைவர் செட்டிமாங்குறிச்சி எடப்பாடி	[signature]
104	P. தங்கவேல் தலைவர் மசக்காடு எடப்பாடி	P. தங்கவேல்
105	V. இராமலிங்கம் Vice president ஆரியகவுண்டம்பட்டி ஊராட்சி	V. இராமலிங்கம்
106	ரமேஷ் தலைவர் மணியக்காரன் திருவாசல்	[signature]
107	அம்மாசி தலைவர் வெள்ளரிவெள்ளி எடப்பாடி	[signature]
108	C. சேகர் தலைவர் கொல்லபட்டி ஆத்தூர்	C. [signature]
109	P. சோமசுந்தரம் கொப்பனூர் அ.பட்டணம்	P. [signature]
110	திருச்செல்வி தலைவர் ~~[illegible]~~ நாகியம்பட்டி கெங்கவல்லி	S.T[signature]

பங்கேற்பாளர்கள் பட்டியல்

வ.எண்	பெயர் மற்றும் முகவரி	கையொப்பம்
111	கி. சகாயராஜ் [illegible] வேளாண்மை அலுவலர் I ஆத்தூர்.	
112	A. [illegible] வேளாண்மை அலுவலர் வாழப்பாடி	

பங்கேற்பாளர்கள் பட்டியல்

வ.எண்	பெயர் மற்றும் முகவரி	கையொப்பம்
113	(4) [illegible] [illegible] [illegible] சேலம்	
114.	K. G. Thennavan Bramma Rayer Regional Inspector of fisheries.	
115.	S. Gopalsamy A. D. Sericulture Salem	
116.	அ. ப. சுப்பிரமணியன் வேளாண்மை துணை இயக்குநர் (வேளாண் வணிகம்) சேலம்	9/6/08
117.	Dr. S. Venkatesan, Professor & Head. TCRS, Yethapur.	4/6/08
118	[illegible] [illegible] சேலம்	
119	அ. [illegible] [illegible] சேலம்	

பங்கேற்பாளர்கள் பட்டியல்

வ.எண்	பெயர் மற்றும் முகவரி	கையொப்பம்
120	த. யசோதா ஸ்ரீ [illegible] தலைவர் திருமங்கலம்	D. yasotha
121	A. பூபதி Chair சேர்மன் உடையன் பஞ்சாயத்து [illegible]	[illegible]
122	சாந்தி சேர்மன் [illegible]	[illegible]
123	கோகிலா சேர்மன் [illegible]	M. [illegible]
124	[illegible] சேர்மன் [illegible]	[illegible]

பங்கேற்பாளர்கள் பட்டியல்

வ.எண்	பெயர் மற்றும் முகவரி	கையொப்பம்
125	P.C. சந்திரசேகரன் தலைவர், பண்ணைப்பட்டி காடையாம்பட்டி	[illegible]
126	K. செல்வபதி தலைவர், செம்மாண்டப்பட்டி காடையாம்பட்டி	K. Sel…
127	வெள்ளியம்மை தலைவர், கொட்டப்பட்டி பெ.நா.பாளையம்	வெள்ளியம்மாள்
128	M. இராமசாமி தலைவர், பெரியேரிப்பட்டி ஓமலூர்	[illegible]
129	M. காசிராஜன் தலைவர், கோணேரிப்பட்டி சங்ககிரி	[illegible]
130	K. ரங்கநாதன், தலைவர் பொம்மியம்பட்டி காடையாம்பட்டி	க.ரங்கநாதன்
131	M. வசந்தா, தலைவர் வீரபாண்டி	M.வசந்தா
132	M. பழனியப்பன் தலைவர் சேலம்	பழனியப்பன்

