

# **Coimbatore - District Agricultural Plan**

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# **NATIONAL AGRICULTURAL DEVELOPMENT PROGRAMME (NADP)**

## **DISTRICT AGRICULTURE PLAN COIMBATORE 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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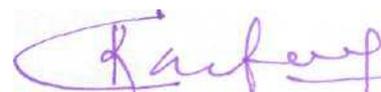
## FOREWORD

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 11<sup>th</sup> 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 11<sup>th</sup> plan.

  
(C. RAM AS AMY)

Coimbatore  
June 30, 2008



## **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

Tamil Nadu has been divided into five Agricultural Zones, based on the agro - climatic conditions and the soil profile. Coimbatore district falls under Zone-II. Population of the district is Total : 4271856. Out of which Male : 2176031 and Female: 2095825. Total Literates are 2945278. Density of population is according to Census 2001 : 572. Sex Ratio is 963. Scheduled Castes and Scheduled Tribes accounts for 13.8 per cent and 0.66 per cent.

The total main cultivators are 1.72 lakhs while main agricultural laboureres are 3.36 lakhs. Thus more number of people who depend on agriculture in the district are wage earners. Coimbatore district is positioned in top 5 rank in per capita income and longevity. The district fares well in terms of both HDI and GDI. In general, the urbanized Coimbatore district has high per capita incomes of Rs.14,000 to Rs 20,000. Equally, important, the manufacturing and tertiary sectors contribute a high percentage to total income while the primary sector's contribution in these districts is insignificant. Coimbatore regions' poverty line is below the State average (25-30 per cent).

On an Average, the district gets 600 mm. of rainfall in a year. Coimbatore receives high rainfall from North East Monsoon of 444.3 mm. Rainfall distribution is also good. Temperature varies from 18.6 Celsius to 35.7 Celsius.

Of the total geographical area 7.47 lakhs ha and 3.14 lakhs ha are under net sown area and gross cropped area while 0.19 lakh ha is sown more than once. The gross cropped area under all crops has slightly decreased to 3.33 lakh ha in 05-06 from 3.51 lakh ha in 04-05. While the area under Food crops accounted for 54.17 per cent and that of non-food crops formed 45.83per cent only, of the gross cropped area during the year 2004-05 and 2005-06.

The change in land use pattern created serious concern among the agricultural planners to evolve suitable development strategies. The increasing trend of fallow lands (both current and other fallows) due to drought situation caused reduction in cropping intensity from the average level of 120 per cent to 113.4 per cent during last 2 years.

The soil types of a particular area play a critical role in determining the fertility status and cropping pattern. More than 50 per cent of the area comes under Irugur and Palladam series which are poor in productivity. Majority of soils are deficient in Zn (more than 90 per cent) followed by Cu. Mg and Fe deficiency varies in between 10-20 per cent. The soil is predominantly black soil which is suitable for cotton crop. The soil in Coimbatore taluk is enriched with organic matter from the hill ranges. The red soils around the Anamalais are fertile. Major well and tank irrigated blocks exploit ground water which fall under critical and semi critical category.

Coimbatore is perhaps one of the very few districts in the State which is covered with thick forest (> 20 per cent of the total district's area). The forests here are abundant in commercially significant trees such as Teak, Sandalwood, Rosewood, Bamboo etc. The cinchona department is raising a cinchona plantation in forests of Pollachi range to jungles of shrubs in Udumalpet. Apart from this, there are one or two tea plantations and coffee plantations.

There are four cold storage units with a total capacity of 12400MT of produce. The unit located at Coimbatore is mainly used for tamarind and chillies. However, one unit at Mettupalayam (2500MT) is used for storage of potato and vegetable produced in Coimbatore and Nilgris districts. The remaining two units at Mettupalayam are used for multi purposes. As regards storage Godowns, all the existing 419 Godowns are owned by the government. There are 18 regulated markets, 2 sub markets and one marketing committee in Coimbatore district. Majority of these Regulated Markets (RMs) are provided with the necessary infrastructure such as godowns, transaction sheds, drying yards, farmers' rest sheds etc.

Important crops grown in the district are Paddy, Cholan (Jowar), Cumbu (Bajra), Ragi, Maize, Small millets, Pulses, Sugarcane, Spices and Condiments, Fruits and Vegetables which constitute the Food crops. It is reported that fruits, vegetables, flowers, medicinal plants and horticulture crops are cultivated in the district covering an area of 52011 ha. The major plantation crops grown are Coconut (28.2 percent of the total area), Tea, Coffee, Areca nut (1577 ha) and Cardamom. Cashew and curry leaf are also grown in a few pockets. Fibres, Oilseeds, Drugs and Narcotics, Dyes, Fodder crops, Green-manure crops, Flowers and Other Miscellaneous tree crops and Groves constitute Non-food crops.

Cocoa cultivation has also been started on a small scale as an intercrop in the coconut plantations with area coverage of 330 ha. Mango, banana, guava, lime, papaya and grapes are some of the major fruit crops grown in about 9894 ha. Banana is also cultivated quite extensively and has covered 4983 ha with production of 1,45,880 MT. Mango cultivation is gaining impetus in Coimbatore. The district occupies second position in the State in area under grapes with 386 hectares and an estimated production of 9000 MT of fruit. The Spices like chillies, coriander, tamarind, cardamom, pepper, ginger, turmeric and cloves are also grown in about 8067 hectares.

The sloppy, Waste Lands and undulated terrains of the Agricultural Lands are leveled to conserve soil and moisture and also to bring more area under cultivation. Earthmoving machineries like Bulldozers are being hired out. For Ploughing and transport purposes, Tractors are being hired out. In Coimbatore Division 9 Bulldozers and 4 Tractors are available for hiring purposes.

The different forms of investments under Micro irrigation and installation of scarce ground water saving irrigation devices such as drip and sprinkler systems result in enhanced plant growth, increase in area under irrigation, improved quality of the produce and savings in cost of cultivation as a result of savings in energy, labour, fertilizers and weeding costs.

Among the crops coconut is the major irrigated crop followed by maize, sugarcane, banana, paddy and groundnut. Among the food grains cereals constituent 87 per cent and pulses constituent 13 percent of production. The production of food grains during the year 05-06 is 86,762 tonnes as against a decrease of 0.5per cent in 2004-05. Jowar is major constituent accounting for 32.71per cent of the total food grains production followed by Maize and Rice in the district. Among the pulses maximum production is from Bengal gram 3,335 tonnes followed by Horsegram and blackgram.

Inspite of various constraints such as fragmentation of land holdings, more than 52per cent of the cultivable area are under dryland condition, over exploitation of irrigation sources, deterioration of soil health due to continuous intensive cropping, shrinking trend of gross cropped area and also continuous severe drought which prevailed in the past 2 years, productivity of major crops continues to increase. The yield gap II analysis showed that the difference between progressive farmer and average farmer varies for different crops. Thus there is scope for increasing production and productivity of maize, paddy, groundnut and cotton with existing technologies by implementing good crop husbandry.

As the district is highly industrialized, it has good infrastructure and support services already in place. A number of leading manufacturers and dealers in agricultural implements and service stations are present in the district.

As per 2004 census, there were around 2429 tractors, 493 sugarcane crushers, 464 oil grannies in the district. The number of ploughs is 33377. The number of operational holdings of size of more than 10 ha is 3,035 which cover 63551 ha. However, as Coimbatore district is highly industrialized, there is acute shortage of agricultural labour. Considering the employment opportunities in the industries, there is acute shortage of agricultural labour. Therefore, the cost of human power is very high.

The number of holdings below 2 ha forms 71.2 per cent of the total land holdings of 231675 in the district. This indicates the potential available for financing under this sector. Further, the area under cultivation of sugarcane is 12660 ha. Pneumatic tyre carts are generally used for transporting cane to the factories. The total number of draught animals in the district is 1,11,374. Raw material for manufacture of the carts are available in plenty. The technology for the manufacture of carts is also available from the TNAU. A number of markets are available for purchasing cattle. As such, there is no dearth of support for this activity.

In Coimbatore district for the past ten years, there is a deceleration of growth in agriculture. However, it is not uniform and there are areas that still hold promise for stimulating the growth. Studies confirmed that the sharp erosion of total factor productivity in agriculture in Coimbatore district was on account of multiple factors relating to technology fatigue, soil fatigue, declining fertilizer response rate, depleting capital stock and agro-climatic aberrations.

The area, production and productivity of important crops that are considered to be critically important for the development of agriculture in Coimbatore district are discussed in the following sections. The crops identified for the implementation of development plan are Rice, Maize, Groundnut, Millets and Cotton.

On the technology front, the core issues related to seeds. About 85 per cent of our farmers use farm-saved seed that lose its vigor to enhance the productivity over a period. Low seed replacement rate, uncertified seeds of doubtful quality sourced from diverse seed supply chain and poor quality of farm saved seeds are the important reasons for low productivity. There are high yield gaps between the varieties available in different regions. Combined with this is the decline in the role of public sector in seeds and its management. Seed production chain from breeder seed to certified seed have serious gaps. Breeder seed is not multiplied into foundation and certified seed by the seed producing agencies.

The other important causes for decline in crop production response to the application of inputs and technology is the gradual degradation of soil, the key factor for sustaining agriculture. The imbalanced fertilizer consumption, without taking into account the soil needs and soil health is proving counter productive. Therefore, soil analysis has to be taken on priority to find the status of micronutrients and the requirement of fertilizers to supplement these deficiencies.

The problems faced on irrigation front has culminated into stress on water resources, falling water use efficiency, timely availability of water and increasing cost of irrigation. The mission approach adopted for oilseeds and pulses had not yielded desired results, resulting in the dependence on import of edible oil and pulses. These missions should have greater flexibility and adoptability to different regions and crops.

There have been concerns on availability of not only the quality seeds but the quality inputs also. There are reports that nearly 75 per cent of pesticides used by farmers are of poor quality and are spurious. As a result, the crop losses due to pests are high, and the farming is becoming a risky, costly and less remunerative proposition.

Coimbatore district cooperative milk union procures about 2.42 lakh litres of milk per day. Among the dairy industries in Coimbatore, Dairy Division of Sakthi group of industries procures and processes 1,10,000 liters of milk every day. It also manufactures and markets milk products like cream, ghee, curd, buttermilk etc. This division will be the thrust area for further growth of the company and the potential for growth is immense. Products like butter, khoa, flavored milk, yogurt, paneer and cheese are being planned for introduction shortly.

The total production of broiler birds is around 111690 per week. Broiler farming is concentrated in Palladam, Madathukulam, Gudimangalam, Kinathukadavu, and Pongalur blocks. There are 36 broiler breeding units and hatcheries in the district, of which 6 are large units, which act as integrators and provide all inputs and 'market to farmers under contract farming'.

The major thrust areas identified under NADP in agriculture is seed production subsidy, agricultural mechanisation and training to farmers and AOs. Major crops that need attentions are paddy, maize, ground nut, cotton and coconut.

The National Agriculture Development Programme is planned to be implemented on Cluster approach and the project component includes establishment of drip irrigation system, application of water soluble fertilizers, establishment of support system for crops and laying of demonstration plots so that the farmers can have a practical glimpse of the techniques to be followed. The ultimate result of this programme is improvement in yield, efficient water and fertilizer use, improvement of soil health which ultimately fetches additional income to the farmer.

Horticulture project of Coimbatore district includes the components related to increased vegetable production, Banana and training and exposure visit for farmers. There are eighteen interventions out of which support system for Banana (300 lakhs), Pandal for Vegetable Production (10 lakhs), 10 hectare mega demo plot for the districts (25 lakhs), Enterprising Farmers Association (25 lakhs) were given much importance in this district. Goal of project from horticulture department are 1) To improve production of Horticultural produces. 2) Make efficient use of fertilizers by fertigation (drip & water soluble fertilizers) 3) Organized marketing by proper channeling and 4) To educate the farmers and increase the income of farmers.

New proposal has been submitted for establishment of 'Centre for testing farm implements and machines under AED, Tamil Nadu' with a budget of Rs. 380 lakhs. It is proposed under three major areas 1. Introduction of Newly Developed Agrl. Machinery / Implements, Innovative water harvesting structures, Promoting the concept of Mechanised villages, 2. Popularisation of Agricultural mechanisation through conventional machinery/equipments, Water harvesting structures, Soil conservation works, Water management works and 3. Establishing testing lab for farm machineries.

Marketing department proposed project with objectives of 1. Attaining maximum net prices per unit quantity sold by farmers, 2. Minimization of price risk and 3. Maximization of net profitability per unit area of cultivation.

To avoid crop failure and economic loss to the nation, to improve water management without any water loss, it is proposed for improving the irrigation water use efficiency better and equitable distribution of water to all the farmers in the command area through strengthening the existing irrigation infrastructure of Amaravathi Old and New Canal system in Canal irrigation in Coimbatore District at an estimate outlay of Rs.29 Crores.

In animal husbandry and fisheries projects with a budget of Rs. 2622.40 lakhs will be implemented by the Departments of Animal Husbandry, Dairy Development, Fisheries and TANUVAS, to promote feed and fodder development, genetic upgradation, improvement of livestock health and farmers training.

The total budget for four years (2008 – 09 to 2011- 12) for all the departments is estimated @ Rs.10,608.9 lakhs as detailed below.

| <b>S.No.</b> | <b>Department</b>        | <b>2008-09</b> | <b>2009-10</b> | <b>2010-11</b> | <b>2011-12</b> | <b>Total</b> |
|--------------|--------------------------|----------------|----------------|----------------|----------------|--------------|
| 1            | Agriculture              | 167.975        | 202.58         | 231.06         | 254.58         | 856.195      |
| 2            | Horticulture             | 415.82         | 421.45         | 421.45         | 421.45         | 1680.17      |
| 3            | Animal Husbandry         | 885.72         | 296.7          | 257.68         | 252.79         | 1692.89      |
| 4            | Fisheries                | 466            | 319.5          | 127            | 17             | 929.5        |
| 5            | Agricultural Engineering | 764.29         | 498.38         | 492.24         | 557.75         | 2312.66      |
| 6            | Agricultural Marketing   | 64.75          | 61.105         | 53.58          | 58.045         | 237.48       |
| 7            | Public Works Department  | 880            | 755            | 635            | 630            | 2900         |

|  |                    |                 |                 |                |                 |                |
|--|--------------------|-----------------|-----------------|----------------|-----------------|----------------|
|  | <b>Grand Total</b> | <b>3644.555</b> | <b>2554.715</b> | <b>2218.01</b> | <b>2191.615</b> | <b>10608.9</b> |
|--|--------------------|-----------------|-----------------|----------------|-----------------|----------------|

## **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<sup>th</sup> plan. To implement this, formulation of action plans by means of developing District Agriculture Plans (DAP) is recommended. It is of the view that such plans would also reflect the felt needs of the farmers and stakeholders. Such District Agriculture Plans aim at moving towards projecting the requirements for development of Agriculture and allied sectors of the district including animal husbandry and fishery, minor irrigation projects, rural development works, agricultural marketing schemes and schemes for water harvesting and conservation, etc. keeping in view the natural resources and technological possibilities in each district.. These plans thus, present the vision for Agriculture and allied sectors within the overall development perspective of the district apart from the financial requirement and the sources of financing the agriculture development plans in a comprehensive way.

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

### **Methodology Adopted for Preparation of District Agriculture Plan**

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

### **Major Areas of Focus**

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

### **Collection of Data**

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

### **Formulation of District Planning Unit**

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

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

### **Sensitization Workshop**

A series of Sensitization Workshops 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 Tamil Nadu 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 20.05.08 under the chairmanship of District Collector. This meeting was attended by the scientists from TNAU, officials from line departments and the representatives of local bodies wide coverage was given in the media also.

### **Finalization**

The feedback received in the District Collectors Meeting was 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 Coimbatore at a Glance

The district is filled with naturally diverse eco system such as hills, plains, forests, evergreen fields, drought prone areas, river bodies, tanks etc. Due to the presence of the mountain pass major parts of the district are benefitted by the south-west monsoon. The pass which is commonly known as Palghat Gap has an enduring influence on the trade and commerce that are centered in and around Coimbatore city.

The third largest city of the state, Coimbatore, is one of the most industrialized cities in Tamil Nadu, known as the textile capital of South India or the Manchester of the South, The city is situated on the banks of the river Noyyal, Coimbatore existed even prior to the 2nd or 3rd century AD ruled by Karikalan, the first of the early Cholas. Among its other great rulers were Rashtrakutas, Chalukyas, Pandyas, Hoysalas and the Vijayanagara kings. When Kongunadu fell to the British along with the rest of the state, its name was changed to Coimbatore and it is by this name that it is known today, except in Tamil, in which it is called Kovai.

In the rain shadow region of the Western ghats, Coimbatore enjoys a very pleasant climate all the year round, aided by the fresh breeze that blows through the 25 kms long Palakkad gap. The rich black soil of the region has contributed to Coimbatore's flourishing agriculture industry and, it is in fact the successful growth of cotton that served as a foundation for the establishment of its famous textile industry. The first textile mill came as far back as 1888 but there are now over a hundred mills. The result has been a strong economy and a reputation as one of the greatest industrial cities in South India.

Coimbatore serves as an entry and exit point to neighbouring Kerala and the ever popular hill station of Udhagamandalam (Ooty). It is the disembarking point for those who want to take the Mountain train that runs from Mettupalayam, just 35 kms from Coimbatore. There are also regular bus services from Coimbatore to Ooty.

## 2.2. Area Location and Geographical Features

The total area of Coimbatore district is 7469 sq.kms which is divided into three Revenue Divisions, nine Taluks, 19 Blocks (recently 20) and 482 Revenue Villages. The size of the population covered by these administrative divisions is about 42 Lakhs. This district is an inland district in the southern part of the Peninsula. It lies between 10° 10' and 11° 30' of the northern latitude and 76° 40' and 77° 30' of eastern longitude in the extreme west of Tamil Nadu. It is bounded in the north and east by Erode district. In the west and south the mountain ranges, *viz.*, the Western Ghats and Aanaimalai provide its boundary. In the west, there is a mountain pass in the Western Ghats. Erode is district in its northern and Dindigul district in its eastern side. It shares part of its boundary with the neighbouring state of Kerala.

Tiruppur situated at 55 Kms east of Coimbatore is one of the big town in Coimbatore District. The Knitwear industry in Tiruppur is broadly segmented as,

|   |   |      |
|---|---|------|
| • Knitting and/or stitching units           | : | 2500 |
| • Dyeing and/or bleaching units             | : | 750  |
| • Printing units                            | : | 300  |
| • Embroidery units                          | : | 235  |
| • Others (Compacting, Raising, Calendering) | : | 200  |

Besides knitwear units catering for exports and local markets, there are large number of other ancillary and supporting industrial units operating for manufacture of elastic zippers, buttons, cartons, printing or labels, polythene bags and other packaging materials

### 2.2.1 Geographical Features

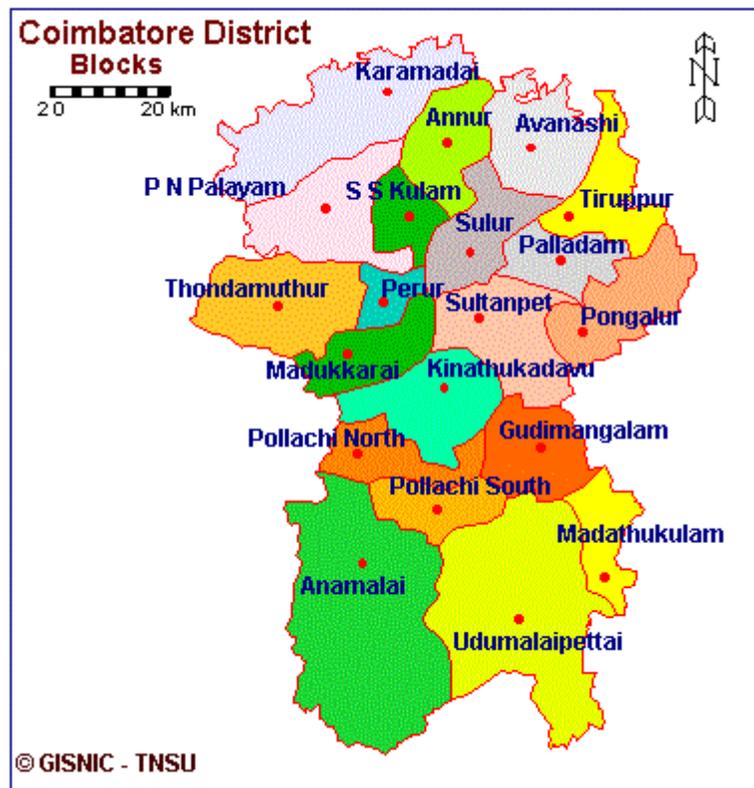
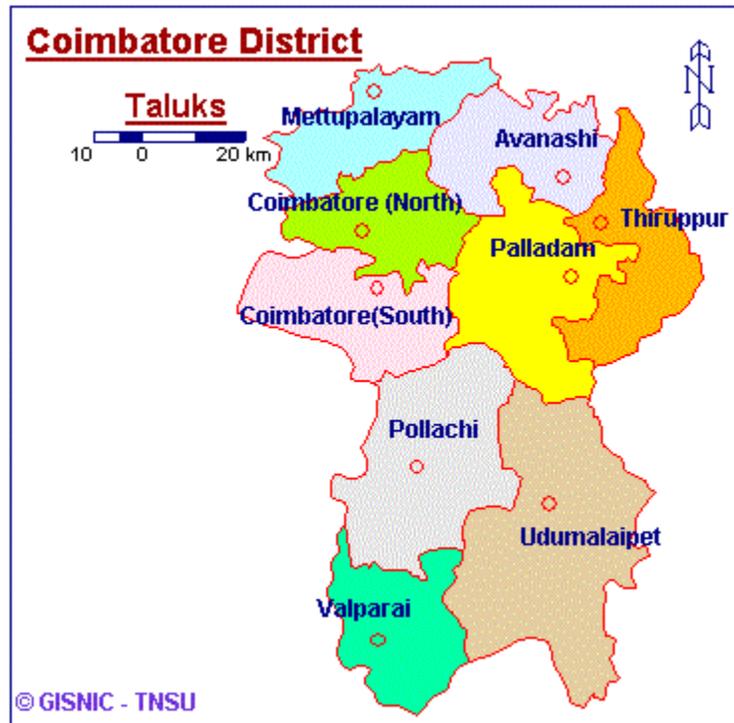
The soil is predominantly black soil which is suitable for cotton crop. Red loam are also found in Avanashi and Coimbatore taluks. The soil in Coimbatore taluk is enriched with organic matter from the hill ranges. There are rich tracts of red loam in Palladam and Pollachi taluks. The soils in Pollachi taluk are mostly of sandy loam often mixed with gravel. The red soils around the Anamalais are fertile.

Coimbatore is perhaps one of the very few districts in the State which are covered with thick forest. More than 20 per cent of the total districts' area is under forest. The forests here are abundant in commercially significant trees such as Teak, Sandalwood, Rosewood, Bamboo etc. The Nilgiris slope *viz.*, the Mettupalaiyam range is rich in sandalwood trees and bamboo. The Other forests in this district are spread over Pollachi, Udumalaipettai and Tunacadavu ranges. They vary from rich tropical evergreen forests of Pollachi range to jungles of shrubs in Udumalaipettai or Pollachi ranges. The cinchona department is raising a cinchona plantation here. Apart from this, there are one or two tea plantations and coffee plantations.

The fauna is also rich in this district. Most of the common species which are found in the plains are available here but important ones are wild elephants and a few tigers in high ranges. The famous wild life sanctuary in Anamalais which covers 95000 hectares includes tigers and elephants. Among domestic animals the Kangeyam breed and bull are famous in this district. Kangeyam cows are noted not only for their yield but their availability in large numbers has helped the district to make a mark in the field of dairy development.

**Coimbatore District Map**





The map of the district, Details of Revenue Divisions, Taluks, Firkas and Revenue Villages, number of blocks, Number of Panchayat Villages in Coimbatore are given in the following Tables. There are three Revenue Divisions, six taluks and 19 blocks in the district.

**Table 2.1. Details of Revenue Divisions, Taluks, Firkas and Revenue Villages**

| <b>S. No</b> | <b>Revenue Division</b> | <b>No. of Taluks</b> | <b>No. of Zones</b> | <b>No. of Firkas</b> | <b>No. of Revenue Villages</b> |
|--------------|-------------------------|----------------------|---------------------|----------------------|--------------------------------|
| 1.           | Coimbatore              | 3                    | 4                   | 15                   | 100                            |
| 2.           | Pollachi                | 3                    | 6                   | 18                   | 225                            |
| 3.           | Tirupur                 | 3                    | 4                   | 17                   | 156                            |
|              | <b>Total</b>            | <b>9</b>             | <b>14</b>           | <b>50</b>            | <b>481</b>                     |

**Table 2.2. Details of the Number of Revenue Villages Talukwise**

| <b>Taluk</b>      | <b>Revenue Villages</b> |
|-------------------|-------------------------|
| Avinashi          | 55                      |
| Coimbatore(North) | 34                      |
| Coimbatore(South) | 47                      |
| Mettupalayam      | 19                      |
| Palladam          | 62                      |
| Pollachi          | 131                     |
| Tiruppur          | 39                      |
| Udumalpet         | 93                      |
| Valparai          | 1                       |

**Table 2.3. Name of Taluks and Blocks**

| <b>Taluks</b>    | <b>Block</b>    | <b>Panchayat Villages</b> | <b>Block</b>        | <b>Panchayat Villages</b> |
|------------------|-----------------|---------------------------|---------------------|---------------------------|
| Coimbatore North | Anaimalai       | 19                        | Annur               | 21                        |
| Coimbatore South | Avinashi        | 31                        | Gudimangalam        | 23                        |
| Mettupalayam     | Karamadai       | 17                        | Kinathukadavu       | 34                        |
| Palladam         | Madathukulam    | 11                        | Madukkarai          | 9                         |
| Pollachi         | Palladam        | 20                        | Perianaickenpalayam | 9                         |
| Tiruppur         | Pollachi(North) | 39                        | Pollachi(South)     | 26                        |
| Udumalpet        | Pongalur        | 16                        | Sarcarsamakulam     | 8                         |
| Valparai         | Sulthanpet      | 20                        | Sulur               | 17                        |
|                  | Thondamuthur    | 10                        | Tiruppur            | 21                        |
|                  | Udumalpet       | 38                        | Perur               |                           |

### 2.2.2 Demographic Profile

#### Salient Features of 2001 Census

Population of the district is Total : 4271856. Out of which Male : 2176031 and Female : 2095825. Total Literates are 2945278 and Male literates : 1648814, Female literates : 1296464. Literacy Rate 76.97 per cent , For Male : 84.59per cent, Female : 69.06per cent. Density of population is according to Census 1991 : 470, Census 2001 : 572. Sex Ratio is Census 1991 : 952, Census 2001 : 963. Scheduled Castes and Scheduled Tribes account for 13.8 per cent and 0.66 per cent.

#### Population Dependent on Agriculture

The total main cultivators are 1.72 lakhs while main agricultural laboureres are 3.36 lakhs. Thus more number of people who depend on agriculture in the district are wage earners.

### Working Population

Total workers in the district are 19.78 lakhs while male workers are 13.76 lakhs. The total main workers are 18.95 lakhs while 13.75 lakhs are males and 5.20 lakhs are females. The non workers are 22.93 lakhs of which 8.00 lakhs are males and 14.93 lakhs females.

Thus in Coimbatore, Total Main Workers are a) Cultivators (8.7 per cent) b) Agricultural Labours (17.02 per cent) c) Household Industry Manufacturing, Processing, Servicing and Repairs (3.42 per cent) d) Other Workers (63.32 per cent). Marginal Workers (7.53 per cent), Total Workers (46.29 per cent) and Non Workers (53.71 per cent).

**Table 2.4. Population by Broad Industrial Categories of Workers**

| Sl. No | Industrial Category                              | District |                           | T. Nadu Persons |
|--------|--|----------|---------------------------|-----------------|
|        |  | Persons  | per cent to total workers |                 |
| 1.     | Total Main Workers                               |          |                           |                 |
|        | a) Cultivators                                   | 172107   | 8.70                      | 5116039         |
|        | b) Agricultural Labours                          | 336548   | 17.02                     | 8837630         |
|        | c) Household Industry                            |          | 2                         |                 |
|        | Manufacturing, Processing, Servicing and Repairs | 67696    | 3.42                      | 1499761         |
|        | d) Other Workers                                 | 1252278  | 63.32                     | 12624852        |
| 2      | Marginal Workers                                 | 148983   | 7.53                      | 27878282        |
|        | Total Workers                                    | 1977612  | 46.29                     |                 |
|        | Non Workers                                      | 2294244  | 53.71                     |                 |
|        | Total Population                                 | 4271856  | -                         | 62405679        |

Source : Census of India 2001

### 2.2.3 Soil and Topography

Red soil and black soil are major soil types available in the district. The soil classification of Coimbatore district is furnished in Table 2.5.

**Table 2.5. Soil Classification of Coimbatore District**

| S. No. | Type of Soil           | Places in District-2005-06  |
|--------|------------------------|---|
| 1.     | Red Loam               | Avinashi ,Coimbatore (N &S), Mettupalayam, Palladam, Pollachi, Tiruppur , Udumalpet |
| 2.     | Lateritie Soil         | Nil   |
| 3.     | Block Soil             | Avinashi, Coimbatore (N&S), Palladam, Tiruppur, Pollachi, Udumalpet.                |
| 4.     | Sandy Coastal Alluviam | Coimbatore (N&S), Mettupalayam, Palladam.   |
| 5.     | Red Sandy Soil         | Avinashi, Coimbatore (N&S).   |
| 6.     | Calcareous Soil        | Avinashi , Palladam, Pollachi, Tiruppur   |

Source: Records of Directorate of Economics and Statistics, Chennai

**Table 2.6. Coimbatore Soils and Area in hectare**

| Soil Description                                     | Area (ha) |
|--|-----------|
| Moderately deep, fine loamy, mixed, Alfisols         | 81208.37  |
| Moderately deep, fine, montmorillonitic, Inceptisols | 66974.41  |
| Moderately shallow, fine loamy, mixed, Inceptisols   | 54598.91  |
| Deep, fine loamy, mixed, Inceptisols                 | 49184.42  |
| Deep, fine, montmorillonitic, Vertisols              | 46142.84  |
| Deep, fine, mixed, Inceptisols                       | 44715.54  |
| Deep, fine loamy, mixed, Alfisols                    | 41767.09  |
| Very deep, fine loamy, mixed, Alfisols               | 40712.36  |
| Moderately shallow, fine loamy, mixed, Alfisols      | 31890.21  |
| Deep, fine, kaolinitic, Inceptisols                  | 29545.57  |

**Table 2.6. Contd....**

| <b>Soil Description</b>                                 | <b>Area (ha)</b> |
|---|------------------|
| Shallow, loamy skeletal, mixed, Alfisols                | 28706.46         |
| Deep, fine, montmorillonitic, Inceptisols               | 28192.30         |
| Shallow, clayey, mixed, Ultisols                        | 26829.30         |
| Moderately deep, fine loamy, mixed, Inceptisols         | 25224.74         |
| Moderately deep, fine, montmorillonitic, Vertisols      | 18294.78         |
| Very deep, fine, montmorillonitic, Vertisols            | 11303.03         |
| Deep, loamy skeletal, mixed, Inceptisols                | 10169.59         |
| Shallow, loamy, mixed, Inceptisols                      | 8367.70          |
| Deep, fine, montmorillonitic, Entisols                  | 8294.62          |
| Very deep, loamy skeletal, mixed, Inceptisols           | 7468.95          |
| Shallow, clayey skeletal, mixed, Alfisols               | 6091.17          |
| Shallow, loamy skeletal, mixed, Inceptisols             | 6066.36          |
| Very deep, fine loamy, mixed, Inceptisols               | 5525.69          |
| Very shallow, loamy, mixed, Inceptisols                 | 5059.15          |
| Very deep, fine, mixed, Alfisols                        | 3685.10          |
| Very shallow, loamy, mixed, Entisols                    | 3637.02          |
| Moderately deep, loamy skeletal, mixed, Ultisols        | 3189.18          |
| Moderately deep, very fine, montmorillonitic, Vertisols | 2354.31          |
| Moderately shallow, clayey skeletal, mixed, Alfisols    | 2152.22          |
| Moderately deep, fine, mixed, Alfisols                  | 2112.35          |
| Shallow, clayey, mixed, Alfisols                        | 1846.34          |
| Shallow, clayey skeletal, mixed, Inceptisols            | 1687.67          |
| Very deep, fine, kaolinitic, Alfisols                   | 1545.15          |
| Very deep, clayey skeletal, kaolinitic, Alfisols        | 1029.88          |
| Deep, contrasting particle size, mixed, Entisols        | 339.29           |
| Deep, fine, mixed, Alfisols                             | 280.53           |
| Moderately deep, coarse loamy, mixed, Inceptisols       | 153.01           |
| Very deep, fine, mixed, Inceptisols                     | 114.92           |
| Very shallow, clayey skeletal, mixed, Entisols          | 34.88            |
| Moderately shallow, fine, mixed, Inceptisols            | 17.53            |
| Very deep, fine, mixed, Mollisols                       | 11.89            |
| Deep, coarse loamy, mixed, Mollisols                    | 1.32             |
| Moderately deep, fine, mixed, Inceptisols               | 0.76             |





#### 2.2.4 Rainfall and Temperature

On an Average, the district gets 695 mm. of rainfall in a year. Coimbatore receives high rainfall from North East Monsoon of 444.3 mm. followed by South West Monsoon Period and hot weather period. Rainfall distribution is also good.

The existence of Palghat gap across the Western Ghats on the East has considerably influenced the climate and cultivation in the District. During the South West monsoon, a considerable quantity of rain is carried along this gap into Pollachi Taluk. After shedding the rains, the winds gushing out of this gap develop into dry winds and sweep through Palladam Taluk making the area dry.

**Table 2.7. Monthly Rainfall Data-Season wise 2006-2007**

| <b>(In milli metres)</b>           |                        |                        |
|------------------------------------|------------------------|------------------------|
| <b>Period</b>                      | <b>Normal Rainfall</b> | <b>Actual Rainfall</b> |
| <b>1.South West Monsoon Period</b> |                        |                        |
| <b>Total</b>                       | <b>192.9</b>           | <b>141.5</b>           |
| June                               | 38.2                   | 31.6                   |
| July                               | 56.7                   | 22.3                   |
| August                             | 41.8                   | 27.1                   |
| September                          | 56.2                   | 60.5                   |
| <b>2.North East Monsoon</b>        |                        |                        |
| <b>Total</b>                       | <b>327.0</b>           | <b>444.3</b>           |
| October                            | 153.2                  | 133.6                  |
| November                           | 123.4                  | 308.8                  |
| December                           | 50.4                   | 1.9                    |
| <b>3.Winter-Period</b>             |                        |                        |
| <b>Total</b>                       | <b>26.1</b>            | <b>11.1</b>            |
| January                            | 14.2                   | 5.2                    |
| February                           | 11.9                   | 5.9                    |
| <b>4.Hot-Weather Period</b>        |                        |                        |
| <b>Total</b>                       | <b>148.4</b>           | <b>128.4</b>           |
| March                              | 19.1                   | 0.0                    |
| April                              | 52.8                   | 56.9                   |
| May                                | 76.5                   | 71.5                   |

Source: Records of Meteorological Department, Nungampakkam, Chennai

**Time Series Data of Rainfall by Seasons**

It reveals that 1997 to 2001 hot weather and winter season received lower rainfall than normal. However total rainfall is found to be higher than normal. For the period 2002-2004, lower rainfall received in almost all seasons contributed to negative deviations. In 2005-06 positive deviations was observed and last year the district received more or less equal to normal rainfall. North East Monsoon and South West Monsoon received rainfall regularly except during 2002-04.

**Table 2.8. Time Series Data of Rainfall by Seasons (Last 10 Years)**

| Year    | Hot Weather Season |        | South West Monsoon |        | North East Monsoon |        | Winter Season |        | Total  |        | Deviation of per cent |
|---------|--------------------|--------|--------------------|--------|--------------------|--------|---------------|--------|--------|--------|-----------------------|
|         | Normal             | Actual | Normal             | Actual | Normal             | Actual | Normal        | Actual | Normal | Actual |                       |
| 1997-98 | 135.1              | 75.0   | 158.2              | 167.7  | 328.2              | 571.9  | 25.6          | 0.6    | 647.2  | 890.2  | 37.5                  |
| 1998-99 | 135.1              | 69.8   | 158.2              | 229.7  | 328.2              | 434.8  | 25.6          | 16.0   | 647.2  | 750.3  | 16.0                  |
| 1999-00 | 135.1              | 92.3   | 158.2              | 87.1   | 328.2              | 504.7  | 25.6          | 68.7   | 647.2  | 752.6  | 16.3                  |
| 2000-01 | 135.1              | 141.9  | 158.2              | 339.0  | 328.2              | 179.8  | 25.6          | 5.0    | 647.2  | 665.7  | 2.8                   |
| 2001-02 | 135.1              | 66.20  | 158.3              | 152.4  | 328.2              | 327.0  | 25.6          | 6.1    | 647.2  | 551.8  | -14.7                 |
| 2002-03 | 135.1              | 69.6   | 158.3              | 78.6   | 328.2              | 62.8   | 25.6          | 17.6   | 647.2  | 228.6  | -64.67                |
| 2003-04 | 148.4              | 202.0  | 192.9              | 90.1   | 327                | 205.4  | 26.1          | 16.7   | 694.4  | 514.2  | -26.0                 |
| 2004-05 | 148.4              | 294.7  | 192.9              | 233.3  | 327.0              | 260.2  | 26.1          | 26.6   | 694.4  | 814.8  | 14.7                  |
| 2005-06 | 148.4              | 162.1  | 192.9              | 177.6  | 327.0              | 505.7  | 26.1          | 17.7   | 694.4  | 863.1  | 24.3                  |
| 2006-07 | 148.4              | 128.4  | 192.9              | 141.5  | 327.0              | 444.3  | 26.1          | 11.1   | 694.4  | 725.3  | 4.4                   |

Source: Records of Assistant Director of Statistics, Coimbatore.

### Temperature at Select Stations

Temperature varies from 18.6 Celsius to 35.7 Celsius. Mean Minimum temperature actual is high by one degree Celsius.

**Table 2.9 Temperature at Select Stations  
(Celsius)**

| Year | Months    | Mean Maximum |        | Mean Minimum |        | Humidity  |            |
|------|-----------|--------------|--------|--------------|--------|-----------|------------|
|      |           | Normal       | Actual | Normal       | Actual | 8.30 hrs. | 17.30 hrs. |
| 2006 | April     | 35.3         | 35.3   | 23.4         | 23.5   | 80.0      | 51.0       |
|      | May       | 33.9         | 33.6   | 23.3         | 23.3   | 85.0      | 60.0       |
|      | June      | 31.4         | 30.9   | 22.3         | 22.8   | 81.0      | 65.0       |
|      | July      | 30.4         | 31.9   | 21.7         | 22.6   | 76.0      | 61.0       |
|      | August    | 31.1         | 32.2   | 21.8         | 22.2   | 80.0      | 63.0       |
|      | September | 31.9         | 31.0   | 21.7         | 22.2   | 82.0      | 68.0       |
|      | October   | 30.9         | 31.3   | 21.9         | 22.3   | 83.0      | 67.0       |
|      | November  | 29.0         | 29.2   | 20.7         | 21.8   | 88.0      | 70.0       |
|      | December  | 29.0         | 29.2   | 18.7         | 18.9   | 81.0      | 49.0       |
| 2007 | January   | 30.0         | 30.2   | 18.6         | 19.2   | 83.0      | 39.0       |
|      | February  | 32.5         | 32.5   | 19.1         | 19.8   | 76.0      | 31.0       |
|      | March     | 35.1         | 35.7   | 21.4         | 22.2   | 70.0      | 25.0       |

Source: Records of Meteorological Department, Nungampakkam, Chennai

### 2.2.5 Land Use Classification for District

The change in land use pattern created serious concern among the agricultural planners to evolve suitable development strategies. The increasing trend of fallow lands (both current and other fallows) due to drought situation caused reduction in cropping intensity from the average level of 120 per cent to 113.4 per cent during last 2 years. The gross cropped area declined leaving about 9.8 L.Ha. under fallow. Net Area Sown 41.88 per cent, Forest 21.26 per cent, Land put to Non-Agricultural uses 14.46 per cent and Current Fallows 11.96per cent. Cropping intensity is 1.06.

**Table 2.10. Land Utilisation**

| <b>Sl. No.</b> | <b>Classification</b>  | <b>(Area in Hectares)</b> | <b>per cent to Total Geographical Area</b> |
|----------------|--|---------------------------|--|
| 1.             | Forest   | 158801                    | 21.26                                      |
| 2.             | Barren and Uncultivable uses   | 7475                      | 1.00                                       |
| 3.             | Land put to Non-Agricultural uses  | 108064                    | 14.46                                      |
| 4.             | Cultivable Waste   | 13464                     | 1.80                                       |
| 5.             | Permanent Pastures and Other Grazing Land                                    | 85                        | 0.01                                       |
| 6.             | Land Under Miscellaneous Tree Crops and Groves not included in Net Area Sown | 3413                      | 0.46                                       |
| 7.             | Current Fallows  | 89326                     | 11.96                                      |
| 8.             | Other Fallow Land  | 53552                     | 7.17                                       |
| 9.             | Net Area Sown  | 312899                    | 41.88                                      |
| 10.            | Geographical Area according to Village Records                               | 747079                    | 100.00                                     |
| 11.            | Total Cropped Area   | 330584                    |  |
| 12.            | Area cropped more than once  | 17652                     |  |

Source: 'G' Return.

### **2.2.6 Land Holding Pattern of the Farmers – size group-wise number and area of holdings**

The data on size of land holding shows that increase in marginalization of land holding in Coimbatore. Number and holding area found to be high in 1 -2 hectare size class.

**Table 2.11 Size Class of holdings (Hectares)****Year : 2006-2007**

| Size Class<br>(Hectares) | Number |      |        |       | Area (Hectares) |        |          |          |
|--------------------------|--------|------|--------|-------|-----------------|--------|----------|----------|
|                          | S.C.   | S.T. | Others | Total | S.C.            | S.T.   | Others   | Total    |
| UPTO 0.5                 | 2971   | 195  | 40141  | 43307 | 906.05          | 57.13  | 12947.18 | 13910.36 |
| 0.5-1.0                  | 1758   | 210  | 50714  | 52682 | 127164          | 155.44 | 3840437  | 39831.45 |
| 1.0-2.0                  | 994    | 244  | 65286  | 66524 | 1392.00         | 310.07 | 95713.56 | 97415.63 |
| 2.0-3.0                  | 282    | 93   | 30711  | 31086 | 673.02          | 225.09 | 75023.78 | 75921.89 |
| 3.0-4.0                  | 91     | 47   | 16079  | 16217 | 312.40          | 163.13 | 55759.23 | 56234.76 |
| 4.0-5.0                  | 53     | 31   | 8188   | 8272  | 231.00          | 139.90 | 36740.81 | 37111.71 |
| 5.0-7.5                  | 29     | 23   | 8994   | 9046  | 174.19          | 133.81 | 54533.50 | 54841.50 |
| 7.5-10.0                 | 11     | 4    | 3376   | 3391  | 94.19           | 34.19  | 28874.65 | 29003.03 |
| 10.0-20.0                | 13     | 5    | 2521   | 2539  | 191.53          | 61.19  | 33157.88 | 33410.60 |
| 20.0 &<br>Above          | 4      | -    | 402    | 406   | 96.03           | -      | 31914.49 | 32014.52 |

Source: Agricultural Census 2000-001

**2.2.7 Irrigation and Ground water****Name of the Rivers**

1. Aliyar
2. Nirar
3. Sholayar
4. Uppar,
5. Amaravathy
6. Noyyal
7. Thirumurthi
8. Bhavani

The waters of eight rivers flowing through the district cover approximately 16 per cent of the net sown area. The river Bhavani irrigates some parts of Mettupalayam taluk,

Uppar and Aliyar irrigate part of Pollachi taluk. However, none of these rivers are perennial. River Amaravathi, which is a dependable source, irrigates part of Udumalpet taluk and the Solaiyar river irrigates Valparai area

### Details of Dams

Among the dams Parambikulam has the highest capacity of 7820 M.C.ft. followed by Amaravathi dam (4047.47).

**Table 2.12 Details of Dams**

**Year: 2006-2007**

| <b>Name of the Dam/Block</b>   | <b>Catchment area</b> | <b>Water spread area</b> | <b>Height (Ft)</b> | <b>Capacity (M.C.Ft)</b> | <b>Length of canals in Km.</b> |
|--------------------------------|-----------------------|--------------------------|--------------------|--------------------------|--------------------------------|
| Aliyar Dam - Anaimalai         | -                     | -                        | 120.00             | 3864.00                  | 259.4                          |
| Parambikulam - Anaimalai       | -                     | -                        | 145.00             | 7820.00                  |                                |
| Thunaikadavu - Peruvairipallam | -                     | -                        | -                  | 1177.00                  |                                |
| Thirumurthi -Udumalpet         | -                     | -                        | 57.00              | 1935.25                  | 57.00                          |
| Amaravathi -Udumalpet          | -                     | -                        | 90.00              | 4047.47                  | 77.00                          |

### Details of Tanks, Wells and Bore Wells

Number of wells and borewells are found to be high in Pollachi and Udumalpet. This provides irrigation for about one lakh hectares. Major source of irrigation for Coimbatore is wells.

**Table 2.13. Details of Tanks, Wells and Bore Wells****Year: 2006-2007**

| Sl. No. | Name of the Taluk | Tanks             |             | Length of canals | No. of Wells in use | No. of Bore wells |
|---------|-------------------|-------------------|-------------|------------------|---------------------|-------------------|
|         |                   | Capacity (M.C.Ft) | Height (Ft) |                  |                     |                   |
| 1.      | Coimbatore (N)    | 89.94             | 16.50       | -                | 4728                | 1885              |
| 2.      | Coimbatore (S)    | 117.95            | 24.83       | 45.00            | 5926                | 2920              |
| 3.      | Mettupalayam      | 75.00             | 25.25       | 18.00            | 5519                | 1144              |
| 4.      | Pollachi          | 61.71             | 45.00       | -                | 24603               | 6326              |
| 5.      | Udumalpet         | 191.24            | 144.41      | 177.40           | 20285               | 6244              |
| 6.      | Tiruppur          | 19.80             | 44.76       | -                | 8421                | 4175              |
| 7.      | Palladam          | 371.54            | 74.70       | 15.00            | 15628               | 2855              |
| 8.      | Avinashi          | 160.66            | 192.83      | -                | 11407               | 3425              |
| 9.      | Valparai          | -                 | -           | -                | -                   | -                 |

Source: Asst. Director of Statistics, Coimbatore.

**Table 2.14 Irrigation****Net Area Irrigated by (Ha.)**

|    |                          |   |        |
|----|--------------------------|---|--------|
| a. | Government Canals        | : | 40288  |
| b. | Private Canals           | : | 715    |
| c. | Tanks                    | : | 1855   |
| d. | Tube Wells               | : | 6723   |
| e. | Other Wells              | : | 126364 |
| f. | Other Sources            | : | 5118   |
| g. | Total Net Area Irrigated | : | 178130 |
| h. | Gross Area Irrigated     | : | 191269 |

### Ground Water Potential

The category wise classification of blocks is given below. Major well and tank irrigated blocks which exploited ground water fall under critical and semi critical category.

**Table 2.15 Ground Water Potential**

| <b>Over exploited<br/>(100per cent)</b>  | <b>Critical<br/>(85-100per cent)</b>         | <b>Semi critical<br/>(60-85per cent)</b>  |
|--|--|---|
| Sulur, Annur, Avinashi, Madukkarai, Sultanpet, Kinathukadavu, P.N.Palayam, Pollachi N, Pollachi S, S S kulam, Thondamuthur | Udumalpet, Palladam, Gudimangalam, Karamadai | Pongalur, Tirupur, Anamalai, Madathukulam |

### 2.2.8 Marketing Infrastructure

State warehouses are located at Avinashi, Coimbatore, Mettupalayam, Palladam, Pollachi and Tiruppur, while central warehouses are located at Coimbatore, Kovaipudur, Udumalpet and Neelikonampalayam. There are four cold storage units in the district, three at Mettupalayam and one at Coimbatore city, with a total capacity of 12400MT of produce. The unit located at Coimbatore with a capacity of 1500 MT is mainly used for tamarind and chillies. However, one unit at Mettupalayam (2500MT) is mainly used for storage of potato and vegetable produced in Coimbatore and Nilgris districts. The remaining two units at Mettupalayam are used for multi purposes. As regards storage Godowns, all the existing 419 Godowns are owned by the government. The details of the ware houses, storage Godowns available in the district as on 31 March 2005 are furnished below.