பங்கேற்பாளர்கள் பட்டியல்

வ.எண்	பெயர் மற்றும் முகவரி	கையொப்பம்
133	சாந்தி நல்லதம்பி தலைவர் தும்பிபாடி ஓமலூர்	ந.சாந்தி
134.	E. பழனியம்மாள் ஒருங்கிணை சேலம் ஊராட்சி ஒன்றிய குழு தலைவர்.	E.பழனியம்மாள்
135	குப்பண்ணன் தலைவர் பெருமாகவுண்டம்பட்டி வீரபாண்டி	S.குப்பன்
136	A. சேகர் தலைவர். சின்னனூர் அயோத்தியா பட்டணம்	A-[illegible]
137	V. வசந்தா . காசிவிஸ்வநாதன் தலைவர் பொன்னாரம்பட்டி வாழப்பாடி	கா. வசந்தா
138	V. பழனியப்பன் தலைவர். புதூர் மகுடஞ்சாவடி.	VP [illegible]
139	P. ராமசாமி துணை தலைவர் பூலாவாரி வீரபாண்டி	P. [illegible]
140	R. பாக்கியம் தலைவர் . P நல்லாகவுண்டம்பட்டி ஓமலூர்.	R.பாக்கியம்

பங்கேற்பாளர்கள் பட்டியல்

வ.எண்	பெயர் மற்றும் முகவரி	கையொப்பம்
141	V.S. ஸ்ரீநாத் தலைவர் வெள்ளாளபட்டி பெத்தநாயக்கன்பாளையம்	[signature]
142	G. சித்ரா தலைவர்: உமையாள்புரம் பெத்தநாயக்கன்பாளையம்	ஜி. சித்ரா
143	P. சிங்காரம் தலைவர் A. குமாரபாளையம் பெத்தநாயக்கன்பாளையம்	ப. சிங்காரம்
144	A. மாரியம்மாள் தலைவர்: வீராணம் அயோத்தியாபட்டணம்	A. Mariammal.
145	M. சந்திரகாந்தி தலைவர். [illegible] ஆத்தூர்	[signature]
146	சின்னதுரை தலைவர். சீலநாயக்கன்பட்டி ஆத்தூர்	[signature]
147	A. பொன்னுதுரை தலைவர் மாவட்ட ஊராட்சி மன்ற வார்டு - 23வது வார்டு	[signature]
148	K. சிவசண்முகம் தலைவர் ஆவடத்தூர் நங்கவள்ளி	K. Sm[illegible]

பங்கேற்பாளர்கள் பட்டியல்

வ.எண்	பெயர் மற்றும் முகவரி	கையொப்பம்
149	மாரியப்பன் தலைவர் : ஆரப்பள்ளி நங்கவள்ளி	M. மாரி[illegible]
150	செ. சுகிர்திரன் மாவட்ட திட்ட குழு உறுப்பினர்	[illegible]
151	S. சித்ரா தலைவர் . இறை பாப்பட்டி வீரபாண்டி	S. Chitra
152	C. பெரியசாமி தலைவர், ~~[illegible]~~ தேவண்ணகவுண்டனூர் சங்ககிரி	[illegible]
153	P. கயல்விழி தலைவர் . A- குருப்பட்டி பெத்தநாயக்கன்பாளையம்	P. Kayalvizhi
154	M. [illegible] தலைவர் . பள்ளிபட்டி அயோத்தியாபட்டணம்	M. [illegible]
155	வசந்தா சுப்ரமணி தலைவர் . தலைவாசல் தலைவாசல்	Vasantha
156	V. மாணிக்கம் தலைவர் . கோணூர் நங்கவள்ளி	V. Manickam

பங்கேற்பாளர்கள் பட்டியல்

வ.எண்	பெயர் மற்றும் முகவரி	கையொப்பம்
157	சாந்தி அங்கமுத்து தலைவர் பெரிய கிருஷ்ணாபுரம் பெத்தநாயக்கன்பாளையம்	A. [illegible]
158	பரமேஸ்வரன் தலைவர் . வைத்தூர் ஆத்தூர்	D. [illegible]
159	R. சாந்தா தலைவர் : [illegible] ஓமலூர்	R.சாந்தா
160	G. கலைமணி கோவிந்தன் தலைவர் தீர்த்தமலைபாளையம் காடையாம்பட்டி ஒன்றியம்	G. [illegible]
161	பழனியம்மாள் வேலுசாமி தலைவர் புள்ளாகவுண்டன்பட்டி அக்ரஹாரம் . சங்ககிரி	P.வேலுசாமி
162	K.M. ராஜா தலைவர் தொண்டப்பநாயக்கன்பட்டி சேலம்	[illegible]
163	A பூங்கொடி P. மாதேஷ் தலைவர் : [illegible] மகுடஞ்சாவடி	[illegible]
164	A. கண்ணன் தலைவர் : புக்கம்பட்டி மேச்சேரி	[illegible]