**Table 2. 16. Warehouses and Storage Godowns Available in the District**

| <b>Sl. No</b> | <b>Ware housing Godown</b>                     | <b>No</b>  | <b>Capacity (Metric Tonnes)</b> |
|---------------|--|------------|---------------------------------|
| 1.            | Food corporation of India (central Govt.)      | 2          | 165250                          |
| 2             | TN warehousing corporation.<br>(State govt.)   | 3          | 33375                           |
| 3             | Agriculture department(state govt)             | 33         | 216500                          |
| 4             | Cooperation department (state govt)            | 368        | 68035                           |
| 5             | TN civil supplies corporation<br>(state govt.) | 12         | 46270                           |
| 6             | Private (CISS assisted)                        | 1          | 528                             |
|               | <b>Total</b>                                   | <b>419</b> | <b>529958</b>                   |

There are 18 regulated markets, 2 sub markets and one marketing committee in Coimbatore district. The Regulated Markets are located at Tiruppur, Avanashi, Sevur, Annur, Karamadai, Coimbatore, Sulur, Palladam, Udumalpet, Anamalai, Kinathukadavu, Pollachi, Malayadi palayam, Negamam, Thondamuthur, Madathukulam, Pethampatti and Pongalur.

- Regulated Markets for Coconut are located at Pollachi, Udumalpet, Anamalai, Kinathukadavu and Negamam;
- for Maize at Palladam, Tiruppur and Udumalpet;
- for Paddy at Pollachi and Anamalai;
- for Cotton at Tiruppur, Avanashi, Sevur and Annur;
- for Tobacco at Palladam, Pongalur, Annur and Karamadai; and
- for Red Chilli at Pollachi and Tiruppur.

**Table 2.17 Regulated Markets - 2006-2007**

| Sl.No | Name of the Block        | No.of Regulated Markets | No.of Sub Regulated Markets | Total Receipts (Rs.in Lakhs) |
|-------|--------------------------|-------------------------|-----------------------------|------------------------------|
| 1.    | P.N.Palayam              |                         | -                           | 45.11                        |
| 2.    | S.S. Kulam               |                         | -                           |                              |
| 3.    | Cbe-Corporation          | 1                       | -                           |                              |
| 4.    | Madukkarai               |                         | -                           |                              |
| 5.    | Thondamuthur             | 1                       | -                           | 6.85                         |
| 6.    | Kinathukadavu            | 1                       | 1                           | 8.88                         |
| 7.    | Karamadai                | 1                       | -                           | 21.09                        |
| 8.    | Pollachi (N),Pollachi(S) | 2,0                     | -                           | 86.11                        |
| 9.    | Anaimalai                | 1                       | -                           | 16.68                        |
| 10.   | Udumalpet,Gudimangalam   | 1                       | -                           |                              |
| 11.   | Madathukulam             | 1                       | -                           | 7.39                         |
| 12.   | Tiruppur                 | 1                       | -                           | 83.69                        |
| 13.   | Pongalur                 | 1                       | -                           | 22.23                        |
| 14.   | Avinashi                 | 2                       | 1                           | 31.15                        |
| 15.   | Annur                    | 1                       | 1                           | 33.28                        |
| 16.   | Palladam                 | 1                       | -                           | 12.34                        |
| 17.   | Sultanpet                | 1                       | -                           | 5.79                         |
| 18.   | Sulur                    | 1                       | -                           | 40.01                        |

Source: Records of District Agriculture Marketing Office.

Majority of these Regulated Markets (RMs) are provided with the necessary infrastructure such as godowns, transaction sheds, drying yards, farmers' rest sheds etc. The total arrival of agricultural produce to these markets during 2004 – 05 was of the order of Rs. 384 lakhs. In order to avoid distress sale by the small and marginal farmers in the peak season, some of the RMs have been identified for providing pledge loans to the farmers. Under this scheme, the farmers can store their produce in these godowns for a maximum period of 6 months and take pledge loan at a maximum of 75 per cent of the value of the produce upto the maximum limit of Rs. 25000. During 2002 – 03, market committee had issued Rs. 335.37 lakhs under pledge loans. The sector depends, to a large

extent, on the support form the government. A capital investment subsidy scheme for construction / expansion / modernization of multi chamber / multi product cold storages and storages for horticultural produce was introduced by the GOI. Cold storages would help in minimizing post harvest losses being suffered by farmers, particularly small and marginal farmers. The scheme is implemented by National Horticulture Board in collaboration with NABARD / National Cooperative Development Corporation (NCDC) in IX Five Year Plan starting from 1999 – 2000. The cold storage capacity may vary from 10 MT to 5000 MT depending upon the volume, value, etc. of the products to be stored such as horticultural produce and other perishable items such as dairy products, meat, fish, chicken, etc. The permissible subsidy is subject to a maximum of Rs. 50 lakhs per project. The scheme has been extended for implementation during the X plan period also. Many bankers are encouraging the farmers in taking up this credit linked subsidy scheme.

#### **List of Cold Storage Godowns**

Nahar Cold Storage, Thadagam Road, Coimbatore 2.

KPS Cold Storage, Odanthurai, Kallar, Mettupalayam

A.K. Cold Storage, Nellithurai Road, Mettupalayam.

#### **2.2.9 Banking facilities – Coimbatore District**

The district has great advantage of having a large number of banks. Of the total 47 banks in the district, 45 are Commercial banks, 1 District Central Cooperative Bank (DCCB) and the remaining one is Tamil Nadu Cooperative Agricultural and Rural Development Bank (TNSCARD). The district does not have any Regional Rural Bank (RRB). The Commercial banks have the maximum number of branches of 414. Among the Commercial banks, State Bank of India (SBI) has the maximum number of 47 branches, followed by Canara Bank, the lead Bank of the district, has 40 branches. The CDCC bank has 25 branches and Tamil Nadu State Agricultural and Rural Development Bank (TNSCARD) has 13 branches. The district has the benefit of having the controlling offices of eight Commercial banks. Among the private banks, South Indian Bank has the maximum number of 23 branches.

Of the total branches of 452, 122 branches are in the rural areas, 96 are in semi-urban and the remaining 234 are in Urban. Canara Bank has the maximum number of 16 branches in rural areas. Of the 45 commercial banks, 27 banks do not have any branches in the rural areas.

During 2005-06, the advances have gone up to Rs.19384.38 crores. The total priority sector advances has gone up to reach the level of Rs.7,996.61 crores. The PMRY targets were achieved during last year.

**Table 2.18. Banking and Insurance**

**Year: 2006-2007**

| <b>Items</b>       | <b>Deposits<br/>(Rs. in Crores )</b> | <b>Advances<br/>(Rs. in Crores )</b> | <b>Credit Deposit<br/>Ratio</b> |
|--------------------|--------------------------------------|--------------------------------------|---------------------------------|
| Commercial Banks   | 14871.88                             | 24129.11                             | 162.24                          |
| Co-operative Banks | 97.03                                | 74.82                                | 77 per cent                     |

Source : Records of Lead Bank (Canara Bank)

### 2.2.10 Production and Value of Major Minerals

Coimbatore is possessing Rs. 2892 lakhs worth of minerals especially limestone.

**Table 2.19. Production and Value of Major Minerals**

**Year : 2006 -2007**

| <b>Name of the District</b> | <b>Name of the Mineral</b> | <b>Quantity<br/>(Tonnes)</b> | <b>Value<br/>(Rs.in '000')</b> |
|-----------------------------|----------------------------|------------------------------|--------------------------------|
| COIMBATORE                  | Lime Stone                 | 640222                       | 288099.9                       |
|                             | Quartz                     | 1220                         | 244                            |
|                             | Feldspar                   | 1131                         | 188.877                        |
|                             | Gypsum                     | 864                          | 115.776                        |
|                             | Soap Stone                 | 2733                         | 614.925                        |

Source: Deputy Director of Geology and Mines, Coimbatore

### 2.2.11 Export and Import Commodities

#### i. Exports

1. Hosiery Items,
2. Yarn,
3. Jasmine,
4. Arecanut,
5. Jewels,
6. Software,
7. Tea,
8. Pumps and Motors

#### ii. Imports

1. Ready made Garments,
2. Chemicals

### 2.2.12 District Income

Coimbatore district income is increasing about one lakh every year. Income of the district almost tripled during the decade from 1993-2004.

**Table 2.20. Estimates of District Income - Gross Domestic Product at Current Prices**

| Year      | (Rs. Lakhs) |
|-----------|-------------|
| 1993-94   | 511299      |
| 1994-95   | 638092      |
| 1995-96   | 709519      |
| 1996-97   | 836769      |
| 1997-98   | 857826      |
| 1998-99   | 1033418     |
| 1999-2000 | 1129912     |
| 2000-01   | 1308096     |
| 2001-02   | 1332189     |
| 2002-03   | 1452895     |

Source : Records of Directorate of Economics and Statistics, Chennai-6.

### 2.2.13 Intra District Growth Differentials

Coimbatore district positioned in top 5 rank in per capita income and longevity. Gender Development Index values for the districts in Tamil Nadu vary from 0.766 to 0.582.

**Table 2.21- Top and Bottom Five Districts in HDI**

|     | <b>Indicators</b>              | <b>Top 5</b>  | <b>Bottom 5</b> |
|-----|--------------------------------|---------------|-----------------|
| I   | Per capita Income              | Kancheepuram  | Thanjavur       |
|     |                                | Chennai       | Tiruvarur       |
|     |                                | Coimbatore    | Sivagangai      |
|     |                                | Madurai       | T.V. Malai      |
|     |                                | Thoothukudi   | Villupuram      |
| II  | Literacy Rate                  | Kanniyakumari | Perambalur      |
|     |                                | Chennai       | Erode           |
|     |                                | Thoothukudi   | Salem           |
|     |                                | Trichy        | Villupuram      |
|     |                                | Madurai       | Dharmapuri      |
| III | Combined Gross Enrolment Ratio | Chennai       | Virudhunagar    |
|     |                                | Thoothukudi   | Kancheepuram    |
|     |                                | Madurai       | Pudukottai      |
|     |                                | Kanniyakumari | Villupuram      |
|     |                                | Theni         | Dharmapuri      |
| IV  | Life Expectancy at Birth       | Chennai       | Thanjavur       |
|     |                                | Kanniyakumari | Theni           |
|     |                                | Coimbatore    | Madurai         |
|     |                                | Kancheepuram  | Perambalur      |
|     |                                | Nilgiris      | Dharmapuri      |

Source: Records of Directorate of Economics and Statistics, Chennai-6.

Chennai fares the best and Dharmapuri (and Villupuram) the worst. The other districts which fare well are Kanniyakumari, Thoothukudi, Kancheepuram and Coimbatore-the same districts which fare well with regard to the HDI.

The districts fare well in terms of both HDI and GDI. The high faring districts include Chennai, Kanniyakumari, Thoothukudi, Kancheepuram, Coimbatore and the Nilgiris. The low faring districts include Pudukkottai, Tiruvannamalai (T.V. Malai), Villupuram and Dharmapuri. All the other districts, that is 19 in number, are classified as medium. Some of these are Thiruvallur, Cuddalore, Trichy, Madurai, Tirunelveli, Erode, Vellore, Theni, Salem, Thanjavur, Dindugul and Namakkal.

In general, the urbanized districts such as Chennai and Coimbatore have high per capita incomes Rs 14,000 to Rs 20,000. Equally, important, the manufacturing and tertiary sectors contribute a high percentage to total income while the primary sector's contribution in these districts is insignificant. Coimbatore's high per capita income combined with high literacy of 70-80 per cent and longevity of 69-72 years is noteworthy. Coimbatore regions' poverty line is below the State average. Level of poverty - low poverty districts is Coimbatore (25-30 per cent).

**Table 2. 22. Tamil Nadu Region-wise Estimates of Poverty**

| <b>Region</b> | <b>Poverty Percentage<br/>1987-88</b> | <b>Per cent below<br/>Poverty Line<br/>1993-94</b> | <b>Decline in Poverty<br/>Levels in per cent<br/>Points</b> |
|---------------|---------------------------------------|--|---|
| Chennai       | 58.17                                 | 44.23  | 13.94   |
| Coastal       | 37.09                                 | 21.09  | 16.00   |
| Madurai       | 50.27                                 | 37.35  | 12.92   |
| Coimbatore    | 28.78                                 | 22.50  | 6.28  |
| Tamil Nadu    | 42.90                                 | 34.42  | 8.48  |
| All India     | 39.60                                 | 33.38  | 6.22  |

Source: Records of Directorate of Economics and Statistics, Chennai-6.

## CHAPTER - III

### SWOT ANALYSIS OF THE DISTRICT

#### 3.1. Introduction

Tamil Nadu has been divided into five Agricultural Zones, based on the agro-climatic conditions and the soil profile. Coimbatore district falls under Zone-II.

Important crops grown in the district are Paddy, Cholan (Jowar), Cumbu (Bajra), Ragi, Maize, Small millets, Pulses, Sugarcane, Spices and Condiments, Fruits and Vegetables which constitute the Food crops. It is reported that fruits, vegetables, flowers, medicinal plants, horticulture crops are cultivated in the district covering an area of 52011 ha. The major plantation crops grown are Coconut, Tea, Coffee, Areca nut and Cardamom. Cashew and curry leaf are also grown in a few pockets. Fibres, Oilseeds, Drugs and Narcotics, Dyes, Fodder crops, Green-manure crops, Flowers and Other Miscellaneous tree crops and Groves constitute Non-food crops.

Coimbatore district cooperative milk union procures about 2.42 lakh liters per day. Among the dairy industries in Coimbatore, Dairy Division of Sakthi group of industries procures and process 1,10,000 liters of milk every day. Liquid milk is marketed in various towns of Tamil Nadu and Kerala carrying the brand name of "Sakthi Milk". It also manufactures and markets milk products like cream, ghee, curd, buttermilk etc. This division will be the thrust area for further growth of the company and the potential for growth is immense. Products like butter, khoa, flavored milk, yogurt, paneer and cheese are being planned for introduction shortly. It has established good marketing network for dairy products, both in Tamilnadu and in Kerala.

The total production of broiler birds is around 111690 per week. Broiler farming is concentrated in Palladam, Madathukulam, Gudimangalam, Kinathukadavu, and Pongalur blocks. There are 36 broiler breeding tanns and hatcheries in the district, of which 6 are large units, who act as integrators and provide all inputs and market to farmers under contract farming.

### 3.2. SWOT Analysis of the District

#### Strengths

- There is scope to take up contract farming for maize in the potential areas so that the poultry growers are able to get better priced poultry feed.
- There are good number of milk societies in the district. Therefore, there is scope for milk processing plants and manufacture of milk products.
- Coimbatore district is an industrially progressive district. As the district is bestowed with natural resources, there exists a good potential for development under Non-Farm Sector. The major NFS activities in the district are general engineering, pump manufacturing, foundries, mechanical repair shops, garages, grinder manufacturing, etc. Food products, cotton textiles, coir units, wooden products and metal products are the other tiny and cottage units functioning in the district.
- Coconut plantations has been increasing. Export of coconut and processing unit for coconut based product has large scope.
- Increase in mango plantation, tissue culture banana was increasing.
- Known for manufacturing and service industries
- Tea and coffee plantations in hilly areas.
- Education institution
- Excellent scope for agribusiness

#### Weaknesses

- Agricultural labour migration to industries
- Fragmented land holdings
- Non availability of good quality seeds of staple crops
- Very low irrigation potential and over exploitation of ground water potential
- High feed cost and instability in egg prices have resulted in shift from layers to broilers. In order to feed the poultry industry, Government is initiating steps for increasing the availability of maize, which is good feed for poultry industry.

## Opportunities

- Banks to encourage Agriculture & Veterinary disciplines graduates by financing them to set up Agri clinics & Agri business centres, under the recently announced Scheme (by GOI & NABARD). Banks may encourage entrepreneurs in taking up modernization of dairy sector so that they take the benefit from Central sector scheme of Venture Capital Fund for Dairy/Poultry sector. In fact, millennium enterprises is prepared to erect the hygienically made platform and washbed for proper cleaning and culling of birds.
- The production of milk in the district may be augmented by financing more number of dairy units in the existing milk routes.
- Poultry companies, the integrators have started going in for export of the processed chicken. M/s Suguna Poultry farm have already started exporting the processed chicken mainly to the Middle East countries. Banks may encourage financing for processed chicken-meat products. Export infrastructure can be assisted (egg grading etc.) under the RIDF of NABARD.
- Generation of renewable energy from poultry droppings may be explored. Banks may finance innovative proposals under Venture Capital Fund for Dairy/Poultry sector
- Fish being a delicious food, value added fast food centers may be created on joint venture with private sector in prime locations.
- Modernization of rice milling is one such area that has to be dovetailed into agro-based industry.
- There is good potential for setting up small scale coconut oil extraction units in the district.
- Good scope exists for the production of multi-product based processing units for better capacity utilization of processing infrastructure.
- Other food products based activities like Jaggery, Bakery, Squash, Sauce, Bread, Sweets, Pickle making have good potential in the district.
- Export of garments
- Export of Banana, mango and cut flowers
- The small, tiny and medium sized industries engaged in this district can be utilised to their full potential to reap the maximum benefits
- In fact, there is ample scope for tender coconut water and sugarcane juice, sold in sachets/tetra pack. There is also good scope for drying of coconut units. As the Coconut oil producing companies are demanding copra, dried coconut, there is growing demand for drier unit.

## Threats

- Of late, the area under grazing lands is decreasing steadily.
- Migration of people towards urban areas hinders the agricultural growth.
- Mechanization has limited scope as the land holdings are very much fragmented.
- Establishment of industrial complexes and multinational companies attracts people from agriculture towards industries.
- Farming is unattractive mainly because of increased input cost, poor credit availability, labour problems and non remunerative returns while disposing the harvested produce

### 3.3 Composite Index of Agricultural Development of Coimbatore 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 ( $i = 1,2,3 \dots m$ ,  $d = 1,2,3\dots n$ ). 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

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

where  $\text{Min } X_{id}$  and  $\text{Max } X_{id}$  are the minimum and maximum of  $(X_{i1}, X_{i2}, \dots, X_{in})$  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

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

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

The data base for the current study on Coimbatore district is taken from various government publications like Season and Crops Report and Economic Appraisal of Tamil Nadu for the 4 periods 1990-91, 1995-96, 2000-01 and 2005-06. In all, 25 indicators of agricultural development as given in Table 2.1 were used for estimating the composite index of development for the district. The 25 indicators were grouped into 6 different 'components': i) Crop-Area-Variables (10) ii) Irrigation (7) iii) Livestock (3) iv) Fisheries(1) v) Fertilizer (3) and vi) Cultivators-Labourers (2).

The analysis showed that Coimbatore district which was classified as 'backward' in agricultural development during 90-91 became 'developed' in agriculture during 1995-96 and during the remaining two periods it was classified as 'developing'. In terms of overall agricultural development its rank 5 among the 29 districts of Tamil Nadu varied from 13 to 22 during the 1990-91 to 2005-06. As far as the individual components of agricultural development are concerned, its ranks in the above periods are summarized in

the following Table 2.2. The table shows that except in livestock, in all other components its performance in the period of study is not satisfactory. For example, in irrigation its ranks is less than 16 in all the 4 periods. Similarly in cultivators and labourers also it occupied ranks between 26<sup>th</sup> and 28<sup>th</sup> ranks.

**Table 3.1. Selected Indicators of Agricultural Development for Coimbatore 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 foodgrains to Gross Cropped Area                   |                   |
|                       | Per cent Share of foodcrops to Gross Cropped Area                    |                   |
|                       | Per cent Share of non foodcrops 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                          |                   |
|                       | <b>Total</b>   | <b>25</b>         |

**Table 3.2. Rank of Coimbatore District in terms of agricultural development among other Districts of Tamil Nadu during 1990-91 to 2005-06**

| <b>Component of Composite Index</b> |         | <b>Crop-Area-Variables</b> | <b>Irrigation</b> | <b>Livestock-</b> | <b>Fisheries</b> | <b>Fertilizer</b> | <b>Cultivators-Labourers</b> | <b>Overall</b> |
|-------------------------------------|---------|----------------------------|-------------------|-------------------|------------------|-------------------|------------------------------|----------------|
| <b>Period</b>                       | 1990-91 | 23                         | 17                | 5                 | -                | -                 | 26                           | 22             |
|                                     | 1995-96 | 8                          | 18                | 4                 | 28               | 11                | 28                           | 13             |
|                                     | 2000-01 | 12                         | 20                | 3                 | 28               | 9                 | 27                           | 18             |
|                                     | 2005-06 | 22                         | 19                | 5                 | 21               | 15                | 27                           | 21             |

## CHAPTER - IV

### 4.1 DEVELOPMENT OF AGRICULTURAL SECTOR

Agriculture provides basic sustenance to all living beings. It is very important that ecologically, socially and economically sustainable agriculture should become the backbone of the development process of the State. Agriculture should be sustainable so that the natural resources such as soil, water and biodiversity are used efficiently and equitably. It should be economically viable and lead to increasing employment opportunity, socially feasible, strengthening the role of women and other marginalized sections of the people. Equity in sharing benefits is vital for community participation in the conservation and enhancement of natural resources.

The Government is aiming to achieve 100 per cent food security in the State and also to create avenue for export of agricultural produce for economic upliftment of the farming community. During the Tenth Plan period, the state is aiming an annual growth rate of 4per cent in Agriculture and 8per cent in Horticulture crops for sustainable Agricultural development, employment generation and poverty alleviation. The Government is focusing its policies towards overall development of agriculture sector in terms of increasing the cropping intensity by bringing every piece of land under cultivation, productivity increase, maximizing natural resources with parallel efforts to conserve them.

The state aims at bring second green revolution in dry land Agriculture, while sustaining the tempo of agricultural development in irrigated agriculture.

#### 4.1.1. Agricultural Performance

Desired emphasis has been given to agricultural sector since the inception of Five-Year Plan periods due to the agrarian driven economy; even today agricultural sector fuels GDP growth by contributing over 15 per cent (2002-03). After the introduction of improved varieties, a phenomenal breakthrough in productivity of crops was achieved

resulting in higher production of most of the crops. Tamil Nadu has done extremely well in irrigated agriculture particularly in rice, sugarcane and groundnut, the major crops of the state. Foodgrains production was much ahead of population growth during the above period. Among the cereals, much jump in production of maize was noticed since demand for poultry and other livestock products pushed the demand for maize as livestock and poultry feed.

Effect of Cauvery water dispute in rice cultivation combined with lesser profitability of sorghum, cumbu and ragi due to poor demand for these grains, as the underlying factor, caused the significant decline in the area of these crops. However, impressive performance in yield rates of foodgrains has more than compensated the fall in area. As a result, production of foodgrains increased over the period. Technology, expansion in irrigation and market development paved the way for perceptible growth in yields of rice, sugarcane and groundnut. In pulses also, the productivity growth is high in Tamil Nadu. The state has made remarkable progress in achieving higher productivity of sugarcane and groundnut on par with the productivity levels at all India level. The productivity of these crops has been stabilized in the irrigated areas. To achieve the targeted growth rate in agriculture, new initiatives like the private sector participation in precision farming and contract farming have been taken up. Agricultural production is also linked to both domestic and external markets through establishment of agricultural export zones for floricultural and horticultural commodities.

#### **4.1.2. Constraints**

Marginalization of land holding, high variability in rainfall distribution, inadequate capital formation by the public sector, declining public investment on agriculture, declining net area sown, over - exploitation of ground water and inadequate storage and post harvest facilities affect the agricultural performance in the state. The state supports seven per cent of the country's population but it has only four per cent of the land area and three per cent water resources of the country. Of the total gross cropped area, only 50 percent of the area is irrigated in Tamil Nadu. Similarly, of the total area

under food grains, only 60 percent of the area is irrigated. Nearly, 52 per cent of area is under dry farming conditions in Tamil Nadu apart from stable cropping intensity which is hovering around 120 per cent over the period. In spite of the above constraints, the State has made a tremendous performance in the production of crops, which is attributed mainly to the productivity increase.

#### **4.1.3. Challenges**

There is a need for improving the agricultural growth to meet the challenges like rising food demand, increase in industrial raw material requirements and providing many gains in employment in agriculture through galvanizing potentials of agriculture. Tamil Nadu did well in irrigated agriculture, while rainfed agriculture has not been given adequate attention in terms of infrastructure development, technology and extension delivery system resulting in low agricultural growth and high level of poverty. Coverage of High Yielding Varieties was higher during early phases of green revolution and increased tremendously in the irrigated environment compared to rainfed environment. There are deficits in supply of certain agriculture commodities like pulses, oilseeds and cotton. Increase in pulses production is marginal and the state has to depend on imports to meet the demand. Cotton production in the state declined at the rate of 2.38 per cent per annum during the last two decades mainly due to decline in area by 2.57 per cent. Productivity growth of cotton is marginal (0.20 per cent) and average productivity of cotton in the state is lesser than the national average particularly due to large scale cultivation under rainfed condition. Major oilseeds such as groundnut and gingely exhibited declining tendency in terms of area and production. The area under fallow lands has increased over the years due to various reasons. The current fallows are on the increase from 12.02 lakh hectare in 1970s (9.2 per cent) to 15.03 lakh hectare in 2002-03 (11.6 per cent); area sown more than once tended to decrease from 13.21 lakh hectare in 1970s to 6.01 lakh hectare in 2002-03. The gross cropped area which reached the maximum in 1970s with 74.56 lakh hectare sharply fell to 51.91 lakh hectare in 2002-03.

#### **4.1.4 Opportunities**

Improving the efficiency of water use, increasing the effectiveness of public expenditure and agricultural extension and spurring the development of agricultural markets are the key factors for achieving targeted growth in agriculture. Improved irrigation management practices and irrigation technologies (such as drip and sprinkler irrigation) and new investment in canals and water storages (coupled with improved operation and maintenance) will be crucial for improving the water use efficiency in the state. Use of sprinkler and drip technology has been promoted in the state to a certain extent. High capital cost of these technologies currently poses a constraint to widespread adoption by marginal and small farmers. Therefore, greater attention to development of more affordable technologies is warranted or a suitable system of targeted subsidies should be developed to scale-up the use of sprinkler and drip systems.

Contract farming is emerging in many of the crops like maize, cotton, medicinal plants, etc as an alternative system of crop production. Diversification into less water intensive high value products including fruits, vegetables, spices and condiments is one of the most promising strategies for increasing agricultural growth in Tamil Nadu. Horticulture is becoming a very significant sector in the emerging economic scenario due to existence of tremendous potential for export of exotic horticultural products especially fruits, flowers and vegetables. Another important factor in favour of development of the plantation and horticulture sector is the propensity of increasing the income levels of the farmers in rainfed areas by taking up dry land horticultural crops in dry lands as an alternate land use system as well as on cultivable wastes and other fallow lands. Such diversification could induce private investment in the processing for many of the higher value products in agricultural sector, which is likely to generate new rural non farm employment opportunities and contribute to higher rural incomes. Rich resource endowments offer vast vistas of opportunities for setting up of processing industries to produce value added products. Target research and Public Private Partnership (PPP) is necessary for attaining the momentum of growth in agriculture which has been targeted at four per cent in the tenth plan.

#### **4.1.5 Seasonal Condition and Crop Prospects**

The health, growth and normal yields of crops depend upon certain optimum conditions of rainfall, temperature, wind, cloudiness, etc., which normally occurs in a season. Magnitude of vulnerability of agriculture within a season again depends heavily upon weather variability within a season.

The Agricultural situation in Tamil Nadu largely depends on the quantum of rains received during seasonal rainfall of South West and North-East monsoon. Comfortable storage in Mettur reservoir coupled with uniform distribution of monsoon rains will bring good crop in delta region. But the State had faced consecutive drought situation for the past 2 years because of low and uneven precipitation.

During 2004-05, the state had experienced a dual situation, whilst it faced severe drought upto June-July 2004, it had torrential rains in the month of October leading to flood damage and submergence in some of the districts. The water from Mettur reservoir was released on 12.8.2004 after a delay of 2 months for Samba cultivation.

The area coverage under major crops showed a dip in coverage in the early part of the year, which however revived in the month of September 2004 onwards.

#### **4.2 Land Use Pattern**

The land use pattern of the district for the last ten years is given in the Table 4.2 . The current (2005-06) land use pattern is given below (Table 4.1). Of the total geographical area of 7.47 lakhs ha., 3.14 lakhs ha. were under net sown area. The land put to non agricultural use was 1.06 lakh ha. and 1.56 lakh ha. were under current fallow other fallow and cultivable waste. The net area sown and gross cropped area remained about same in the last ten years while current fallows, other fallows have increased over years.

**Table 4.1. Land Utilization Pattern - 2005-06**

| <b>S.No.</b> | <b>Classification</b>                      | <b>Area in ha</b> |
|--------------|--|-------------------|
| 1.           | Total Geographical area                    | 7,47,079          |
| 2.           | Forest                                     | 15,8801           |
| 3.           | Barren and uncultivable waste              | 7,463             |
| 4.           | Land put to non Agri use                   | 1,06,025          |
| 5.           | Cultivable waste                           | 13,996            |
| 6.           | Permanent pasture grazing land             | 85                |
| 7.           | Tree crops and groves not included cropped | 3,383             |
| 8.           | Current fallows                            | 84,524            |
| 9.           | Other fallows                              | 57,840            |
| 10.          | Net area sown                              | 3,14,957          |
| 11.          | Total cropped area                         | 3,33,331          |

Source : Records of the Office of the Assistant Director, Statistics, Coimbatore

**Table 4.2. Land Utilization Pattern in Coimbatore 1996 - 2006**

(Area in Ha)

| Year    | Geographical area | Forest area | Barren and uncultivable land | Land put to non-Agrl. Use | Cultivable waste | Permanent pastures and other grazing lands | Land under Misc tree crops & Groves not included in the net area sown | Current fallow | Other fallow land | Net area sown | Area sown more than once | Gross cropped area |
|---------|-------------------|-------------|------------------------------|---------------------------|------------------|--|---|----------------|-------------------|---------------|--------------------------|--------------------|
| 1996-97 | 746799            | 158472      | 10271                        | 86636                     | 2491             | 1456                                       | 4364  | 149726         | 12997             | 320386        | 22488                    | 342874             |
| 1997-98 | 746799            | 158338      | 10271                        | 88125                     | 2474             | 1455                                       | 4408  | 141065         | 14380             | 326283        | 22293                    | 348576             |
| 1998-99 | 747619            | 158300      | 10271                        | 89936                     | 2474             | 1455                                       | 4831  | 137968         | 13648             | 328736        | 25447                    | 354183             |
| 1999-00 | 747079            | 158543      | 10257                        | 91027                     | 2799             | 1135                                       | 4769  | 135802         | 14480             | 328267        | 29736                    | 358003             |
| 2000-01 | 747079            | 158528      | 10265                        | 92004                     | 2933             | 1139                                       | 4339  | 146807         | 13689             | 317375        | 19229                    | 336604             |
| 2001-02 | 747079            | 158728      | 10182                        | 92584                     | 3295             | 1137                                       | 4190  | 150599         | 14884             | 311480        | 17378                    | 328858             |
| 2002-03 | 747079            | 158606      | 10185                        | 96528                     | 3295             | 1137                                       | 5044  | 145246         | 25286             | 301752        | 8944                     | 310696             |
| 2003-04 | 747079            | 158558      | 10155                        | 102416                    | 2883             | 1137                                       | 4865  | 26902          | 121175            | 318988        | 12944                    | 331932             |
| 2004-05 | 747079            | 158616      | 10144                        | 102851                    | 2835             | 1137                                       | 4650  | 23060          | 119376            | 324410        | 29150                    | 329215             |
| 2005-06 | 747079            | 158801      | 7464                         | 106025                    | 13997            | 85   | 3383  | 84525          | 57842             | 314957        | 18375                    | 333332             |

Source : Records of the Office of the Assistant Director, Statistics, Coimbatore

### 4.3 Soil Health

The soil types of a particular area play a critical role in determining the fertility status and cropping pattern. According to Soil Atlas, the total land area under Coimbatore district is 7,46,799. Out of this Irugur soil series occupies major area (2,15,405 ha) and contributes 28.84 percent, followed by forest soil series, which occupies (1,58,472 ha) and contributes 21.22 percent. The third largest soil series in Coimbatore district is Palladam soil series, which occupies 1,22,965 ha and contributes 16.47 percent. The table below shows the soil series availability in Coimbatore district.

**Table 4.4. Soil Series Availability in Coimbatore District**

| Soil series            | Symbol | Extent          |                         |
|------------------------|--------|-----------------|-------------------------|
|                        |        | Area (ha)       | Contribution (per cent) |
| 1.Irugur               | Igr    | 2,15,405        | 28.84                   |
| 2.Palladam             | PId    | 1,22,965        | 16.47                   |
| 3.Palathurai           | Pth    | 59,920          | 8.02                    |
| 4.Pilarnedu            | Plm    | 42,914          | 5.74                    |
| 5.Manupatty            | Mpy    | 30,461          | 4.08                    |
| 6. Velalur             | VIr    | 24,089          | 3.23                    |
| 7. Picnanur            | Pch    | 20,280          | 2.72                    |
| 8.Dasarapatti          | Dpt    | 18,913          | 2.53                    |
| 9.Sornayyanur          | Smy    | 17,847          | 2.39                    |
| 10.Noyyal              | Nyl    | 5,856           | 0.78                    |
| 11.Peryanaickenpalayam | PyK    | 4,075           | 0.55                    |
| 12.Anamalai            | Aml    | 2,918           | 0.39                    |
| 13.Okkilipalayam       | Okp    | 1,095           | 0.15                    |
| 14.Chavadiparai        | Cvp    | 913             | 0.12                    |
| 15.Forests             |        | 1,58,472        | 21.22                   |
| 16.Hill soils          |        | 20,676          | 2.77                    |
| <b>Total</b>           |        | <b>7,46,799</b> | <b>100.00</b>           |

Source: Soil ATLAS, Coimbatore dist. 1998; Soil Survey and Land Use Planning

### 4.3.1 Soil Productivity

60 percent of the soils are poor in productivity in Irugur, Palladam series of soils.

**Table 4.5. Soil Productivity of Coimbatore District**

| Area (ha) | Productivity | Soil series   |
|-----------|--------------|---|
| 3,90,206  | Poor         | Irugur, Palladam, Menupatty, Pichanur Okkilipalayam                           |
| 1,32,591  | Average      | Dasarpatti, Palathurai, Noyyal, Chavadiparai Peelamedu, Periyanaickenpalayam. |
| 44,854    | Good         | Vellalur, Somayyanur, Anamalai  |

Source : Records of the Office of the Assistant Director, Statistics, Coimbatore

Red Calcareous soil, Black soil and Red non-calcareous soil are major soil types found in Coimbatore district. Percentage distribution of Red Calcareous soil is high compared to other soil types.

**Table 4.6. Percentage Distribution of Major Soil types of Coimbatore District**

| Taluk                 | Red Calcareous soil | Black soil | Red non-calcareous soil | Alluvial and colluvial soil | Brown soil | Forest soil |
|-----------------------|---------------------|------------|-------------------------|-----------------------------|------------|-------------|
| Coimbatore North      | 60.39               | 12.54      | 11.89                   | 9.57                        | 5.64       | -           |
| Coimbatore South      | 67.26               | 5.73       | 14.62                   | 8.25                        | 4.14       | -           |
| Mettupalayam          | 39.57               | -          | 15.66                   | -                           | -          | 44.77       |
| Avinashi              | 46.34               | 6.26       | 47.40                   | -                           | -          | -           |
| Palladam              | 49.88               | 15.38      | 33.5                    | -                           | 1.24       | -           |
| Tiruppur              | 51.91               | 7.33       | 40.96                   | -                           | -          | -           |
| Pollachi              | 54.42               | 8.23       | 37.35                   | -                           | -          | -           |
| Udumalpet             | 32.43               | 36.26      | 31.31                   | -                           | -          | -           |
| Valparai (Hilly Area) | -                   | -          | -                       | -                           | -          | 100.00      |

Source: Records of the Office of the Soil Testing Lab, Agricultural Department, Coimbatore

### 4.3.2 Micronutrient Status of Soils

Majority of soils are deficient in Zn (more than 90 per cent) followed by Cu. Mg and Fe deficiency varies in between 10-20 per cent.

**Table 4.7. Micronutrient Status of Soils in Coimbatore district**

| Sl. No | Taluk                      | Per cent deficiency |        |           |      |
|--------|----------------------------|---------------------|--------|-----------|------|
|        |                            | Zinc                | Copper | Manganese | Iron |
| 1.     | Coimbatore (North & South) | 93                  | 66     | 10        | 17   |
| 2.     | Mettupalayam               | 90                  | 74     | 8         | 30   |
| 3.     | Avinashi                   | 91                  | 74     | 8         | 10   |
| 4.     | Palladam & Tiruppur        | 93                  | 42     | 19        | 15   |
| 5.     | Pollachi & Valparai        | 93                  | 72     | 14        | 11   |
| 6.     | Udumalpet                  | 93                  | 60     | 22        | 22   |

Source : Records of the Office of the Assistant Director, Statistics, Coimbatore

### 4.4 Water Resources and Management

The major sources of irrigation in the district are wells and canals which cover 75 percent and 23 percent of the irrigated area, respectively. Tanks and ponds contribute 2 percent to the irrigated area. There are 7099 tube wells and 115336 other wells, mainly concentrated in Pollachi, Udumalpet, Palladam, Tiruppur, Mettupalayam and Avinashi taluks. A length of about 500 km is covered by 40 canals, covering an area of 50255 ha under irrigation. Of these, 12 canals are located in Udumalpet and 11 in Pollachi taluks. Further, there are 73 tanks, majority of them concentrated in Avinashi (23), Udumalpet (13), Palladam (9) taluks, providing irrigation to 1855 ha. One of the prerequisites for enhanced production in agriculture is irrigation.

**Table 4.8. Source wise Area Irrigated in Coimbatore District**

| Source of Irrigation | Total Gross Area (ha) | Total Net Area (ha) | Irrigation Intensity |
|----------------------|-----------------------|---------------------|----------------------|
| Tank                 | 663                   | 555                 | 1.19                 |
| Canal                | 56,327                | 53,991              | 1.04                 |
| Tube wells           | 20,517                | 19,608              | 1.05                 |
| Open wells           | 1,03,964              | 96,357              | 1.08                 |
| Supplementary wells  | 6,802                 | 6,714               | 1.01                 |
| Other sources        | 0                     | 0                   | 0                    |
| Total area irrigated | 1,81,471              | 1,70,511            | 1.06                 |

Source : Records of the Office of the Assistant Director, Statistics, Coimbatore

**Table 4.9. Sources of Water Supply –Taluk Wise**

| Sl. No | Name of the Taluk | Canals Nos. | Length (Km.) | Wells used for irrigation purpose only | Tube Wells | Wells used for Domestic Purpose only | Reser-voirs | Tanks (Nos.) |
|--------|-------------------|-------------|--------------|--|------------|--------------------------------------|-------------|--------------|
| 1      | Coimbatore North  | -           | -            | 4728                                   | 1885       | 1128                                 | -           | 7            |
| 2      | Coimbatore South  | 8           | 76.8         | 5926                                   | 2920       | 2207                                 | -           | 14           |
| 3      | Mettupalayam      | 7           | 18.00        | 5519                                   | 1144       | 1167                                 | 1           | 3            |
| 4      | Palladam          | 1           | 15.0         | 15628                                  | 2855       | 3722                                 | -           | 9            |
| 5      | Pollachi          | 11          | 196.40       | 24603                                  | 6326       | 2759                                 | 3           | 6            |
| 6      | Tiruppur          | 1           | 32.0         | 8421                                   | 4175       | 2569                                 | -           | 2            |
| 7      | Udumalpet         | 12          | 177.40       | 20285                                  | 6244       | 3246                                 | 2           | 13           |
| 8      | Valparai          | -           | -            | -                                      | -          | 40                                   | 3           | -            |

Source : Records of the Office of the Assistant Director, Statistics, Coimbatore

Minor irrigation (MI) has advantages over the medium and major irrigation projects such as low cost, early completion, efficient management, less environmental

degradation, etc. It also provides for vast, opportunity for rural development. The different forms of investments under MI are dug well, bore well, pump sets, energisation of pump sets, laying of pipeline for distribution of water and installation of scarce ground water saving irrigation devices such as drip and sprinkler systems. These systems also result in enhanced plant growth, increase in area under irrigation, improved quality of the produce and savings in cost of cultivation as a result of savings in energy, labour, fertilizers and weeding costs. The gross irrigated and net irrigated area of the district is 1.81 lakh and 1.70 lakh ha respectively (Table 4.7.).

Major source of irrigation for Anaimalai and Udumalpet is Canal. Karamadai and Udumalpet tank irrigation. Well irrigation is found to be high in Kinathukadavu (highest of 22498 ha), Udumalpet and Pollachi (North). Udumalpet ,Anaimalai and Kinathukadavu blocks are in descending order of net irrigated area. Total area irrigated by wells is 1,01,572.69 ha followed by canal of 73,675.99 ha. Annur, Sulthanpet, Pongalur, Pollachi (North), Sarcarsamakulam and Perianaickenpalayam are blocks with high irrigation intensity. In these blocks major irrigation sources are wells and others. Canal and tank irrigated areas are showing lower irrigation intensity. While comparing it with the given data on ground water potential, it shows that critical position of ground water potential may be reason for low irrigation intensity.

**Table 4.10. Sources of Water Supply and Area Irrigated in Coimbatore District**

| Type              | 1980-81 | 1990-91 | 2000-01 |
|-------------------|---------|---------|---------|
| <b>Canals</b>     |         |         |         |
| <i>Government</i> |         |         |         |
| No                | 35      | 39      | 40      |
| Km                | 577     | 597     | 515.6   |
| <i>Private</i>    |         |         |         |
| No                | 1       | 1       | 2       |
| Km                | 10      | 10      | 10.8    |

|   |        |       |        |
|---|--------|-------|--------|
| <b>Wells</b>  |        |       |        |
| <i>Used for irrigation only</i>   |        |       |        |
| <i>Government</i>   |        |       |        |
| Masonry   | 61     | 69    | 72     |
| Non masonry   | 2      | 2     | 179    |
| <i>Private</i>  |        |       |        |
| Masonry   | 77738  | 83109 | 61138  |
| Non masonry   | 1281   | 7919  | 35406  |
| <b>Total</b>  | 79082  | 91099 | 96795  |
| Wells used for domestic purpose only                                      | 8979   | 12320 | 17133  |
| Wells not in use  | 5479   | 9242  | 15730  |
| <b>Wells solely used for irrigation</b>                                   |        |       |        |
| Nos   | 118439 | -     | 126364 |
| <b>Tubewell</b>   |        |       |        |
| <i>Government</i>   |        |       |        |
| <i>Private</i>  | -      | 506   | 22293  |
| Total   | -      | 506   | 22293  |
| <b>Reservoirs</b>   | 3      | 7     | 7      |
| <b>Tanks</b>  |        |       |        |
| ayacut >100 ac  | 40     | 41    | 44     |
| ayacut <100 ac  | 33     | 35    | 33     |
| <b>Total</b>  | 73     | 76    | 77     |
| Net area irrigated by canal (ha)  |        |       |        |
| <i>Government</i>   | 37935  | 38165 | 40288  |
| <i>Private</i>  | 582    | 560   | 715    |
| Net area irrigated by Tank (ha)   | 5256   | 1909  | 1855   |
| Net area irrigated by Tube well (ha)                                      | -      | 1315  | 6723   |
| Net area irrigated by wells supplementing other source of irrigation (ha) | 5153   | 3768  | 2933   |

|   |        |        |        |
|---|--------|--------|--------|
| Net area irrigated by other sources of irrigation               |        |        |        |
| Area irrigated by Springs & canals etc (ha)                     | 122    | 481    | 2440   |
| Net area irri. Excluding wells supplementing other sources (ha) | 162334 | -      | 78130  |
| per cent of net area irri. to net area sown                     | 45.9   | 37.3   | 56.13  |
| Area irri. more than once in same year (ha)                     | 29426  | 17692  | 13139  |
| Gross area of crops irrigated (ha)                              | 191760 | 134430 | 191269 |
| per cent of total gross irrigated area to total area sown       | 48.6   | 39.1   | 56.82  |

Source: Season and Crop Report of Tamil Nadu

#### 4.4.1 Area Irrigated by Crops

Among the crops coconut is the major irrigated crop followed by maize, sugarcane, banana, paddy and groundnut (Table 4.10).

**Table 4.11 Area Irrigated by Crops 2005-06  
(By all Sources)**

| Sl.No. | Crop         | Area (in Ha.) |
|--------|--------------|---------------|
| 1.     | Paddy        | 6220          |
| 2.     | Jowar        | 3810          |
| 3.     | Bajra        | 172           |
| 4.     | Maize        | 18878         |
| 5.     | Ragi         | 100           |
| 6.     | Greengram    | 146           |
| 7.     | Redgram      | 89            |
| 8.     | Blackgram    | 91            |
| 9.     | Other Pulses | 1361          |
| 10.    | Cardamom     | -             |
| 11.    | Turmeric     | 2787          |
| 12.    | Arecanut     | 1602          |

**Table 4.11 Contd...**

| <b>Sl.No.</b> | <b>Crop</b> | <b>Area (in Ha.)</b> |
|---------------|-------------|----------------------|
| 13.           | Coriander   | 68                   |
| 14.           | Curryleaves | 1337                 |
| 15.           | Sugarcane   | 9456                 |
| 16.           | Onion       | 3214                 |
| 17.           | Banana      | 9947                 |
| 18.           | Mango       | 2207                 |
| 19.           | Grapes      | 236                  |
| 20.           | Tomato      | 3409                 |
| 21.           | Brinjal     | 657                  |
| 22.           | Tapiaco     | 1160                 |
| 23.           | Gingelly    | 258                  |
| 24.           | Groundnut   | 3675                 |
| 25.           | Coconut     | 104196               |
| 26.           | Sunflower   | 253                  |
| 27.           | Cotton      | 1079                 |
| 28.           | Tobacco     | 348                  |
| 29.           | Fodder      | 1320                 |
| 30.           | Flowers     | 903                  |

Source: Records of the Office of the Assistant Director of Statistics, Coimbatore.

#### **4.5 Cropping Pattern**

Cropping pattern refers to the proportionate area under different crops during a fasli year.