பங்கேற்பாளர்கள் பட்டியல்

வ.எண்	பெயர் மற்றும் முகவரி	கையொப்பம்
165	K. முத்துசாமி தலைவர் M. பெருமாபாளையம் அயோத்தியாபட்டணம்	K. Muthusamy
166	P. அபிமன்யு தலைவர் சிங்கிபுரம் - கொளத்தூர்	P. Abimanyu
167	T. சிவரமணியன் தலைவர். ஆராத்தி அக்ரஹாரம் தலைவாசல்	[signature]
168	T. மணிகண்டன் தலைவர் வேட்டைபட்டி அயோத்தியாபட்டணம்	[signature]
169	R. நல்லப்பன் தலைவர் சின்னகவுண்டபுரம் அயோத்தியாபட்டணம்	R. நல்லப்பன்
170	ராதா சின்னவெங்கம் தலைவர் காரிப்பட்டி ஊராட்சி அயோத்தியாபட்டணம்	ராதா
171	சுமதி பரந்தாமன் தலைவர் [illegible] ஊராட்சி அயோத்தியாபட்டணம்	P. Sumathi
172	R. முருகசாமி தலைவர் வீரக்கல் நங்கவள்ளி	R. முருகசாமி

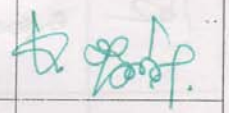
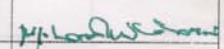
பங்கேற்பாளர்கள் பட்டியல்

வ.எண்	பெயர் மற்றும் முகவரி	கையொப்பம்
173	S. பழனிசாமி தலைவர் எருமைப்பட்டி கொங்கணாபுரம்	S.Palani
174	K. மாதையன் தலைவர் : புதுப்பாளையம் கொங்கணாபுரம்	K. மாதை
175	T.K. மாதேஸ்வரன் தலைவர் : அய்யம்பாளையம் சங்ககிரி.	Thamodaran
176	பழனிரத்தினம் தலைவர் : கோட்டைவருதம்பட்டி சங்ககிரி	[illegible]
177	A.T. ராஜு தலைவர் : இடங்கணசாலை	[illegible]
178	K.K. [illegible] கண்ணன் தலைவர் : வெள்ளக்கல்பட்டி முதல் நிலை ஊராட்சி ஓமலூர்	[illegible]
179	நாகமணி துணைத்தலைவர் கோனேரிப்பட்டி சங்ககிரி	P.Nagamani P-Nagamani
180	சாந்தி தலைவர் காருவள்ளி காடையம்பட்டி	N. Shanthi

பங்கேற்பாளர்கள் பட்டியல்

வ.எண்	பெயர் மற்றும் முகவரி	கையொப்பம்
181	A. கோவிந்தராஜ் தலைவர் கொங்குப்பட்டி காடையம்பட்டி	A. Govindaraj
182	V. வைத்தியலிங்கம் தலைவர் மல்லகுண்டம் சேக்கேரி	V. Vaithilingam
183	பரந்தாமன் தலைவர் கோட்டை மாரியம்மன் கோவில் ஓமலூர்	[illegible]
184	K. வெங்கடாசலம் தலைவர் கட்சுபள்ளி கொங்கணாபுரம்	K. வெங்கடாசலம்
185	துரைசேகரன் திட்ட குழு உறுப்பினர் தலைவாசல்	[illegible]
186	D. வைத்தியநாதன் தலைவர் ஏ.கொம்பை ஆத்தூர்	[illegible]
187	S. ராமர் தலைவர் நாவக்குறிச்சி தலைவாசல்	S. R[illegible]
188	முத்துசாமி தலைவர் சிறுவாச்சூர் தலைவாசல்	ப.முத்துசாமி