**Table 4.12. Area under Principal Crops in Coimbatore District****(in Ha.)**

| Crop                      | 05-06                                  |               | 04-05         |               | per cent variation over previous year |              |
|---------------------------|--|---------------|---------------|---------------|---------------------------------------|--------------|
|                           | Area                                   | per cent      | Area          | per cent      |                                       |              |
| <b>I. FOOD CROPS</b>      |  |               |               |               |                                       |              |
| 1                         | Paddy                                  | 7406          | 2.22          | 7239          | 2.06                                  | 0.16         |
| 2                         | Jowar (Cholam)                         | 77490         | 23.25         | 94888         | 27.00                                 | -3.75        |
| 3                         | Bajra (Cumbu)                          | 412           | 0.12          | 460           | 0.13                                  | -0.01        |
| 4                         | Ragi                                   | 69            | 0.02          | 167           | 0.05                                  | -0.03        |
| 5                         | Maize                                  | 21662         | 6.50          | 24692         | 7.03                                  | -0.53        |
| 6                         | Other Millets                          | 41            | 0.01          | 28            | 0.01                                  | 0.00         |
| 7                         | Pulses                                 | 28111         | 8.43          | 34761         | 9.89                                  | -1.46        |
| 8                         | Spices and Condiments                  | 10632         | 3.19          | 9562          | 2.72                                  | 0.47         |
| 9                         | Sugarcane                              | 8894          | 2.67          | 5883          | 1.67                                  | 1.00         |
| 10                        | Fruits                                 | 13578         | 4.07          | 11472         | 3.26                                  | 0.81         |
| 11                        | Vegetables                             | 11912         | 3.57          | 11005         | 3.13                                  | 0.44         |
| 12                        | Other food crops                       | 366           | 0.11          | 363           | 0.10                                  | 0.01         |
|                           | <b>Total food crops</b>                | <b>180573</b> | <b>54.17</b>  | <b>200520</b> | <b>57.06</b>                          | <b>-2.89</b> |
| <b>II. NON-FOOD CROPS</b> |  |               |               |               |                                       |              |
| 1.                        | Cotton                                 | 6436          | 1.93          | 11547         | 3.29                                  | -1.36        |
| 2.                        | Groundnut                              | 22515         | 6.75          | 19147         | 5.45                                  | 1.30         |
| 3.                        | Gingelly                               | 1478          | 0.44          | 1125          | 0.32                                  | 0.12         |
| 4.                        | Coconut                                | 101541        | 30.46         | 100160        | 28.50                                 | 1.96         |
| 5.                        | Other edible Oil seeds                 | 301           | 0.09          | 472           | 0.13                                  | -0.04        |
| 6.                        | Non edible Oil seeds                   | 757           | 0.23          | 623           | 0.18                                  | 0.05         |
| 7.                        | Tobacco                                | 327           | 0.10          | 583           | 0.17                                  | -0.07        |
| 8.                        | Fodder crops                           | 4073          | 1.22          | 2104          | 0.60                                  | 0.62         |
| 9.                        | Coffee                                 | 2323          | 0.70          | 2324          | 0.66                                  | 0.04         |
| 10.                       | Tea                                    | 11103         | 3.33          | 11033         | 3.14                                  | 0.19         |
| 11.                       | Other Drugs & Narcotics                | 209           | 0.06          | 237           | 0.07                                  | -0.01        |
| 12.                       | Flowers                                | 1001          | 0.30          | 969           | 0.28                                  | 0.02         |
| 13.                       | Other Non-food crops                   | 695           | 0.21          | 581           | 0.17                                  | 0.04         |
| 14.                       | <b>Total Non-Food Crops</b>            | <b>152759</b> | <b>45.83</b>  | <b>150905</b> | <b>42.94</b>                          | <b>2.89</b>  |
| 15.                       | <b>Total Food &amp; Non-Food Crops</b> | <b>333332</b> | <b>100.00</b> | <b>351425</b> | <b>100.00</b>                         | <b>-</b>     |

Source : Records of the Office of the Assistant Director, Statistics, Coimbatore.

The gross cropped area under all crops has slightly decreased to 3.33 lakh ha in 05-06 from 3.51 lakh ha in 04-05. While the area under Food crops accounted for 54.17 per cent and that of non-food crops formed 45.83 per cent only, of the gross cropped area during the year 2004-05 and 2005-06. The Table 4.11 shows the cropping pattern followed in the Coimbatore district during 05-06 besides indicating relative share of area under principal crops to total cropped area.

Paddy, Cholan (Jowar), Cumbu (Bajra), Ragi, Maize, Small millets, Pulses, Sugarcane, Spices and Condiments, Fruits and Vegetables constitute the Food crops. The area under food crops has decreased by 1.80 lakh ha i.e. -2.89 per cent in 05-06 over the previous year.

Fibres, Oilseeds, Drugs and Narcotics, Dyes, Fodder crops, Green-manure crops, Flowers and Other Miscellaneous tree crops and Groves constitute Non-food crops. The area under non-food crops has increased to 1.52 lakh ha i.e. 2.89 per cent in 05-06 over the previous year (1.50 lakh ha). In 2005-06 among food crops area under Jowar was 77,490 ha (23.25 per cent) followed by maize 21,665 ha (6.50 per cent) pulses 28,111 ha (8.43 per cent). Among non- food crops area under coconut is 1.01 lakh ha (30.46 per cent) followed by groundnut 22,515 ha (6.75 per cent) and cotton 6,436 ha (1.93 per cent).

#### **4.5.1 Production and Productivity of Major Crops**

Factors such as fertility of land, monsoon behaviour, rainfall, irrigation, application of fertilizers, climatic conditions, marketing facilities, prices, availability of agricultural labour etc., determines the area, production and productivity of any crop. The crop wise analysis of production of food grain between the current year and previous year is presented in the Table 4.13 below. Among the food grains cereals constituent 87 per cent and pulses constituent 13 percent of production. The production of food grains during the year 05-06 is 86,762 tonnes as against 98,059 tonnes in 04-05 recording a

decrease of 11,297 tonnes or 0.5 per cent. Jowar is major constituent accounting for 32.71 per cent of the total food grains production followed by Maize (29.81 per cent) and Rice (23.82 per cent) in the district.

**Table 4.13. Crop wise Production of Food grains**  
(in tonnes)

| Crop              |                                | 05-06        |               | 04-05        |               |
|-------------------|--------------------------------|--------------|---------------|--------------|---------------|
|                   |                                | Production   | Per cent      | Production   | Per cent      |
| <b>A. Cereals</b> |                                |              |               |              |               |
| 1.                | Rice                           | 20665        | 23.82         | 24454        | 24.94         |
| 2.                | Maize                          | 25864        | 29.81         | 27779        | 28.33         |
| 3.                | Jowar (Cholam)                 | 28383        | 32.71         | 32292        | 32.93         |
| 4.                | Bajra (Cumbu)                  | 745          | 0.86          | 865          | 0.88          |
| 5.                | Ragi                           | 116          | 0.13          | 261          | 0.27          |
| 6.                | Korra                          | 6            | 0.01          | 1            | 0.00          |
| 7.                | Varagu                         | 1            | 0.00          | 0            | 0.00          |
| 8.                | Samai                          | 16           | 0.02          | 10           | 0.01          |
| 9.                | Other cereals                  | 5            | 0.01          | 7            | 0.01          |
|                   | <b>Sub Total (A)</b>           | <b>75801</b> | <b>87.37</b>  | <b>85669</b> | <b>87.36</b>  |
| <b>B . Pulses</b> |                                |              |               |              |               |
| 10.               | Bengalgram                     | 3335         | 3.84          | 3071         | 3.13          |
| 11.               | Redgram                        | 197          | 0.23          | 198          | 0.20          |
| 12.               | Greengram                      | 1579         | 1.82          | 2074         | 2.12          |
| 13.               | Blackgram                      | 1302         | 1.50          | 802          | 0.82          |
| 14.               | Horsegram                      | 1837         | 2.12          | 2466         | 2.51          |
| 15.               | Other pulses                   | 2711         | 3.12          | 3779         | 3.85          |
|                   | <b>Sub total (B)</b>           | <b>10961</b> | <b>12.63</b>  | <b>12390</b> | <b>12.64</b>  |
|                   | <b>Total Food grains (A+B)</b> | <b>86762</b> | <b>100.00</b> | <b>98059</b> | <b>100.00</b> |

Source : Records of the Office of the Assistant Director, Statistics, Coimbatore

Among the pulses maximum production was from Bengal gram 3,335 tonnes (3.84per cent) followed by Horsegram 1,837 tonnes (2.55per cent) and blackgram 1305 tonnes (2.51per cent) the average yield of important crop is furnished in Table 4.14. Among cereals rice yield is 2790 kg /ha followed by Bajra 1,807, ragi 1,672, Maize 1,194 kg /ha. Among Pulses, Bengal gram yield is 741 kg / ha followed by blackgram 699 kg / ha others have recorded larger yield. The cotton yield is hardly 151 bags / ha, groundnut yield is 1353 kg / ha while coconut productivity is 10,547 nut / tree / year. In spite of various constraints such as fragmentation of land holdings, more than 52 per cent of the cultivable area are under dryland condition, over exploitation of irrigation sources, deterioration of soil health due to continuous intensive cropping, shrinking trend of gross cropped area and also continuous severe drought prevailed in the past 2 years, continues to increase in the productivity of major crops.

**Table 4.14. Average Yield of Major Crops in the District**

|   | Crop              | Yield rate (in kg/ha) |       |
|---|-------------------|-----------------------|-------|
|   |                   | 05-06                 | 04-05 |
| 1.  | Rice              | 2790                  | 3378  |
| 2.  | Jowar             | 366                   | 340   |
| 3.  | Bajra             | 1807                  | 1881  |
| 4.  | Ragi              | 1672                  | 1560  |
| 5.  | Maize             | 1194                  | 1125  |
| 6.  | Bengalgram        | 741                   | 741   |
| 7.  | Redgram           | 540                   | 667   |
| 8.  | Greengram         | 354                   | 382   |
| 9.  | Blackgram         | 699                   | 367   |
| 10.   | Horsegram         | 431                   | 488   |
| 11.   | Sugarcane (Cane)* | 139                   | 116   |
| 12.   | Tapioca           | 38211                 | 41268 |
| 13.   | Cotton (lint)*    | 151                   | 218   |
| 14.   | Castor            | 367                   | 367   |
| 15.   | Groundnut         | 1353                  | 1265  |
| 16.   | Gingelly          | 484                   | 349   |
| 17.   | Sunflower         | 1240                  | 1063  |
| Sugarcane tones / ha and cotton one bale is 170 kg lint |                   |                       |       |

Source : Records of the Office of the Assistant Director, Statistics, Coimbatore

### 4.5.2 Yield Gap

The yield gap II analysis showed that the difference between progressive farmer and average farmer varies for different crops (Table 4.15). Maximum yield gap II is observed in sugarcane followed by maize (14.32 q/ ha) paddy (5.04q / ha), groundnut (4.99q/ha) while for cotton it is 2.87 q/ha. Thus there is scope for increasing production and productivity of maize, paddy, groundnut and cotton with existing technologies by implementing good crop husbandry.

**Table 4.15. Yield Gap II of Major crops in Coimbatore District, Tamil Nadu**

| Crops                | Farmers' Maximum Yield (q/ha) | Farmers' Average Yield (q/ha) | Yield Gap II (q/ha) |
|----------------------|-------------------------------|-------------------------------|---------------------|
| Maize                | 78.46                         | 64.14                         | 14.32               |
| Paddy                | 56.48                         | 51.44                         | 5.04                |
| Jowar                | 4.79                          | 3.30                          | 1.49                |
| Cow pea              | 35.25                         | 21.63                         | 13.62               |
| Green gram           | 3.27                          | 2.13                          | 1.14                |
| Sugarcane planted    | 1,666.67                      | 1,191.58                      | 475.09              |
| Sugarcane ratoon     | 1,231.88                      | 1,015.42                      | 216.46              |
| Groundnut            | 19.00                         | 1,4.01                        | 4.99                |
| Sesamum              | 1.50                          | 1.22                          | 0.28                |
| Chillies             | 52.90                         | 50.83                         | 2.07                |
| Turmeric             | 175.00                        | 173.00                        | 2.00                |
| Cotton medium staple | 18.00                         | 15.13                         | 2.87                |

Source : Records of the Office of the Assistant Director, Statistics, Coimbatore

### Input Management

#### Fertilizer

The Department of Agriculture shoulders the responsibility to closely monitor the production and supply of fertilisers to ensure timely availability to the farmers. After

continuous drought situations for the past more than 2 years, during 2004-2005, extensive cultivation was resorted to by the farmers due to favourable seasonal rains from September 2004. This has created greater demand for fertilizers especially urea. This sudden spurt in demand was effectively tackled by securing additional quantity of 2.38 L.MT of urea during Rabi till November 2004 despite extreme limitations and timely availability ensured. A public notice was released in the dailies sternly warning the traders against indulging in over pricing or any other malpractice and also inviting complaints from the farmers on non availability, sale at higher price. To enforce this warning 608 fertilizers shops were inspected and 79 stop sale orders issued 42 nos. of warning issued and 59 nos. of license suspended temporarily. To monitor the fertilizer supply, Facilitation centres were opened in all the districts from 8.00 A.M to 8.00 P.M. and the Department ensured timely availability of fertilizer at correct price.

**Table 4.16 Consumption of Chemical Fertilisers and Pesticides**

**Year : 2006–2007**

| Fertilisers (in '000' Tonne) |                    |                  |             | Pesticides |               | Urea ('000' Tonne) |
|------------------------------|--------------------|------------------|-------------|------------|---------------|--------------------|
| Nitrogeaneous (N)            | Phosphatic (P2 05) | Pottassic (K2 0) | Total (NPK) | Dust (MT.) | Liquid (Lit.) |                    |
| 19576 MT                     | 10526 MT           | 21700 MT         | 51802 MT    | 97.85 MT   | 33845         | 25470 MT           |

Source: Records of the Office of the Joint Director of Agriculture, Coimbatore.

#### **4.6.2 Farm Mechanization**

Tools, implements and powered machinery, are essential and major inputs in agriculture. The term "mechanisation" is generally used as an overall description of the application of these inputs. There are three levels of farm power used to provide an energy source for the utilization of these tools, machines and equipment; manual power, animal draft and motorized power. The level, appropriate choice and proper use of mechanized inputs into agriculture have a direct and significant effect on achievable levels of agricultural production and the profitability of farming. Farm Power and Machinery consisting of manual labour, draught animals, tractors, implements, hand

tools, equipment, and machinery is an essential farm input. In almost any agricultural production system the annual expenditure on farm power, whether on labour, draft animals, or fuel and depreciation of machines, largely exceeds the costs of other inputs such as agro-chemicals and seeds. Agricultural production and food security can adversely be affected because of insufficient use of farm power, low labour productivity and/or labour scarcity. Machines are also required to assist the post-harvest loss reduction and on-farm processing. Thus it is once again recognized that agricultural mechanization is crucial in the fight against hunger and poverty, and at the same time to address environmental and health concerns.

#### **4.6.3 Infrastructure and Support Services Available in Coimbatore District**

As the district is highly industrialized, it has good infrastructure and support services already in place. A number of leading manufacturers and dealers in agricultural implements and service stations are present in the district.

As per 2004 census, there were around 2429 tractors, 493 sugarcane crushers, 464 oil grannies in the district. The number of ploughs is 33377. The number of operational holdings of size of more than 10 ha is 3,035 which cover 63551 ha. However, as Coimbatore district is highly industrialized, there is acute shortage of agricultural labour. Agricultural labour force constitutes 29.0 per cent of the total work force. Considering the employment opportunities in the industries, there is acute shortage of agricultural labour. Therefore, the cost of human power is very high.

#### **4.6.4 Assessment of Infrastructure Gaps**

Though there are good number of dealers in the district, there is still scope in rural areas for servicing of farm equipments. There is great demand for bull dozers for preparation of land. Therefore, Govt. may make available adequate number and provide them to the farmers on hiring basis.

### Other Allied Activities (Bullock and Bullock Carts)

In spite of the vast good network of roads in the district, bullock carts, the traditional mode of transport, are still used by small and marginal farmers. These carts are useful in transporting the agricultural produce to and from the markets in the rural areas.

#### 4.6.5 Availability and Gaps in Infrastructure and Support Services (Bullock And Bullock Carts)

The number of holdings below 2 ha forms 71.2 per cent of the total land holdings of 231675 in the district. This indicates the potential available for financing under this sector. Further, the area under cultivation of sugarcane is 12660 ha. Pneumatic tyre carts are generally used for transporting cane to the factories. The total number of draught animals in the district is 1,11,374. Raw material for manufacture of the carts are available in plenty. The technology for the manufacture of carts is also available from the TNAU. A number of markets are available for purchasing cattle. As such, there is no dearth of support for this activity.

**Table 4.17 Agricultural Implements and Machinery**

(In Number)

| Sl.No. | Item                               | 1994  | 1999  | 2004  |
|--------|------------------------------------|-------|-------|-------|
| 1.     | Ploughs                            |       |       |       |
|        | a) Wooden                          | 70326 | 71263 | 27198 |
|        | b) Iron                            | 3068  | 7170  | 6179  |
|        | c) Total                           | 73398 | 78433 | 33377 |
| 2.     | Water Pumps for Irrigation Purpose |       |       |       |
|        | a) Worked by Oil Engine            | 5816  | 6360  | 4531  |
|        | b) Worked by Electric Power        | 51618 | 63184 | 45864 |
|        | c) Total                           | 57434 | 69544 | 50395 |

**Table 4.17 Contd....****(In Number)**

| Sl.No. | Item                  | 1994 | 1999 | 2004 |
|--------|-----------------------|------|------|------|
| 3.     | Tractors              |      |      |      |
|        | a) Government         | 49   | 60   | 2429 |
|        | b) Private            | 985  | 1975 |      |
|        | c) Total              | 1034 | 2035 |      |
| 4.     | Sugarcane Crushers    |      |      |      |
|        | a) Worked by Power    | 1502 | 1618 | 296  |
|        | b) Worked by Bullocks | 198  | 0    | 197  |
|        | c) Total              | 1700 | 1618 | 493  |
| 5.     | Oil Ghanis            |      |      |      |
|        | a) 5 Kg. & above      | 45   | 31   | 464  |
|        | b) Less than 5 Kg.    | 0    | 0    | -    |
|        | c) Total              | 45   | 31   | 464  |

Source: Based on 17<sup>th</sup> Quinquennial Livestock Census

## 4.7 Constraint Analysis

### 4.7.1 Agricultural Development Issues

The growth in agriculture is of paramount importance for the sustenance and well being of the large percentage of population who are dependent on agriculture in the district. The development issues have to address the issues of food security, livelihood security of the farm families and the overall sustainability of scarce natural resources the district is endowed with. The approach has to be multi - pronged and should not only focus on the short term gains but also the long term sustainability of the system as a whole.

In Coimbatore district for the past ten years, there is a deceleration of growth in agriculture. However, it is not uniform and there are areas that still hold promise for stimulating the growth. Studies confirmed that the sharp erosion of total factor

productivity in agriculture in Coimbatore district was on account of multiple factors relating to technology fatigue, soil fatigue, declining fertilizer response rate, depleting capital stock and agro-climatic aberrations.

The area, production and productivity of important crops that are considered to be critically important for the development of agriculture in Coimbatore district are discussed in the following sections. The crops identified for the implementation of development plan are Rice, Maize, Groundnut, Millets and Cotton. The area, production and productivity of these crops show a marked decline over a period of last ten years (1995-2004) except for the crop Maize which dictated by the market prices and introduction of high yielding varieties/hybrids resulted in higher area and production. The area, production and productivity of these crops are depicted in the figure.

#### **4.7.2 Rice**

Rice is the principal crop extensively cultivated in all the districts of Tamil Nadu state having a unique three-season pattern viz Kar/Kuruvai /Sornavari (April to July), Samba/ Thaladi/Pishanam (August to November) and Navarai/ Kodai (December to March). In Coimbatore district Paddy area is accounted for 2.22 per cent of the total cropped area during 05-06.

The area under paddy in Coimbatore district has drastically declined from 20,000 hectares to just about 8000 hectares in the past ten years (1996-2005). The production and productivity also showed similar decline for the same period. The area, production and productivity for the past ten years (1996-2006) are depicted in the figures.

#### **4.7.3 Groundnut**

In Coimbatore district, groundnut is cultivated under both irrigated and rainfed conditions. Irrigated ground nut is sown during the months of December and January where as the rainfed groundnut is sown during the months of April to August depending on the rainfall. The area, production and productivity of groundnut crop in the district are decreasing over the years. The production decline is offset to some extent by lesser reduction in productivity levels.

#### 4.7.4 Cotton

As a commercial crop different varieties of cotton are grown to the extent of 6,436 ha in Coimbatore district during the year 05-06. It accounts 1.93 per cent of the total area during 05-06. The Area, Production and yield rate of cotton are as follows.

| Year                |                                      | 05-06 | 04-05 |
|---------------------|--------------------------------------|-------|-------|
| Area (in ha)        |                                      | 6436  | 11547 |
| in terms of<br>lint | Production (in bales of 170 kg each) | 5710  | 14808 |
|                     | Yield rate (in Kg/ ha)               | 151   | 218   |

#### 4.7.5 Cholam

Jowar known as Cholam in Tamilnadu was grown in about 77,490 constituting 23.25 per cent of the total cropped area of the district 2005-06). Jowar is sown under rain-fed as well as irrigated conditions.

| Year                   | 05-06 | 04-05 |
|------------------------|-------|-------|
| Area (in ha)           | 77490 | 94888 |
| Production (in Tonnes) | 28383 | 32292 |
| Yield rate (in Kg/ha)  | 366   | 340   |

#### 4.7.6 Cumbu

Bajra known as Cumbu in Tamilnadu is generally sown under rain-fed conditions in the district. The area under the crop during 05-06 is 412 ha constituting 0.12 per cent of the total cropped area in the district.

| Year                   | 05-06 | 04-05 |
|------------------------|-------|-------|
| Area (in ha)           | 412   | 460   |
| Production (in Tonnes) | 745   | 865   |
| Yield rate (in Kg/ha)  | 1807  | 1881  |

#### 4.7.7 Maize

Maize is one of the crops under which area, production and productivity has been on the rise pushed by strong demand from poultry sector whose maize consumption needs are expected to be in the range of 8.21 million tonnes during 2008-09 season. Majority of the maize grown in Coimbatore district are under irrigated conditions

On the technology front, the core issues related to seeds. About 85 per cent of our farmers use farm-saved seed that lose its vigour to enhance the productivity over a period. Low seed replacement rate, uncertified seeds of doubtful quality sourced from diverse seed supply chain and poor quality of farm saved seeds are the important reasons for low productivity. There are high yield gaps between the varieties available in different regions. Combined with this is the decline in the role of public sector in seeds and its management. The State Seeds Corporation is reportedly not functioning efficiently and several seed farms are either defunct or being disposed off. Seed production chain from breeder seed to certified seed have serious gaps. Breeder seed is not multiplied into foundation and certified seed by the seed producing agencies.

The other important causes for decline in crop production response to the application of inputs and technology is the gradual degradation of soil, the key factor for sustaining agriculture. The land and water taken together constitutes the soil and there are problems associated with both these soil components. On the available land there is a serious concern on degradation of soil in the major food basket regions. The imbalanced fertilizer consumption, without taking into account the soil needs and soil health is not proving counter productive. Therefore, soil analysis has to be taken on priority to find the status of micronutrient and the requirement of fertilizers to supplement these deficiencies.

The problems faced on irrigation front has culminated into stress on water resources, falling water use efficiency, timely availability of water and increasing cost of irrigation. These factors are the consequences of falling investment in agriculture and

depreciation of capital stock in irrigation, besides the lack of awareness in farming communities to the aspects of conservation of natural resources and sustainable agriculture.

There are institutional issues linked to deceleration in agricultural growth and the foremost of these issues is the slackness in the delivery of technology to the farmers. The mission approach adopted for oilseeds and pulses had not yielded desired results, as evidenced by the increased dependence on import of edible oil and pulses. These missions should have greater flexibility and adoptability to different regions and crops.

There have been concerns on availability of not only the quality seeds but the quality inputs also. There are reports that nearly 75 per cent of pesticides used by farmers are of poor quality and are spurious. As a result, the crop losses due to pests are high, and the farming is becoming a risky, costly and less remunerative proposition.

#### **4.7.8 Needed Interventions**

For realizing the agricultural growth objectives of Coimbatore district, particularly from the crop husbandry segment, the inputs will play the most crucial role. The factor productivity of capital as well as labour has been diminishing. Besides, the cost of inputs has been increasing. This causes a serious impact on the profitability in agriculture. The Situation Assessment Survey conducted by the National Sample Survey Organisation (59th Round) revealed that 27 per cent of farmers found agriculture a non-profitable activity and as many as 40 per cent farmers opined that given an alternative, they would like to quit farming as a profession. To address these critical issues for development of agriculture in Coimbatore district, the input management would require focused attention on five core areas *viz.* **seeds, nutritional management, water management, chemicals and management of energy.**

#### 4.7.9 Seeds

1. Need for refocusing on quality seed development and production to close the gap between production and requirement and to **raise seed replacement rate** to 25per cent, 33per cent and 100per cent for self-pollinated crops, cross pollinated crops and hybrids. National level seeds corporations, State Seeds Corporations, seed farms of State Governments and Universities will have to undertake large scale seed production to meet the gap in demand and supply of seeds.
2. In addition to the supply of good quality and cost effective seeds, it would also be necessary to ensure proper practices to be adopted by the farmers prescribed for particular varieties. The assurance of quality of seeds assumes greater significance in view of predominant seed supply from private sources. This would also necessitate proper and effective regulatory mechanism. Aforesaid discussion on seed development and its availability to farmers does not undermine the role of **farmers as seed producer**. There are success stories in farm produce seeds also. The integration of farmers and farmers groups in seed multiplication programme needs promotion.