பங்கேற்பாளர்கள் பட்டியல்

வ.எண்	பெயர் மற்றும் முகவரி	கையொப்பம்
189	S. P. [illegible] தலைவர்: [illegible] [illegible]	
190	K. [illegible] தலைவர்: [illegible] [illegible]	
191	K. [illegible] தலைவர்: [illegible] [illegible]	
192	[illegible] தலைவர்: [illegible] [illegible]	
193	[illegible] தலைவர்: [illegible] [illegible]	
194	[illegible] தலைவர்: [illegible] [illegible]	
195	R. [illegible] தலைவர்: [illegible] [illegible]	
196	M. [illegible] தலைவர்: [illegible] [illegible]	M. meera

பங்கேற்பாளர்கள் பட்டியல்

வ.எண்	பெயர் மற்றும் முகவரி	கையொப்பம்
197	[illegible] துணைத்தலைவர் : ஆலம்பட்டி அகஸ்தியர் பட்டணம்	M. [illegible]
198	R. [illegible] தலைவர் : [illegible] வெத்தநாயக்கன்பாளையம்	R. C[illegible]
199	K. வசந்தி தலைவர் : [illegible] வெத்தநாயக்கன்பாளையம்	K. Vasoutha
200	சுப்ரமணியன் தலைவர் : [illegible] [illegible]	[illegible]
201	[illegible] தலைவர் : [illegible] வெத்தநாயக்கன்பாளையம்	A. M[illegible]
202	தங்கராஜ் தலைவர் : [illegible] [illegible]	K.T. [illegible]
203	செந்தில் தலைவர் : [illegible] அகஸ்தியர்பட்டணம்	A. Senthil
204	[illegible] [illegible]	[illegible]

பங்கேற்பாளர்கள் பட்டியல்

வ.எண்	பெயர் மற்றும் முகவரி	கையொப்பம்
205	தமிழ்செல்வி [illegible] [illegible] (தலைவர்) கொங்கணாபுரம்	R. Thalam
206	சரோஜா தலைவர் சென்னகோபாடி தாரமங்கலம்	[signature]
207	மு. வரதராஜன் தலைவர் புனல் வாசல் திலை வாசல்	N. V. [signature]
208	R. சக்திவேல் தலைவர் வெருதாசம்பட்டி சேக்கோ	R. [signature]
209	K. R. சைலான் தலைவர் பெருமாம்பட்டி வீரபாண்டி	[signature]
210	P. நடராஜன் மாவட்ட கவுன்சிலர் சேலம் மாவட்டம்	P. N[signature]
211	பார்வதி ஸ்ரீராம் தலைவர் சென்னகிரி வீரபாண்டி	[signature]
212	பழனிசாமி கல்லாரப்பட்டி வீரபாண்டி	M. P. [signature]

பங்கேற்பாளர்கள் பட்டியல்

வ.எண்	பெயர் மற்றும் முகவரி	கையொப்பம்
213	[illegible]	[illegible]
214	[illegible]	[illegible]
215	K. பழனி [illegible]	[illegible]
216	[illegible]	[illegible]
217	[illegible]	[illegible]
218	[illegible]	[illegible]
219	A.J. [illegible]	[illegible]
220	[illegible]	[illegible]

பங்கேற்பாளர்கள் பட்டியல்

வ.எண்	பெயர் மற்றும் முகவரி	கையொப்பம்
221	ஜெ. ராஜா. வேளாண்மை உதவி இயக்குநர் பாப்பிரெட்டிப்பட்டி	[illegible] 4/6/2008
222	கே. மணிவண்ணன் வேளாண்மை உதவி இயக்குநர் [illegible]	[illegible] 4/6/08
223	ந. ஜோதிபாசு, வேளாண்மை உதவி இயக்குநர் (மபா) கொளத்தூர்	ந. ஜோதிபாசு 4/6/08
224	R. கோவிந்தராஜன் வேளாண்மை அலுவலர் [illegible]	[illegible] 4/6/08
225	தி. சுரேஷ் வேளாண்மை உதவி இயக்குநர் அயோத்தியாபட்டணம்.	தி. சுரேஷ் 4/6/08
226	P. சௌந்தரராஜன் வேளாண்மை உதவி இயக்குநர் சங்ககிரி	[illegible] 4/6/08
227	S. [illegible] வேளாண்மை அலுவலர் [illegible] [illegible]	[illegible] 4/6/08
228	அ. [illegible] வேளாண்மை அலுவலர் [illegible]	[illegible]

பங்கேற்பாளர்கள் பட்டியல்

வ.எண்	பெயர் மற்றும் முகவரி	கையொப்பம்
229	வ. குணசேகரன் வேளாண்மை உதவி இயக்குநர் [illegible]	[signature] 4/6/[illegible]
230	K. சி. சேகரன் தோட்டக்கலை அலுவலர் வேலூர்.	[signature] 4/6
231	V. [illegible]. உதவி வேளாண்மை அலுவலர் [illegible]	[signature]
232	M. ரமேஷ், வேளாண் மேற்பார்வையாளர், அரூர்.	[signature]
233	A. ராஜேந்திரன் இயற்கை வேளாண்மை [illegible] [illegible]	[signature]
234	M. [illegible] மரவள்ளி மற்றும் ஆமணக்கு ஆராய்ச்சி நிலையம் ஏத்தாப்பூர்	[signature]
235	S. Duraisamy Tapioca & Castor Res. Station Yethapur.	[signature]
236	Dr. M. Anjugam Assoc. Professor, Dept. of Agrl. Economics, TNAU, Cbe 3.	[signature]

பங்கேற்பாளர்கள் பட்டியல்

வ.எண்	பெயர் மற்றும் முகவரி	கையொப்பம்
237	R. [illegible] தலைவர் ராக்கிப்பட்டி ஊராட்சி வீரபாண்டி ஒன்றியம்	R. [illegible]

PROCEEDINGS OF THE SENSITIZATION MEETING

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kht£l ntsh©ik Â£l« jahç¤jš - cŸsh£Á mik¥òfë‹ ÃuÂãÂfSl‹ 04.06.08 m‹W eilbg‰w T£l¤Â‹ T£l elto¡iffŸ

K‹åiy : ÂU. ». #df‹, v«.v°ì (ét)

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ANNEXURE III

SENSITIZATION MEETING ON 4.6.2008-GUJARATI SAMAJ, SALEM

FELICITATION TO COLLECTOR BY JDA, SALEM

REGISTRATION BY PANCHAYAT PRESIDENTS

REGISTRATION BY PANCHAYAT PRESIDENTS

MEETING HALL FILLED WITH PARTICIPANTS

WELCOME ADDRESS BY JDA, SALEM

INTRODUCTORY SPEECH ABOUT NADP BY PROFESSOR & HEAD, TCRS, YETHAPUR

EXPLAINING NADP INTERVENTIONS BY ASSOC. PROFEESOR, TNAU, COMBATORE


சேலம் மாவட்டம்
தேசிய வேளாண்மை மேம்பாட்டுத் திட்டம்
மாவட்ட வேளாண்மை செயல் திட்டம்
உள்ளாட்சி அமைப்பு பிரதிநிதிகளுடன்
ஆலோசனைக் கூட்டம்
இடம் : சேலம்
நாள் : 04.06.08

SPEECH BY PANCHAYAT PRESIDENT REPRESENTING SASLEM DISTRICT

SPECIAL ADDRESS BY DISTRICT COLLECTOR, SALEM

SPECIAL ADDRESS BY DISTRICT COLLECTOR, SALEM

BRIEFING OF INTERVENTIONS UNDER NADP BY
DR.M.ANJUGAM, ASSOC.PROFESSOR, TNAU

BRIEFING OF INTERVENTIONS UNDER NADP BY
DR.M.ANJUGAM, ASSOC.PROFESSOR, TNAU

FEED BACK FROM THE PARTICIPANT

FEED BACK FROM THE PARTICIPANT

FEED BACK FROM THE WOMEN PANCHAYAT PRESIDENT

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FEED BACK FROM THE PARTICIPANT

FEED BACK FROM THE PARTICIPANT

VOTE OF THANKS BY DD, SALEM