#### 4.7.10 Nutritional Management

3. The declining factor for productivity is partly attributed to the **soil de-gradation**, the main cause of that has been the accumulating nutritional deficiency over the years. One of the main factors for disturbed nutritional status of soil is the imbalance in the use of NPK in fertilizers. As already mentioned earlier, against the generalized recommended proportion of 4:2:1 of NPK, the aggregate national averages 7:2:1. There is a tendency of higher use of Nitrogen (urea) by the farmers and in several instances, the phosphate and potash is not at all used. The imbalanced use of fertilizers by the farmers may not be solely attributed to the lack of his awareness on the aspect of soil health and its nutrition balance. There is distorting role of policy and management of fertilizers. The price and

availability of Nitrogenous, Phosphates and Potash is also playing its role in disinclination of the farmers to use them in a balance manner. The subsidized pricing of Nitrogenous fertilizers and reported deficit in the production capability of Phosphatic and Potash fertilizers are also instrumental in disturbing the nutrition balance of the soil over the decades.

4. The balanced use of fertilizers, however, can not be generalized to the entire agrarian space. It would depend upon the soil health and extent of imbalance to supplement proper nutrient ingredient through fertilizers use. Further, the nutrients have complementary and supplementary role in the production and vegetative growth, since use of one nutrient depends on the other as well as other inputs and practices of use. The farmers, when used to apply fertilizers in dry form may not be conscious to adopt soluble practices prescribed in some imported fertilizers. Besides these nutrients, other mineral deficiency such as Gypsum and Carbon content in the soil, also affect the fertilizer use efficiency. **Therefore, the nutritional management should be one of the thrust areas.** For this purpose **soil testing, distribution of soil health cards to all the farmers and creating awareness about on farm nutrition management may need to be taken in mission mode** and efforts should be made to accomplish this in the very first year of the Plan so that its gains accrue in the subsequent plan period. This should also be made integral element of all the extension activities.

#### 4.7.11 Water

5. Water is the basic input for agricultural operations. The crop cycle depends upon weather cycle of rainfall along with that of temperature in different parts of the country. Though, the crop production in India is primarily rain dependent in terms of its acreage, the main production supply is from the irrigated areas. The irrigation is the single largest consecutive user of water attributing to 80 per cent of total water utilized. However, there are serious issues associated with water use

efficiency in agriculture, as water is becoming a scarce input. The greater entrepreneurship of farmers, supported by subsidized electricity for agriculture makes ground water exploitation a more convenient option for irrigation. This phenomenon had already become evident in recent years. Given this scenario, the judicious use of water for water resources for agriculture and other competing demand is the need of the hour. The subdued rainfall precipitation over the year and indiscriminate exploitation of water is reflecting on depleting ground water resources in many parts of the country. For production of one Kg. of rice, 3000 litres of water is required. For sustained agricultural production, it is necessary to evolve a well coordinated strategy to manage the use of water resources such that (i) both surface and ground water supplies are maintained at desired level, and (ii) the quality of land and water resources does not deteriorate with time. With very low water use efficiency, the scarcity of water resources is also increasing its cost of extraction. **Therefore, water budgeting and water use efficiency has to be given extra attention in the district plan.**

6. As minor irrigation schemes play a significant role in rainfed areas, priority may be given for better utilization of potential created through improved management systems (reduction in conveyance losses, micro irrigation and crop diversification).
7. Crop diversification (i.e., changes in cropping pattern) with more balanced and sustainable cropping systems should be taken up to over come problems of soil fatigue, vulnerability reduction in rainfed agriculture.

#### **4.7.12 Chemicals**

8. Like the use of micro-nutrients and water in agriculture, the chemicals are also used indiscriminately and un-judiciously. The use of un-prescribed pesticides in inappropriate doses is not only disturbing the soil conditions but is also destroying

the healthy pool of bio-control agents that normally co-exist with the vegetation. These Biocontrol agents are the friends of agriculture and hence need to be nurtured, cared and developed by reducing the reliance on chemical's use in agriculture. The importance of bio-fertilisers in sustainable agriculture/organic farming in particular, is well known along with the need for promotion of the cheaper and eco friendly plant nutrient supplements.

9. Considering the global concern of ill-effects of chemical pesticides, Integrated Pest Management (IPM), *inter alia*, aims at employment of alternate methods of pest control like cultural, mechanical and biological control in a compatible manner. The chemical control is resorted to when other control methods fail to provide desired results. It is ecologically safe and economical. It is noted that implantation of IPM itself is disintegrated as IPM component in different Plan schemes. Considering the importance of IPM, these fragmented elements need to be coordinated.

#### **4.7.13 Management of Energy**

10. One of the ways to enhance energy use efficiency is through farm mechanization. The farm mechanization is essential not only to save the energy but to transfer the energy efficiently for crop production. The substantial technological know-how is supposed to be available with different institutions dedicated to farm mechanization as well as with the agricultural universities and crop research institutions. There should not be constraint to have region and crop specific machinery of proven performance for their wide scale adoptability in the farming sector.

Absence of quality manufacturing of improved design of farm equipment in different parts of the state is proving to be an impediment in growth of farm mechanization. **Promotion of quality manufacturing of farm equipment and**

**implements in different parts of the state needs to be promoted.** State Agriculture Department also needs to be sensitized for extension of new technologies to farmers and also for obtaining feedback on new technologies required. These dimensions have to be given a special attention in the Plan.

#### **4.7.14 Marketing Infrastructure to be developed**

The availability of subsidy under the Government schemes for Cold storages/ godowns etc. may generate investments from the private sector. Infrastructure like Rural Godowns, Drying Yards, Agribusiness Centre are planned to be established under the Irrigated Agriculture Modernization and Water Bodies Restoration and Management (IAM WARM) Project in Coimbatore district under sub basin frame work of Aliyar and Palar. Initiatives on Agribusiness Development Facility is made under IAM WARM Project by Government of Tamil Nadu with World Bank Funds. Since Coimbatore city is the place known for diversification of commercial crops which would naturally attract investments on agro processing. For that, Agribusiness Development Facility funds will be useful for capacity building.

#### **4.8 Current Agricultural Development Programmes**

The list of current agricultural development programmes available in the district and the details on subsidy and fund allocation are given in the annexure

##### **4.8.1 To Promote Sales Through Regulated Markets by Farmer**

###### **1. Loan against Agricultural Warehouse Receipts**

To avoid distress sales when agricultural produce are low immediately after harvest, the farmers can store their produce in godowns and loans can be availed against warehouse storage receipts up to rupee one lakh can be availed as loan under the scheme marginal farmers and small farmers sanctioned 75per cent and 50per cent of to stored balance of agricultural produce at current market price. The interest charged is only 5per cent simple interest.

#### **4.8.2. Farmers Welfare Fund**

To encourage the farmers to sell their produce through regulated markets, farmers are provided accident insurance cover from the farmers welfare fund. The premium for accident insurances is paid by agricultural market committee and regulated markets. The indemnity is Rs. One lakh for snake bite death, Rs.75,000 when both hands or legs or eyes are lost while if the loss is one hand or leg or eye it will be Rs. 50,000. Also free health service is provided to farmers who sell their produce through regulated markets.

2. Farm produce drying yard promotion scheme

3. Integrated agriculture and water management scheme

#### **4.9. Agricultural Engineering Department Schemes**

- i. Subsidy for agricultural mechaneries used in water and soil conservation activities.
- ii. Minor irrigation development scheme.

Subsidy is provided for hire services of power sprayer, rock blasting and ground water availability detection tests.

#### **4.9.1. Western Ghats Development Scheme**

Under this scheme wasteland development, soil erosion, rainwater harvesting and groundwater recharge activities are promoted.

#### **4.9.2. Distribution of Agricultural Machinery at Subsidized Rate**

#### **4.9.3. Replacement of Old Irrigation Pumpsets with New Ones at Subsidies Rate**

#### **4.9.4. Soil and Water Erosion Management Scheme**

#### **4.9.5. NABARD Assisted Schemes**

#### **4.9.6. TN- IAMWARM Project Includes the Following Components**

- i. Drip irrigation
- ii. Sprinkler irrigation
- iii. PVC buried pipe laying
- iv. Farm mechanization
- v. Rain water harvesting structure
- vi. Micro – irrigation

#### 4.10 Sericulture Development Scheme

##### Schemes under Cooperative Department

Crop loan, medium term loan and self help group members of farm household are provided loan at 7per cent - 13per cent and 13per cent respectively.

##### Agricultural produce sales through cooperative banking societies – promotion scheme

Cooperative procurement @ Rs. 36.20 per quintal through agricultural cooperative societies.

#### 4.11 Horticulture Schemes

- i. Integrated Horticulture Development Programme
- ii. Soil and water Conservation scheme\
- iii. Micro irrigation – drip irrigation
- iv. National Horticulture Board schemes.

The details of subsidies are provided in the following text.

#### 4.12 Current Development Programmes in Coimbatore District

##### Department of Agriculture

##### Component

##### Details

##### 1. Seed Minikit Distribution

1.Pulses Minikit distribution

Subsidy 100per cent of the cost of the minikits.

Eligibility

All Farmers (preference will be given to small & marginal farmers)

## 2. Integrated Cereal Development Programme

|  |   |
|--|---|
| 1. Distribution of Paddy Certified seeds                     | Rs. 2/- per Kg. Subsidy   |
| 2. Distribution of Millet Certified seeds                    | Rs. 2/- per Kg. Subsidy   |
| 3. SRI Démonstration   | Rs. 2000/- per Ha. Subsidy  |
| 4. Farmers' Field School                                     | Rs. 17000/- per No.   |
| 5. Preseason campaigns                                       | Rs. 500/-per campaign.  |
| 6. Crop Production Demonstration<br>(Millet)Rs.30001 per Ha. |   |
| 7. Certified seed production                                 | Rs 5/- per Kg subsidy   |
| Eligibility  | All farmers (preference will be given to SF &MF;30 per cent flow to SC/ST farmers). |

## 3. Integrated Scheme on Oilseeds, Pulses, Oilpalm and Maize – ISOPOM

### a. Maize Development Programme

|                                      |  |
|--------------------------------------|--|
| 1. Maize Certified seed distribution | 30 per cent of the cost of seed  |
| 2. Maize Certified seed production   | Rs 5/- per Kg subsidy  |
| 3. Crop Demonstration                | Rs 4000/- per ha or 50per cent of the cost of inputs   |
| 4. LP.M Demonstration (FFS)          | Rs.22680/-demonstration  |
| 5. Minikit Distribution              | Subsidy 100 per cent   |
| 6. Farm implements Distribution      | Rs 2000/no or 50 per cent of the cost of inputs.   |
| Eligibility                          | All Maize growing farmers (preference will be given to small & marginal farmer 25 per cent flow to SC/ST farmers). |

**b. Pulses Development Scheme**

|   |  |
|---|--|
| 1. Pulses Certified seed distribution   | 30 per cent of the cost of seed  |
| 2. Pulses Certified seed production     | Rs 5/- per Kg subsidy  |
| 3. I.P.M Demonstration (FFS)            | Rs.22680/-demonstration  |
| 4. Formation of Pulses Commodity groups | Rs.10000/- group.<br>50 per cent of the cost of equipment  |
| 5. Plant protection Equipments          | Rs 500/per <i>ha</i> or 50 per cent of the cost.   |
| 6. Gypsum distribution                  | Rs 250/per <i>ha</i> or 50 per cent of the cost  |
| 7. NPV Solution distribution            | Rs 2000/per <i>ha</i> , or 50 per cent of the cost of  |
| 8. Block Demonstration                  | inputs.  |
| Eligibility                             | All Pulse growing farmers (preference will be small & marginal farmer 25 per cent flow to SC/ST farmers) |

**c.Oilseeds Production programme**

|                                 |  |
|---------------------------------|--|
| 1. Certified seed distribution  | 30 per cent of the cost of seed  |
| 2. Certified seed procurement   | Rs 5/- per Kg subsidy  |
| 3. Block Demonstration          | Rs.4000/- <i>ha</i> or 50 per cent of the cost of inputs   |
| 4. Bio-fertilizers distribution | Rs.50/- per <i>ha</i> or 50 per cent of the cost   |
| 5. I.P.M Demonstration          | Rs 1500/ no.   |
| 6. Sprinkler Unit Demonstration | Rs 10000/- unit or 33 per cent of the cost of unit for Big farmers.<br>Rs 15000/- unit or 50 per cent of the cost of unit for SC/ST, Women and SF,MF |
| 7. Plant Protection Equipments  | Rs'2000/no or 50 per cent of the cost  |
| Power operated sprayers         | Rs 800/no or50 per cent of the cost  |
| Hand operated sprayers          |  |
| 8. Farmers training             | Rs 15000/- training (50 farmers)   |
| Eligibility                     | All oil seed growing farmers   |

**4. Technology Mission /Cotton (Mini Mission II)**

|   |  |
|---|--|
| 1. Cotton Certified seed distribution     | Rs.20/- per kg   |
| 2. LP.M Demonstration (FFS)               | Rs.17,000/-per no  |
| 3. Cotton certified seed production       | Rs15/- per kg subsidy.   |
| 4. Cotton foundation seed production      | Rs50/- per kg subsidy.   |
| 5. Farm implements Demonstration centre   | Rs,1,00,000/- centre   |
| 6. NPV solution distribution              | 50 per cent of the cost or Rs.300/- ha   |
| 7. Pheromone trap distribution            | 50 per cent of the cost or Rs.500/- ha   |
| 8. Plant protection equipments            | Rs 1500/no or 50 per cent of the cost.   |
| Power operated sprayers                   |  |
| Hand operated sprayers                    | Rs 700/no or 50 per cent of the cost.  |
| 9. Sprinkler Irrigation unit distribution | Rs 10000/ unit or 33 per cent cost of unit for big farmers                                       |
|   | Rs 15000/ unit or 50 per cent cost of unit for SF,MF women, and SC/ST farmers.                   |
| 10. Drip Irrigation units distribution    | Rs 25000/ha or 50 per cent of the cost of unit.  |
| Eligibility                               | All cotton growing farmers (preference will be given to SF&MF 30 per cent flow to SC/ST farmers) |

**5.Sugarcane Development Scheme**

|  |   |
|--|---|
| 1. Release of Sugarcane parasites      | Rs.10/-ha subsidy   |
| 2. Fertigation through Drip irrigation | Rs.70000/-per Ha. Total cost Rs(12500/- Sugar mill contribution |
|  | Rs 25000/- Govt. contribution                                   |
|  | Rs 32500/- Farmers contribution)                                |
| Eligibility                            | All sugarcane growing farmers 30per cent flow to SC/ST farmers  |

|                                       |          |           |
|---------------------------------------|----------|-----------|
| <b>6.Crop Yield Competition (CYC)</b> | I Prize  | Rs.25000/ |
| Paddy &Groundnut (state level)        | II Prize | Rs.15000/ |
| Paddy &Groundnut (district level)     | I Prize  | Rs. 8000/ |
|                                       | II Prize | Rs. 4000/ |
| Other crops (state level)             | I Prize  | Rs. 8000/ |
|                                       | II Prize | Rs. 4000/ |

Eligibility SF/MF farmers

### 7.Coconut Seedlings Distribution

|                        |                   |
|------------------------|-------------------|
| Coconut Tall Seedlings | Rs. 12/- Seedling |
| Coconut TxD Seedlings  | Rs.20/- Seedling  |
| Coconut DxT Seedlings  | Rs. 75/- Seedling |
| Eligibility            | All farmers       |

### 8. Release of Parasite to Control Coconut Black headed Caterpillar

|             |                            |
|-------------|----------------------------|
| Subsidy     | Rs35/-Ha - Service charges |
| Eligibility | All farmers                |

### 9.Procurement of Certified Seeds from Seed Farm Farmers

|                                   |  |
|-----------------------------------|--|
| Paddy Certified Seeds             | Rs.2/- per Kg as incentive   |
| Millets Certified Seed            | Rs.2/- per Kg as incentive   |
| Pulses Certified Seeds('F'seeds)  | Rs.2/- per Kg; as incentive  |
| Pulses Certified Seeds('c' seeds) | Rs.1/- per Kg as incentive   |
| Groundnut Certified Seeds         | Rs.2/- per Kg as incentive   |
| Gingelly Certified Seeds          | 5per cent of Local market rate                                       |
| Castor Certified Seeds            | as incentive   |
| Eligibility                       | 20 per cent of Local market rate<br>as incentive<br>All farm farmers |

**10. Release of Parasite to Control Sugarcane Internode Borer**

|             |                                  |
|-------------|----------------------------------|
| Subsidy     | Rs17.50/-per ha. Service charges |
| Eligibility | All Sugarcane growing farmers    |

**11. Soil Sample Analysis & Irrigation water Analysis**

|                              |   |
|------------------------------|---|
| Major nutrient analysis      | Concessional Rate Rs5/- Sample  |
| Micro nutrient analysis      | Concessional Rate Rs5/- Sample  |
| Irrigation water analysis    | Concessional Rate Rs10/ Sample  |
| Eligibility                  | All farmers   |
| For all schemes Except 7& 11 | Assistant Agricultural Officer/<br>Agricultural Development Officer at<br>Block level |
| Contact Officer              | Asst. Director of Agriculture   |
| Controlling Officer          | District Soil testing laboratory  |
| For scheme 11                | Mobile Soil testing laboratory  |
| Contact Officer              | Block level agri-extension center.  |
| Controlling officer          | Concerned Agrl. Chemist, Soil testing   |
| For Scheme 7                 | Commissioner of Agriculture   |
| Controlling officer          | Joint Director of Agriculture   |

**Other Programmes**

Jatropha, Water shed development and Comprehensive wasteland development are also being implemented during this year.



**Table 4.19 Implementation of Development Schemes – Financial Target and Achievements**

| <b>Paddy and Minor millets Seed Development Plan- Lakhs</b> |                 |                 |                          |
|---|-----------------|-----------------|--------------------------|
|   | <b>Allotted</b> | <b>Achieved</b> | <b>Per cent achieved</b> |
| 2401-00-789-JP  | 1120400         | 775834          | 70                       |
| 2401-00-789-JA  | 1279000         | 771100          | 60                       |
|   | 2399400         | 1546934         |                          |
| <b>Plant Protection- Lakhs</b>                              |                 |                 |                          |
| Common 2401-00-CH-107-JA                                    | 5.293           | 4.874           | 91.1                     |
| SCP 2401-00-CH-789-JC                                       | 1.613           | 1.514           | 93.86                    |
|   | 8.906           | 6.338           | 91.78                    |
| 2401-00-105-Jp Production of Pleurotus kits                 | 1.2             | 1.2             |                          |

| <b>Pulses Development Programme</b> |                 |                  |
|-------------------------------------|-----------------|------------------|
|                                     | <b>Allotted</b> | <b>Achieved</b>  |
| 2401-00-103-AC                      | 2431600         | 2308549          |
| 2401-00-789-JP                      | 541600          | 558709           |
|                                     | 2973200         | 2867258          |
| <b>Cotton Development- Lakhs</b>    |                 |                  |
| 2401-00-108-AD                      | 827000          | 551850           |
| <b>Coconut development</b>          |                 |                  |
| Increasing area                     | 440             | -                |
| Demo                                |                 | 15.75            |
| Bio-fertilizers                     |                 | 0.2              |
| Removal of diseased trees           |                 | 6.25             |
| Drip irrigation                     | 747             | 13.29            |
| <b>Seed village</b>                 |                 |                  |
| <b>Distribution</b>                 |                 | <b>Financial</b> |
| Paddy                               |                 | 0.85             |
| Oilseeds                            |                 | 0.7              |
| Pulses                              |                 | 1.41             |
| <b>Training</b>                     |                 |                  |
| Paddy                               |                 | 0.3              |
| Oilseeds                            |                 | 0.3              |
| Pulses                              |                 | 0.45             |

## CHAPTER - V

### ALLIED SECTORS

#### 5.1 Horticulture

##### 5.1.1 Introduction

Tamil Nadu has been divided into five Agricultural Zones, based on the agro - climatic conditions and the soil profile. Coimbatore district falls under Zone-II. It is reported that fruits, vegetables, flowers, medicinal plants, horticulture crops are cultivated in the district covering an area of 52011 ha. The major plantation crops grown are Coconut, Tea, Coffee, Areca nut and Cardamom. Cashew and curry leaf are also grown in a few pockets. Fruits, vegetables and flowers are the major horticulture crops.

Coimbatore has the largest area under coconut cultivation with 1.016 lakh ha and accounted for 28.2 percent of the total area under cultivation in the state followed by Thanjavur, Kanyakumari, Dindigul and Vellore districts. It has also accounted for maximum production of coconut in the state. Next, tea is grown in 11035 ha, mainly in the Anamalai block. Its production is around 99297 Metric Tonnes of tea with a productivity of 9 tonnes / hectares during 2005-06.

Arecanut is cultivated in Karamadai and Thondamuthur blocks in 1577 ha as a pure crop [or] as an inter-crop in coconut. Cocoa cultivation has also been started on a small scale as an intercrop in the coconut plantations with area coverage of 330 ha. Mango, banana, guava, lime, papaya and grapes are some of the major fruit crops grown in the district in about 9894 ha. Banana is also cultivated quite extensively in the district and has covered 4983 ha with production of 1,45,880 MT. Mango cultivation is gaining impetus in this district particularly in following blocks Madukkarai, Pollachi, Udumalpet and Anamalai.

The district occupies second position in the State in area under grapes with 386 hectares and an estimated production of 9000 Metric Tonnes of fruit. Thondamuthur

block is the main area of its cultivation. Vegetable crops like Tapioca, tomato, onion, brinjal, bhendi, sweet potato, beans, cabbage, beetroot and pumpkin are some of the major vegetables grown in about 9116 hectares in the district. The Spices like chillies, coriander, tamarind, cardamom, pepper, ginger, turmeric and cloves are also grown in about 8067 hectares.

Flower crops like rose, jasmine, tuberose, chrysanthemum, etc. are grown in an area of 1007 hectares in the areas like Periyayanayakan palayam, S.S. Kulam, Thondamuthur, Palladam and Sulur are the promising blocks for floriculture.

Area under lemon grass is about 86 hectares; the district has got the second highest area under the crop in the mulberry which is main source for sericulture. The total area under mulberry cultivation has gone up to 433.38 hectares during 2004-05 and new variety namely mulberry V-I, which has a potential to produce green leaf yield up to 60 million tonnes/hectares per year, has been introduced in the district and is gaining popularity. The existing grainage in the district produces about 5 lakh diseases free laying (DFL) per year. During 2005-06, 4.52 lakh DFLs were supplied by the department. The production of cocoons was 267 million tonnes.

### **5.1.2 Availability and Gaps in Infrastructure and Support Services**

#### **Infrastructure and support services available**

The Department has been extending extension support to the farmers. It has good network of support in each block. In fact, they are able to make available seedlings/nursery plants for cultivation of various horticulture crops by farming community. The Western Ghats Development Programme is under implementation and covers the entire Coimbatore district.

The entire produce of tea plantations is processed in the district factories. The State Horticultural Farms at Kallar and Anaikatty produce 5.59 lakh plant materials for fruit plants, ornamental plants, forest plants, spices and plantation crops for supplying to

growers. The Tamil Nadu Agricultural University and the Forest Genetic and Tree Breeding Institute at Coimbatore and the Forest College & Research Institute in Mettupalayam are the important Government Institutions which also supply quality plant material. Some private companies like South India Viscose and SPIC Agro Bio-Tech also supply quality plant materials. In addition, 21 private nursery units are registered with the Department, of Horticulture. Two State Horticulture farms are situated at Anaikattai and Kallar for supplying seedlings to the farmers. It is estimated that during the current year 40000 numbers of tall variety and 20000 numbers of hybrid variety coconut seedlings are required. While the tall variety is sold at Rs. 12 per plant and the hybrid variety is sold Rs.20 per plant by the department.

Most of the mango growers auction their orchards to private contractors. Some private companies like 'Ruchi' make use of the local production. The Grape Growers Association at Thondamathur and the Vegetable Growers Association at Periyanyakan palayam help the producers of fruits and vegetables to market their produce. Collection centers for onion are located at Thondamathur, Pollachi, Negamam and Coimbatore. Similarly, collection centers for tomato, coconut, potato and curry leaves are located at Kinathukadavu, Anamalai, Mettupalayam and Konemadai, respectively.

In view of the depleting groundwater-level and scarcity of surface water, the cultivators are being encouraged to install water-saving devices such as drip system for coconut plantation and other horticultural plants.

Under Sericulture, a major commercial cocoon marketing centre is located in Coimbatore. About 451 MT of cocoons are traded every year in this market and the average price offered was Rs 146 per Kg. There are 30 reeling units registered with the Cocoon market. Of which, 21 are in the private sector.

As mentioned, the department has been implementing the National Horticulture Mission (NHM) and has set up a district level committee with District Collector as

chairman, which is monitoring the implementation of NHM scheme. The various components included in the NHM are production of planting materials, establishment of new gardens, rejuvenation / replacement of senile plantation, creation of water resources, promotion of precision farming, promotion of organic farming, pollination support through bee-keeping and post harvest management. The State government has set a target of 150 units of drip/sprinkler irrigation system.

Under the centrally sponsored scheme, support is available for post harvest handling of fruits, micro irrigation with 25% subsidy for drip irrigation and also for sprinkler irrigation. The physical target to be covered was 65 under each of these systems. The Micro Irrigation programme which has been launched during 2005-06 was likely to cover an area of 1690 hectares under drip and sprinkler irrigation

### **Infrastructure Likely to be Developed in the Current Year**

The National Horticulture Mission is launched this year with an outlay of Rs 274 lakhs. Some of the important components having a bearing on the development of horticulture are as under:

| <b>Component</b>                               | <b>Annual Target (Ha)</b> |
|--|---------------------------|
| Production of Planning material-Private sector | 4                         |
| Vegetable seed production                      | 25                        |
| New Gardens- Fruits (Aonla)                    | 700                       |
| Fruits (Banana)                                | 500                       |

Further, during the current year the physical target under Micro Irrigation is 4500 hectares. The department has also worked out crop specific strategies such as distribution of banana (TC varieties), adoption of improved technologies, distribution of grafts through NHM and other schemes, which will ensure coverage of area expansion under different crops. One of the crops namely Amla is being focused by the department for expansion. The department conducted a training programme for the farmers in the cultivation of amla crop. The potential crops to be focused are Aonla, Flowers and Chillies.

### **Infrastructure Planned for the Future**

The department has chalked out a road map for development of horticulture for the next five years. The following strategies are to be adopted:

- To bring the fallow land under cultivation
- Adopting drip irrigation for perennial crops as well as for vegetable crops (Bhendi to be stepped up from 900 Hectares in 2007-08 to 1200 Hectares in 2011-2012)
- Distribution of hybrid vegetable seeds through department under various schemes  
Creation of awareness about TC banana (To increase from 6300 Hectares in 2007-08 to 7000 Hectares in 2011-2012)
- To promote Cocoa cultivation as an intercrop in Coconut plantation ( 50 hectares in 2007-08 to 250 Hectares by 2011-2012)
- Creation of awareness about post harvest technology for fruits and vegetables

#### **5.1.3 Other Issues**

There is a need for greater focus on the post harvest technology financing of horticultural crops. In order to optimize the income from Coconut, farmers may be encouraged to take inter cropping of crops in the coconut plantations. TNAU and department may also set up demonstration plot in association with Coconut Development Board to create better awareness among farmers so that they are educated in the inter culture in coconut garden.

The Government of India has notified promotion of medicinal and aromatic plants as a thrust area and set up the National Medicinal Plant Board (NMPB) at the national level. State Governments have set up State Medicinal Plant Board (SMPB) at the state level. The State and Central Government have accorded priority to medicinal and aromatic plants while setting up Agriculture Export Zones (AEZ). A credit linked subsidy scheme is in operation through NMPB and SMPB. The subsidy assistance will

be to the extent of 50 per cent of cost of cultivation for small and marginal farmers (operational land area below 2 hectares.), 40 per cent of cost of cultivation for medium farmers (2-10 hectares) and 30 per cent for large farmers (more than 10 hectares).

**Table 5.1 Cropping pattern in Coimbatore district**

(Area in ha.)

| S.No | Particulars of crops  | 2006-07   |              | Total area | Productivity per hectare (in Kilo Grams) |
|------|-----------------------|-----------|--------------|------------|--|
|      |                       | Irrigated | Un-irrigated |            |  |
| 1    | Banana                | 8055      |              | 8055       | 49104                                    |
| 2    | Mango                 | 1898      | 1906         | 3804       | 1910                                     |
| 3    | Jack fruit            | 17.71     | 5.10         | 22.81      | 12346                                    |
| 4    | Guava                 | 125.17    | 50.57        | 175.74     | 10904                                    |
| 5    | Grapes                | 287.80    |              | 287.80     | 19130                                    |
| 6    | Sapota                | 417.05    | 24.56        | 441.61     |  |
| 7    | Papaya                | 199.50    |              | 199.50     |  |
| 8    | Pomegranate           | 55.33     | 10.23        | 65.56      |  |
| 9    | Orange                | 4.10      | 5.44         | 9.54       | 1962                                     |
| 10   | Lemon                 | 45.05     | 3.52         | 48.57      | 2523                                     |
| 11   | Sathukudi             | 1.40      |              | 1.40       |  |
| 12   | Amla                  | 318.45    | 76.15        | 394.60     |  |
| 13   | Narthai               | 8.10      |              | 8.10       |  |
| 14   | Cashew nut            | 174.87    | 127.90       | 302.77     | 378                                      |
| 15   | Water melon           | 21.85     | 34.49        | 56.34      |  |
| 16   | Naval                 | 2.18      | 1.30         | 3.48       |  |
| 17   | Seetha                | 0.95      |              | 0.95       |  |
| 18   | Turmeric              | 2339.12   |              | 2339.12    | 7639                                     |
| 19   | Tamarind              | 75.93     | 878.62       | 954.55     | 5858                                     |
| 20   | Arecanut (cured nuts) | 1556.10   |              | 1556.10    | 2872                                     |

Table 5.1 Contd....

(Area in ha.)

| S.No | Particulars of crops | 2006-07   |              | Total area | Productivity per hectare (in Kilo Grams) |
|------|----------------------|-----------|--------------|------------|--|
|      |                      | Irrigated | Un-irrigated |            |  |
| 21   | Cardamom             |           | 869.20       | 869.20     | 78                                       |
| 22   | Chillies             | 1244.30   | 87.80        | 1332.10    | 568                                      |
| 23   | Pepper               | 2.34      | 126.00       | 128.34     | 197                                      |
| 24   | Nutmeg               | 4.15      |              | 4.15       |  |
| 25   | Curry leaves         | 1357.40   | 0.60         | 1358       |  |
| 26   | Mint                 | 4.83      |              | 4.83       |  |
| 27   | Coriander            | 223.42    | 1861.60      | 2085.02    | 311                                      |
| 28   | Tapioca              | 829.99    | 17.56        | 847.55     | 38211                                    |
| 29   | Yam                  | 6.26      |              | 6.26       |  |
| 30   | Beet root            | 474.10    |              | 474.10     |  |
| 31   | Karunai              | 0.55      |              | 0.55       |  |
| 32   | Onion                | 2366.13   | 2366.13      | 2366.13    | 11623                                    |
| 33   | Brinjal              | 681.13    | 41.10        | 722.23     | 11775                                    |
| 34   | Bhendi               | 523.25    |              | 523.25     | 9364                                     |
| 35   | Lablab               | 95.96     | 16.70        | 112.66     |  |
| 36   | Cabbage              | 3.5       |              | 3.50       | 53426                                    |
| 37   | Tomato               | 3161.46   | 1685.19      | 4846.64    | 10503                                    |
| 38   | Pumpkin              | 662.36    | 364.32       | 1026.68    |  |
| 39   | Snake gourd          | 124.28    | 0.55         | 124.83     |  |
| 40   | Ribbed gourd         | 75.95     | 0.70         | 76.65      |  |
| 41   | Bottle gourd         | 30.16     | 1.50         | 31.66      |  |
| 42   | Bitter gourd         | 177.34    |              | 177.34     |  |
| 43   | Ash gourd            | 78.00     | 8.10         | 86.10      |  |
| 44   | Cucumber             | 37.54     | 2.03         | 39.57      |  |
| 45   | Beans                | 19.82     | 0.41         | 20.23      |  |
| 46   | Karamani             | 99.50     | 2.56         | 102.06     |  |

Table 5.1 Contd....

(Area in ha.)

| S.No | Particulars of crops      | 2006-07   |              | Total area | Productivity per hectare (in Kilo Grams) |
|------|---------------------------|-----------|--------------|------------|--|
|      |                           | Irrigated | Un-irrigated |            |  |
| 47   | Drumstick                 | 32.65     | 9.68         | 42.33      |  |
| 48   | Cauliflower               | 84.53     |              | 84.53      |  |
| 49   | Raddish                   | 11.21     |              | 11.21      |  |
| 50   | Greens –<br>Mulai Keerai  | 64.29     |              | 64.29      |  |
| 51   | Kothavarai                | 73.29     | 2.25         | 75.54      |  |
| 52   | Kovakai                   | 4.95      |              | 4.95       |  |
| 53   | Greens -<br>Agathi Keerai | 34.79     |              | 34.79      |  |
| 54   | Chow chow                 | 2.32      |              | 2.32       |  |
| 55   | Coconut<br>(Nuts/ha.)     | 101541    |              | 101541     | 10547                                    |

Source: G return book 2007-08, Joint Director of Agriculture,  
Coimbatore & Season and Crop Report, Government of Tamil Nadu.

#### 5.1.4 Ongoing Schemes- Department of Horticulture

Horticulture has got a very good scope in Coimbatore District. Based on the potentiality available the Department of Horticulture is implementing the following schemes.

##### 1. Integrated Horticulture Development Scheme:

Under this scheme, Fruit plants, flower crops and vegetable seeds will be distributed at 50% subsidy rate.

##### 2. Horticulture Development under Western Ghats Development Programme:

Under this scheme, Fruit Plants, Plantation Crops, Plant Protection chemicals, Vegetable seeds, Fertilizers and drip / sprinkler system , implements and sprayers will be distributed at 25% Subsidy rate.

**3. National Horticultural Mission:****Table 5.2 Plantation Infrastructure & Development**

|  | <b>Unit cost</b>    | <b>Pattern of assistance</b>                             |
|--|---------------------|--|
| 1. Production of planting materials                        |                     |  |
| a. Public sector   |                     |  |
| Model nursery (4 Ha.)                                      | Rs.18.00 lakhs/unit | Maximum of Rs.18.00 lakhs per nursery                    |
| ii Small nursery (1 Ha.)                                   | Rs.3.00 lakhs/unit  | Maximum of Rs.3.00 lakhs per nursery                     |
| iii) Rehabilitation of existing tissue culture units       | Rs.8.00 lakhs/unit  | Maximum of Rs.8.00 lakhs per nursery                     |
| b. Private sector  |                     |  |
| i Model nursery (4 Ha.)                                    | Rs.18.00 lakhs/unit | 50% of cost limited to Rs 9.00 lakhs per nursery         |
| ii) Small nursery (1 Ha.)                                  | Rs 3.00 lakhs/unit  | 50% of cost limited to Rs 1.50 lakhs per nursery         |
| iv) Vegetable seed production                              |                     |  |
| a) Public sector   | Rs 50,000/ha        | 100% of the total cost                                   |
| b) Private sector  | Rs 50,000/ha        | 50% of the total cost subject to maximum of Rs.25000/ ha |
| v) Seed Infrastructure Public sector                       |                     |  |
| i) Drying platform, storage bin, packaging unit, equipment | Project based       | 100% of cost   |
| 2. Establishment of new Gardens                            |                     |  |
| i) Fruits (Perennials)                                     |                     | 75% of cost subject to maximum of Rs22,500/ha            |
| ii Fruits (Non-Perennials)                                 | Rs.30,000/ha        | 50% of cost subject to maximum of Rs15000/ha             |

**Table 5.2 Contd....**

|   | <b>Unit cost</b> | <b>Pattern of assistance</b>                     |
|---|------------------|--|
| iii)Flowers                               |                  |  |
| A) Cut flowers                            |                  |  |
| a. Small & Marginal farmers               | Rs.70,000/ha     | 50% of cost subject to max. of Rs.35000/ha       |
| b.)Other farmers                          | Rs.70,000/ha     | 33% of cost subject to max. of Rs.23100/ha       |
| 8) Organic Farming.                       |                  |  |
| i Adoption of organic farming             | Rs.20,000/ha     | 50% of cost subject to maximum of Rs.10,000/ha   |
| ii Vermi-compost units                    | Rs.60,000/unit   | 50% of cost subject to maximum of Rs.30,000/unit |
| 9) HRD including Horticulture institute   |                  |  |
| a)Training to Technical Officers          | Project based    | 100% assistance                                  |
| b)Training to Extn. Functioneries         | Project based    | 100% assistance                                  |
| c) Training to Farmers                    | Project based    | 100% assistance                                  |
| 10)Pollination support through beekeeping | Rs 1,600/ colony | 50% of cost subject to maximum of Rs.800/ colony |

**B.Post Harvest Management**

|                                | <b>Unit cost</b>   | <b>Pattern of assistance</b>       |
|--------------------------------|--------------------|------------------------------------|
| 1.Pack house                   | Rs. 2.5 lakh/ unit | 25% of the capital cost of project |
| 2.Cold storage units           | Rs. 2.crore / unit | 25% of the capital cost of project |
| 3.Refrigerated Vans/Containers | Rs. 24 lakh/ unit  | 25% of the capital cost of project |
| 4.Market intelligence          | Project based .    | Project based                      |
| 5.Buy back intervention        | Project based      | Project based                      |

|  |               |  |
|--|---------------|--|
| C. Mission Management  |               |  |
| i) State & District Mission Structure including additional manpower & project preparation cost | Project based |  |
| ii) Support to cooperatives for infrastructural requirement (TANHOPE)                          | Project based |  |
| iii) Institutional strengthening, hire/purchase of vehicle, hardware/software                  | Project based |  |
| iv) Technical Support Group (TSG)  | Project based |  |
| v) Collaboration with International agencies like FAO, World Bank etc.,                        | Project based |  |

Source : G return book 2007-08, Joint Director of Agriculture, Coimbatore & Season and Crop Report, Government of Tamil Nadu.

### 5.1.5 Schemes 2007-2008

#### Particulars

Integrated Horticulture Development Scheme – IHDS

National Horticulture Mission – NHM

Micro Irrigation Scheme – MI

Western Ghats Development Programme – WGDP

Irrigated Agriculture Modernisation & Water – Bodies Restoration and Management Project – IAMWARM Scheme

**Table 5.3 Integrated Horticulture Development Scheme - 2007-2008**

|             |                    | <b>Target</b>  | <b>Achievement</b> | <b>Target</b> | <b>Achievement</b> |
|-------------|--------------------|----------------|--------------------|---------------|--------------------|
| <b>I</b>    | <b>Fruits</b>      |                |                    |               |                    |
|             | Mango              | 16             | 21.05              | 0.32          | 0.431              |
|             | Sapota             | 17.5           | 20.06              | 0.84          | 0.963              |
|             | Guava              | 16.5           | 18.04              | 0.362         | 0.372              |
|             | Jack               |                | 0.5                |               | 0.013              |
|             | Pomogranate        |                | 0.75               |               | 0.057              |
|             | <b>Total</b>       | <b>50</b>      | <b>60.9</b>        | <b>1.522</b>  | <b>1.836</b>       |
| <b>II</b>   | <b>Vegetables</b>  |                |                    |               |                    |
| 1.          | Tomato(PKM1)       | 105            | 105                | 0.180         | 0.190              |
| 2.          | Tomato (Hybrid)    | 53             | 53                 | 1685          | 1.472              |
| 3.          | Shendi (Hybrid)    | 46             | 46                 | 2.381         | 1.961              |
| 4.          | Beetroot           | 13             | 13                 | 0.990         | 1.010              |
| 5.          | Gourds             | 44             | 44                 | 0.225         | 0.315              |
| 6.          | Greens             | 74             | 74                 | 0.050         | 0.243              |
| 7.          | Annual Moringa     | 5              | 5                  | 0.038         | 0.038              |
| 8.          | Aadipattam seeds   | 26             | 26                 | 0.031         | 0.120              |
|             | <b>Total</b>       | <b>366</b>     | <b>366</b>         | <b>5.580</b>  | <b>5.349</b>       |
| <b>III.</b> | <b>Others</b>      |                |                    |               |                    |
| 1.          | Nutmeg             | 32.625         | 26                 | 0.522         | 0.416              |
| 2.          | Pepper             | 2              | 2                  | 0.044         | 0.044              |
| 3.          | Coffee             |                | 0.25               |               | 0.010              |
| 4.          | Clove              |                | 3                  |               | 0.048              |
| 5.          | Cocoa              |                | 0                  |               | 0.001              |
|             | <b>Total</b>       | <b>34.625</b>  | <b>31.25</b>       | <b>0.566</b>  | <b>0.519</b>       |
|             | <b>Grand Total</b> | <b>450.625</b> | <b>458.15</b>      | <b>7.668</b>  | <b>7.704</b>       |

Source : Records of the Office of the  
Deputy Director of Horticulture, Coimbatore

**Table 5.4 National Horticulture Mission 2007-2008  
Progress report as on 31.03.2008**

| Sl. No. | Components   | Physical        |             | Financial |             |
|---------|--|-----------------|-------------|-----------|-------------|
|         |  | Target          | Achievement | Target    | Achievement |
| 1.      | Establishment of new gardens (ha)                                    |                 |             |           |             |
|         | i-a. Fruits (Perennials) – Normal planting - Amla 1 year             | 250             | 250         | 28.125    | 28.125      |
|         | Amla – II year maintenance Perennial - @ Rs.4500/ha                  | 405<br>(314.75) | 314.75      | 18.225    | 14.164      |
|         | Amla – III year maintenance Perennial - @ Rs.6750/ha                 | 490<br>(240.75) | 240.75      | 33.075    | 16.250      |
|         | Mango – I Year @ Rs.11250/ha   | 100             | 100         | 11.250    | 11.250      |
|         | ii. Fruits (Non- Perennials) – Banana @ Rs.7500/ha                   | 1135            | 1135        | 85.125    | 85.125      |
|         | Sub Total  | 350             | 2040.5      | 175.80    | 154.914     |
|         | iii. Flowers   | 25              | 25          | 3.00      | 3.000       |
|         | iv. Spices   | 190             | 190         | 21.375    | 21.375      |
|         | v. Plantation crops including coastal horticulture                   | 800             | 431         | 45.000    | 24.244      |
| 2.      | Rejuvenation / Replacement of sterile plantation Mango @ Rs.15000/ha | 50              | 50          | 7.5000    | 7.500       |
| 3.      | Creation of water resources  | 8               | 17          | 80.000    | 80.000      |
| 4.      | Protected cultivation  |                 |             |           |             |
|         | 1. Green house (Hitech)  | 101500          | 0           | 284.775   | 250.250     |
| 5.      | Promotion of INM/IPM   | 1200            | 1200        | 12.000    | 12.000      |
| 6.      | Organic Farming  |                 | 2           | 63.000    | 63.000      |
| 7.      | Pollination support through bee keeping                              | 2500            | 2100.5      | 963.550   | 616.983     |

Source : Records of the Office of the Deputy Director of Horticulture  
Coimbatore

**Table 5.5 IAMWARM Scheme - Aliyar Sub-basin Progress as on 31.3.2008**

| S. No. | Name of the Component   | Target  |             | Achievement |              | Remarks  |
|--------|-------------------------|---------|-------------|-------------|--------------|--|
|        |                         | In (ha) | Rs.in lakhs | In Nos      | Rs. in lakhs |  |
| A      | Fruits                  |         |             |             |              |  |
| 1.     | Banana                  | 150     | 11.25       | 136.5       | 10.223       | 13.5ha converted to Nutmeg since demand was high   |
|        | Total                   | 150     | 11.25       | 136.5       | 10.223       |  |
|        | High Density Planting   |         |             |             |              |  |
| 2.     | Mango                   | 15      | 3.345       |             |              | Since farmers are not willing to take up Mango planting covered under Nutmeg   |
| 3.     | Banana                  | 50      | 18.75       | 50          | 15.397       |  |
|        | Total                   | 215     | 33.345      | 186.5       | 25.62        |  |
| B.     | Vegetables              |         |             |             |              |  |
| 1.     | Hybrid – Tomato         | 25      | 3.75        | 22          | 1.171        |  |
| 2.     | Gourds                  | 25      | 3.75        | 28          | 3.011        |  |
|        | Total                   | 50      | 7.5         | 50          | 4.182        |  |
| C.     | Spices                  |         |             |             |              |  |
| 1.     | Chillies                | 10      | 1.125       | -           | -            | chillies target covered under Nutmeg since farmers are not willing to take up chillies   |
| 2.     | Nutmug                  | 50      | 5.625       | 98.5        | 7.43         |  |
|        | Total                   | 60      | 6.75        | 98.5        | 7.43         |  |
| D.     | Plantation Crops        |         |             |             |              |  |
|        | Cocoa                   | 200     | 11.25       | 200         | 7.204        |  |
|        | Crop Total              | 525     | 58.845      | 535         | 44.436       |  |
| E      | Other items             |         |             |             |              |  |
| 1.     | Poly house (Sq.m)       | 1000    | 3.25        | 1000 sq.mt  | -            |  |
| 2.     | Shade net (Sq.m)        | 4500    | 0.315       | 2200 sq.mt  | 0.186        |  |
| 3.     | INM/IPM (ha)            | 200     | 2           | 200         | 1.992        |  |
|        | Total                   |         | 5.565       |             | 2.178        |  |
| F      | Special Services / TIPS | 5       | 3.2         | 4           | 0.968        |  |
| G      | I.E.C.                  |         |             |             |              |  |
| 1.     | Training                | 100     | 0.96        | 100         | 0.15         | * Even though the physical target has been achieved in full the financial achievement could not be made due to the deficit in budget allotment in RE (Rs.50.360 lakhs)<br>% to BE = 70%<br>% to RE = 98% |
| 2.     | Exposure visit          | 100     | 0.5         | 100         | 0.5          |  |
| 3.     | Awareness campaign      | 11      | 0.11        | 100         | 0.11         |  |
|        | Total                   |         | 1.57        |             | 0.76         |  |
| H      | Advertisement           |         | 1.2         |             | 1.197        |  |
|        | Grand Total             |         | 70.380      |             | 49.539       |  |

**Table 5.6 IAMWARM Scheme – Palar Sub-basin -Progress as on 31.3.2008**

| S. No | Name of the Component   | Target            |                        | Achievement       |                        |   |
|-------|-------------------------|-------------------|------------------------|-------------------|------------------------|---|
|       |                         | Physical in (H.a) | Financial Rs. In Lakhs | Physical in (H.a) | Financial Rs. in Lakhs |   |
| A     | Fruits                  |                   |                        |                   |                        |   |
| 1.    | Amla                    | -                 | -                      | -                 | -                      |   |
| 2.    | Mango                   | -                 | -                      | -                 | -                      |   |
| 1     | Banana                  | 30                | 2.25                   | 51                | 0.906                  |   |
|       | High Density Planting   |                   |                        |                   |                        |   |
| 2.    | Mango                   | 20                | 4.46                   | 20                | 3.923                  |   |
| 3.    | Amla                    | 30                | 6.75                   | 13                | 2.665                  |   |
|       | Total                   | 80                | 13.46                  | 84                | 7.494                  |   |
| B.    | Vegetables              |                   |                        |                   |                        |   |
| 1.    | Hybrid Tomato           | 40                | 6                      | 40                | 2.373                  | Short fall in chillies has been achieved in onion |
| 2.    | Hybrid Bhendi           | 20                | 3                      | 20                | 2.029                  |   |
| 3.    | Onion                   | 150               | 22.5                   | 190               | 21.641                 |   |
| 4.    | Beet root               | 5                 | 0.75                   | 6                 | 0.627                  |   |
| 5.    | Gourds                  | 15                | 2.25                   | 15                | 1.462                  |   |
|       | Total                   | 230               | 34.5                   | 271               | 28.132                 |   |
| C.    | Spices                  |                   |                        |                   |                        |   |
| 1.    | Chillies                | 75                | 8.437                  | 40                | 3.096                  |   |
|       | Total                   | 75                | 8.437                  | 40                | 3.096                  |   |
|       | Grand Total             | 385               | 56.397                 | 395               | 38.722                 |   |
| D.    | Plantation crops        |                   |                        |                   |                        |   |
| 1     | Cocoa                   | -                 | -                      | -                 | -                      |   |
|       | Total                   | -                 | -                      | -                 | -                      |   |
| ii.   | Other items             |                   |                        |                   |                        |   |
|       | INM/IPM                 | 225               | 2.25                   | 2258              | 2.241                  |   |
|       | Total                   | 225               | 2.25                   | 225               | 2.241                  |   |
| iii.  | Special services / TIPs |                   | 3.12                   | 2                 | 0.788                  |   |
| iv.   | IEC                     |                   |                        |                   |                        |   |
| 1.    | Training                | 100 Nos           | 0.52                   | 100 Nos           | 0.15                   |   |
| 2.    | Exposure visit          | 150 Nos           | 0.75                   | 150               | 0.75                   |   |
| 3.    | Awareness campaign      | 20 Nos            | 0.2                    |                   | 0.2                    |   |
| 4.    | Advertisement           |                   | 0.615                  |                   | 0.615                  |   |
|       | <b>Total</b>            |                   | <b>2.085</b>           |                   | <b>1.715</b>           |   |
|       | <b>Grand total</b>      | <b>385</b>        | <b>63.852</b>          | <b>395</b>        | <b>43.465</b>          |   |

Source : Records of Office of the Deputy Director of Horticulture, Coimbatore

**Table 5.7 Micro irrigation 2007-08****As on 31.3.2008**

| Crops        | Physical    |               | Financial    |             | Remarks  |
|--------------|-------------|---------------|--------------|-------------|--|
|              | Target      | Achievement   | Target       | Achievement |  |
| Vegetables   | 1315        | 52            | 377.55       | 5.76        | Work is under progress after Completion of work subsidy will be released |
| Spices       | 100         | 0.4           | 28.8         | -           |  |
| Flowers      | 10          | -             | 75           | -           |  |
| Fruits       | -           | 47.064        |              |             |  |
| <b>Total</b> | <b>1425</b> | <b>99.464</b> | <b>409.1</b> | <b>5.76</b> |  |

**Table 5.8 WGDP Horticulture Component – 2007-2008****Month: March 2008**

| Name of the Scheme                | Physical (No) |             | Financial (Rs.in lakhs) |             | Remarks  |
|-----------------------------------|---------------|-------------|-------------------------|-------------|--|
|                                   | Target        | Achievement | Target                  | Achievement |  |
| Training to farmer in Maharashtra | 25            | 25          | 1.250                   | 1.250       | Farmers got training at HTC Pune during 3 <sup>rd</sup> week of March 08 |

Source : Records of the Office of the Deputy Director of Horticulture, Coimbatore

**5.3 Animal Husbandry Sector****Base Line Information****Population (2004)**

- 3.23 Lakhs of cross-bred cattle
- 0.40 Lakhs of buffaloes
- 2.07 Lakhs of sheep
- 2.87 Lakhs of goats
- 0.13 Lakhs of pigs
- 42 Millions of poultry

**Production (Average 2004-2007)**

- Cow milk (000 Tonnes) – 273.46
- Buffalo milk (000 Tonnes) –33.11
- Improved egg (Lakh numbers) –661.74
- Desi egg (Lakh numbers) – 98.71
- Poultry meat (Tonnes) – 7830.33
- Mutton (Tonnes) – 1516.08
- Chevron (Tonnes) – 1280.87

**Population (1997-2004), Production (1998-2007) and Productivity (1998-2007)****Growth Rates (Annual Compound Growth Rates) in Percent**

- Static total cattle population
- Decrease in total buffalo population (11.5 per cent)
- Increase in sheep (10.3 per cent) and goat (5.12 per cent) population
- Increase in the poultry population (48.1 per cent)
- 11.4 per cent increase in the cross-bred cows
- 11.6 per cent decrease in the she-buffaloes
- 17.14 per cent increase in the cow milk production
- 4.34 per cent increase in the total milk production
- 37 per cent increase in the total meat production
- There is a positive trend in the productivity in the indigenous cow (4.93 per cent) and cross-bred cow (3.19 per cent)
- There is a negative trend in the productivity of buffalo (-5.25 per cent)
- There is a positive trend in the productivity of desi egg (21.33 per cent) and improved egg (24.3 per cent)

**Strengths****Dairy Sector**

- Superior germplasm with very high exotic blood levels
- Excellent established dairy co-operative society network (598 registered societies and 20 step societies with 3.2 Lakh litres of milk per day)
- Increasing trend in the cross-bred dairy population
- Huge domestic demand for fluid milk and milk products
- Increase in the number of mini dairy units

**Small Ruminants**

- Increasing trend in the sheep and goat population
- Huge demand for mutton and chevon

**Poultry**

- Integrated poultry (broiler) farming system – Rapid growth into a successful industry
- Increasing demand for chicken and eggs
- Increasing trend in the poultry population
- Huge demand for milk, pork and egg in the neighboring state, Kerala

**Gaps Identified**

- Fodder shortage (2004)
- Green fodder-86.6 per cent
- Dry fodder-55. per cent
- Animal health care facilities:
- 48 per cent shortfall in the number of veterinary institutions as against the total livestock population in the district (NCA)
- Lack of awareness about feeding of micro-nutrients in the feed of cattle
- Insufficient cold chain management facilities for vaccines
- Poor performance in the non-descript sheep and goats
- Insufficient facilities in the veterinary institutions
- Higher nutritional demand in cross-bred cows – negative energy balance
- Insufficient processing and marketing facilities at Aavin, Coimbatore
- Farmers are not aware of the latest scientific technologies in livestock production and management.

**Intervention Required Areas**

- Scientific fodder production
- Door-to-door health cover to livestock.
- Establishment of cold storage facilities for vaccines
- Tracing of breedable bovine population
- Strengthening the processing and marketing facilities at Coimbatore dairy.

- Strengthening the veterinary institutions with basic facilities like fencing, bore-wells, water troughs etc.
- Genetic upgradation of small ruminants.
- Capacity building through adoption of technology – Training
- Value-addition of milk and meat

### 5.3.1 Livestock - Dairy, Poultry, Sheep and Goat

Livestock plays a vital role in rural life and economy even today. In fact, animal husbandry and agriculture are twin occupations, which are practiced by the rural households since ancient times. Livestock rearing being 'a way of life' in rural areas and with more than 70 per cent of the people relying on the above activities, it forms the backbone of the rural economy. In fact, combination of livestock rearing and crop production enables fuller utilisation of farm by-products, conserves soil fertility and increase the household income. It provides productive employment especially self-employment and the most valuable supplementary income to the vast majority of rural households, majority of whom are small and marginal farmers and landless labourers.

**Table 5.9. Livestock Population**

| Classification          | Numbers |        |
|-------------------------|---------|--------|
|                         | Buffalo | Cattle |
| 1. Male                 |         |        |
| i. Under one year       | 2562    | 21478  |
| ii. 1 to 2.5 Years      | 1396    | 15660  |
| iii. Over 2.5 years     | 684     | 28631  |
| Male Total              | 4642    | 65769  |
| 2. Female               | 6364    | 55338  |
| i. Under one year       | 6349    | 50123  |
| ii. 1 to 2.5 years      | 23557   | --     |
| iii. Over 2.5 years     | 13709   | 121904 |
| a. In milk              | 6127    | 47909  |
| b. Dry                  | 3219    | 17678  |
| c. Not calved even once | 509     | 3849   |
| d. Others               |         |        |
| Female Total            | 36270   | 191340 |
| Total                   | 40912   | 362570 |

**Table 5.9. contd...**

| Classification         | Numbers |               |
|------------------------|---------|---------------|
|                        | Buffalo | Cattle        |
| Sheep                  |         | 206835        |
| Goats                  |         | 286499        |
| Horses and Ponies      |         | 2277          |
| Pigs                   |         | 12665         |
| Mules                  |         | 0             |
| Camels                 |         | 7             |
| Donkeys                |         | 3437          |
| Domestic Dogs          |         | 114391        |
| <b>Total Livestock</b> |         | <b>915202</b> |

Source: 17<sup>th</sup> Livestock Census. (Statistical Hand book 2006)

Livestock provides nutritious protein rich balanced food viz., milk, egg, meat and value added products to the population. In fact, the milk and milk products are the major protein source to the vegetarian population. Organic fertiliser produced by this sector is an important input to crop production and dung from livestock and draught power are chief sources of energy in rural areas. Livestock is not only intricately associated with the social, cultural and traditional values of the region but also serves as an insurance substitute, especially for poor rural households since it is an asset that can be encashed during times of distress. Livestock also provides the basic raw material namely, raw hides and skin for leather industry, which has great employment and export potential.

Dairy is a place where handling of milk and milk products is done and technology refers to the application of scientific knowledge for practical purposes. Dairy technology has been defined as that branch of dairy science, which deals with the processing of milk and the manufacture of milk products on an industrial scale. The dairy industry involves processing raw milk into products such as consumer milk, butter, cheese, yogurt, condensed milk, dried milk (milk powder), and ice cream, using processes such as chilling, pasteurization, and homogenization. Typical by-products include buttermilk, whey, and their derivatives. Coimbatore district cooperative milk union procures about 2.42 lakh liters per day.

**Table 5.10. Dairy Development in Coimbatore District (2005 – 2006)**

| Name of the Societies               | No. of milk societies | Quantity of milk produced (In lakh Litres) | Value of milk produced (Rs. in crores) |
|-------------------------------------|-----------------------|--|--|
| Milk Produces Co-op Societies       | 548                   | 75.80                                      | 75.20                                  |
| Coimbatore District Co-op Societies | 1                     |  |  |

Source Statistical Hand book 2005-06

Among the dairy industries in Coimbatore, Dairy Division of Sakthi group of industries procures and process 1,10,000 liters of milk every day. Liquid milk is marketed in various towns of Tamil Nadu and Kerala carrying the brand name of "Sakthi Milk". It also manufactures and markets milk products like cream, ghee, curd, buttermilk etc. This division will be the thrust area for further growth of the company and the potential for growth is immense. Products like butter, khoa, flavored milk, yogurt, paneer and cheese are being planned for introduction shortly. It has established good marketing network for dairy products, both in Tamilnadu and in Kerala.

There are 1.62 lakh land holdings in the district whose average size of the holdings is below 2.00 ha. As the income derived from such small land holdings through agriculture is not sufficient to meet all the needs of the farmers, they will have to undertake some supplementary activity to earn adequate income. Dairy is one of the well-developed allied activities in the district. As per the census of 2004, the total number of Cross bred and Cattle indigenous in the district were 322532 and 40038 respectively. In addition, there were 40912 buffaloes, taking the total cattle population to 362570 excluding indigenous breed.

There, are 54,1 Milk Producers' Cooperative Societies under the fold of Coimbatore District Milk Union which handled 701.06 lakh litres of milk during 2004-05. There are 41 milk routes in the district.

Coimbatore District Cooperative Milk Union has 4 milk chilling plants and 1 procurement dairy with a total capacity to handle 378,000 lpd. They are located at Shanmugapuram (50,000 lpd), Sultanpet (50,000 lpd), Tiruppur (20,000 lpd), Annur (10,000 lpd) and Coimbatore (2 lakhs lpd). In addition, there are six milk processing units in the district under private sector having an aggregate installed capacity to handle 4.0 lakh litre per day.

There are 15 veterinary hospitals, one veterinary polyclinic, 1 clinician centres, 67 veterinary dispensaries and 97-sub centers and 183 Artificial Insemination (AI) centres in the district. There are also two mobile veterinary units, 1 mobile lab, 5 mobile veterinary routes and 19 mobile veterinary dispensaries. The Anaimalai and Tiruppur are the blocks wherein maximum number of animals were treated. The maximum number of dispensaries were concentrated in Pollachi (N) block, followed by Madhukkarai, Karamadai, Kinathukadavu, Udumalpet, Tiruppur and Sullur. The total milk production in the district during 2004-05 was 2.48 lakh tonnes, of which 1.86 lakh tonnes was cow's milk and 0.62 lakh tonnes from buffaloes.

The Union is presently rearing 100 crossbred cows at its farm in Anaikatty under the calf rearing' scheme, which aims to bring the heifer calves to early maturity by providing proper nutrient feed. The Union also has a 48 acre fodder farm and cattle shed at Anaikatty from which fodder is distributed to the milk societies at a nominal cost. The district has 1 137 ha area under permanent pastures and other grazing lands.

Efforts were made to develop private clinics by agri entrepreneurs. The department has been taking up the prophylactic vaccinations free of cost. Similarly, the foot and mouth disease vaccination is carried out free of cost. As part of their extension efforts, the department undertakes periodical cattle protection scheme programmes and also infertility camps on 5 days in a month in all the 5 divisions in Coimbatore district. In order to educate the farmers undertaking dairy activity, the department conducts mass contact programmes wherein various films of animal husbandry activities are screened.

Banks to encourage Agriculture & Veterinary disciplines graduates by financing them to set up Agri clinics & Agri business centres, under the recently announced Scheme (by GOI & NABARD). Banks may encourage entrepreneurs in taking up modernization of dairy sector so that they take the benefit from Central sector scheme of Venture Capital Fund for Dairy/Poultry sector. The production of milk in the district may be augmented by financing more number of dairy units in the existing milk routes. Banks have to encourage, calf rearing programme with credit to ensuring availability of adequate number of quality milch animals in the district.

### **5.3.2 Poultry**

The district is home to almost 50 per cent of the poultry population of Tamil Nadu. Suguna Poultry Group has revolutionized the poultry industry through a simple innovation and a great business model. Suguna poultry is a leading poultry company in India with its base in Coimbatore. Its turnover exceeded 14.01 billion rupees in 2006-07. Its pioneering efforts in contract farming have helped thousands of farmers to grow along with the company.

The conducive climatic conditions in the district and the huge market potential available in neighbouring Kerala has made poultry one of the emerging activities in Coimbatore district. The district is now the leading producer of broiler poultry birds. Nearly 12 per cent of the egg production in the State is from Coimbatore district. Layer farming is concentrated in Pongalur (32000 birds), Palladam (58300 birds), Sultanpet (40130 birds), Avinashi (18500 birds), Sulur (15300 birds) and Udumalpet (12850 birds) blocks. The total production of broiler birds is around 111690 per week. Broiler farming is concentrated in Palladam, Madathukulam, Gudimangalam, Kinathukadavu, and Pongalur blocks. There are 36 broiler breeding tanns and hatcheries in the district, of which 6 are large units, who act as integrators and provide all inputs and market to farmers under contract farming. While one unit has the grandparent stock, the remaining 35 have parent stock. There is no pureline stock. 12 units have their own feed mixing

plants. Nearly 80 per cent of the production goes to Kerala and other States and only the balance is used for local consumption. The Broiler Coordination Committee situated at Palladam fixes the sale price of the birds.

The district has the distinction of pioneering in contract farming in poultry. Around 95 per cent of the broiler production comes from contract farming. Under contract farming, the small farmers are expected to only invest on shed and equipment, apart from providing their own labour. The inputs viz., chicks, feed, medicines, technical support etc., are provided by the poultry companies called the Integrators, who also take back the grown broilers from the farmers on payment of a rearing fee, which is around Rs 2 per kg. of live weight of the bird. Good management by the farmer will give higher dividends due to lesser mortality and consequent higher 'weight gains. The system made a beginning in Palladam area of the district.

The integrators have started going in for export of the processed chicken. M/s Suguna Poultry farm have already started exporting the processed chicken mainly to the Middle East countries.

The district is endowed with good infrastructure facilities. The Bankers have also started major schemes for financing poultry in the district, eg the Broiler Plus scheme launched by State Bank of India under which loan upto Rs 5 lakh is sanctioned for a unit of. 5000 broilers. Broiler prices have also picked up in the district. Bankers are also generally encouraging contract farming under poultry and have started to finance poultry in a large scale. Some of the bankers are taking initiative under the venture capital fund for dairy/poultry sectors schemes. In fact, millennium enterprises is prepared to erect the hygienically made platform and washbed for proper cleaning and culling of birds. Some of the entrepreneurs are interested in taking up this activity.

The District has very few Poultry feed units in different blocks. Some of the prominent are Senthil . Agencies, R.M.PBreeding fauns (Udumalpet) and Valarmathi Feeds Pvt Ltd (Sulthanpet) respectively.

High feed cost and instability in egg prices have resulted in shift from layers to broilers. In order to feed the poultry industry, Government is initiating steps for increasing the availability of maize, which is good feed for poultry industry. As already mentioned, the Broiler's association is working out an arrangement with the group, of farmers for maize cultivation under, contract farming.

High feed cost, short supply of feed and adequate extension support are needed under this sector. The state government may have to continue the initiative taken for organizing the poultry growers to have a tie up with farmers who are cultivating maize. Banks may encourage financing for processed chicken-meat products. Export infrastructure can be assisted (egg grading etc.) under the RIDF of NABARD. Generation of renewable energy from poultry droppings may be explored. Banks may finance innovative proposals under Venture Capital Fund for Dairy/Poultry sector

### **5.3.3 Venture Capital Fund for Dairy / Poultry Sectors**

Government of India have announced a scheme for creation of a fund for Venture Capital for Dairy and Poultry Sectors with a view to provide interest free loan / interest subsidy on the bank loan to the entrepreneurs for undertaking certain activities under Dairy and Poultry. Under the scheme, interest free loan to the extent of 50 percent of the project outlay and in addition, 50 percent of interest charged on the bank loan will be subsidized to the borrowers who are regular in repayment. These assistance will be given from out of the revolving fund to be set up by NABARD. Establishment of small dairy units (10 animals) (in non-Operation Flood districts only), milking machines / milktesters / bulk cooling units (upto 2000 litres capacity), dairy processing equipment, dairy product . transportation facilities and establishment of private veterinary clinics are eligible under dairy sector. Similarly, establishing poultry breeding farms, feed godown, feed mixing units, marketing infrastructure, egg/broiler carts, central grower units etc. are eligible under poultry sector. Bird flu had been one of the major problems which affected the poultry industry during last year. However, in the district the industry has sustained this problem.

### **5.3.4 Sheep Goat and Piggery**

Sheep and goat rearing is one of the allied activities in agriculture, ranking next to dairy and poultry. It is taken up mostly by the small farmers and landless agricultural labourers. Of late, the area under grazing lands is decreasing steadily. The population of sheep and goat in the district are 1,11,469 and 1,96,907 respectively. There are around 12665 pigs in the district. There is about 1,58,606 ha of forest land and 3295 ha of cultivable wasteland in the district. Banks may consider extending credit support to the suitable borrowers identified by the Animal Husbandry Department under the special Central Assistance Credit-cum-Subsidy Scheme and ensure the proper end-use of credit for improving the performance under this sector.

To increase the supply of fodder the Forest Department, Agricultural Engineering Department (Soil Conservation) etc. may consider planting subabul trees, as part of social forestry scheme. Slaughter houses under the control of Municipalities / Towns / Panchayats need urgent modernisation.

## **5.4 Fisheries Sector**

### **Baseline Information**

- Inland fishermen population – 2,876
- Inland water resources – 6,452 ha. (Reservoir – 3,363 ha., Long seasonal irrigational tanks – 3,089 ha.)
- At present 4,908 ha. are utilized for fish culture.
- Inland fishing villages - 38
- Total inland fish production – 364 tonnes against the potential of 938 tonnes.
- Fish seed production – 34 lakhs against requirement of 110 lakhs at present level and 187 lakhs at optimal production level. The present gap of fingerling requirement is 76 lakhs at present level and 153 lakhs at optimal level. No private fish seed farm.
- The major fisheries activities are at Aliyar, Amaravathy, Thirumurthy, Pillur & Sholayar.
- Per ha. Production at Aliyar-98.60 kg., Amaravathy-169 kg., Thirumurthy-182 kg.

- Cooperative societies - 9 (Members – 1,506).
- Great scope for Improvement in fish seed production and reservoir fish catch using advanced nets and gears.
- Good scope for retail outlet at Coimbatore, Mettupalyam, Udumalpet, Pollachi and Tirupur.

### **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

### **Intervention Required Areas**

- Strengthening of Thirumurthy, Amaravathy and Aliyar Government Fish Seed Rearing Centres.
- Development of Post harvest infrastructure in selected landing centres.
- Supply of fishing implements (modified or advanced craft & gear for operation in deep inland water bodies).
- Expansion of fish culture by providing subsidy 50 per cent assistance to fish farmers for stocking fingerlings.
- Establishment of endemic ornamental fish culture and breeding units.
- Establishment of whole sale fish market at Coimbatore and retail outlet Coimbatore, Tirupur, Mettupalyam, Udumalpet & Pollachi.
- Farmers training.
- Establishment of GIF Tilapia breeding unit

### 5.4.1 Fisheries Development

As the district is landlocked, it has potential only for inland fisheries development. The district has scarce water resources and due to this constraint, there is only a moderate scope for inland fisheries development. Around 154 tonnes of fish were harvested during 2004-2005 from the reservoirs, valued at Rs 34 lakhs. About 88.6 per cent of the catch was harvested from Aliyar, Amaravathi and Thirumoorthy dams.

### 5.4.2 Infrastructure and Support Services

The major resources for fish farming in the district are the five reservoirs viz

- Pillur Dam (Mettupalayam taluk)
- Sholayar (Valparai taluk)
- Aliyar Dam (Pollachi taluk)
- Amaravathi Dam (Udumalpet taluk)
- Thirumoorthy Dam (Udumalpet taluk)

**Table 5.11. Major Resources for Fish Farming in Coimbatore District**

| Source  | Area<br>(in hectares) | Fish Production<br>(Quantity in tones) |
|---|-----------------------|--|
| Reservoirs  | 2991                  | 0.236                                  |
| Irrigation tanks<br>(Perennial and Long Seasonal) | 91                    | 93.50                                  |
| Short Seasonal Tanks and<br>Ponds                 | 1788                  | 849.30                                 |
| <b>Total</b>                                      | <b>4870</b>           | <b>943.036</b>                         |

In reservoir fisheries, stocking of fish seedlings, exploitation of fishes, and conservancy works are being carried out. A total of 73 fishermen families are engaged in fishing spread over three blocks viz., Karamadai, Anamalai and Udumalpet. The Fisheries Department and the Tamil Nadu Fisheries Development Corporation harvest the crop by engaging these fishermen. On need basis, the services of local fishermen or

the family members of fishermen will be utilized. Catla, Roghu, Mrigal and Common carp were the species stocked mostly in Coimbatore district. In Coimbatore district, the local fishermen are paid in kind by way of a portion of their catch. The share of exploited fishes will be one third to the fishermen and two third to the department or corporation who owns the water bodies for fishing right.

**Table 5.12. Reservoir Fisheries – Species wise Stocking 2005 – 2006**  
(in tonnes)

| S. No | Reservoir        | Target      | Achievement |             |             |             |             |              | Total        |
|-------|------------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|--------------|
|       |                  |             | Catla       | Roghu       | Mrigal      | Common carp | Mirror carp | Others       |              |
| 1.    | Pillur Dam       | 2.00        | 0.82        | 0.00        | 0.45        | 0.74        | 0.00        | 0.00         | 2.01         |
| 2.    | Sholayar         | 1.50        | 0.00        | 0.00        | 0.56        | 0.94        | 0.00        | 0.00         | 1.50         |
| 3.    | Aliyar Dam       | 0.06        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.032        | 0.032        |
| 4.    | Amaravathi Dam   | 0.09        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.061        | 0.061        |
| 5.    | Thirumoorthy Dam | 0.07        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.025        | 0.025        |
|       | <b>Total</b>     | <b>3.72</b> | <b>0.82</b> | <b>0.00</b> | <b>1.00</b> | <b>1.68</b> | <b>0.00</b> | <b>0.118</b> | <b>3.628</b> |

Against 3.72 lakh target, common carp, Mrigal and Catla alone are stocked on larger scale (3.63 lakhs) leaving the important counterpart Roghu. Being Roghu is a column feeder, particular layer is not effectively utilized to increase the productivity per unit of water spread. Hence, care has to be taken to develop the seed stocks and it has to be stocked in water bodies appropriately.

Besides these large water bodies, there are a few seasonal tanks owned by the Public Works Department and the Panchayat Unions. During season, these tanks are leased to the fishermen cooperative societies. There are five Fishermen Cooperative Societies functioning in Udumalpet, Palladam, Pollachi, Coimbatore and Mettupalayam blocks.

**Table 5.13. Reservoir Fisheries – Stocked and Unstocked Exploitation 2005–06**  
(in tonnes)

| S. No | Reservoir        | Stocked Variety (in tonnes) | Unstocked Variety (in tonnes) | Total Production (in tonnes) |
|-------|------------------|-----------------------------|-------------------------------|------------------------------|
| 1.    | Pillur Dam       | 1.662                       | 2.666                         | 4.328                        |
| 2.    | Sholayar         | 1.477                       | 1.651                         | 3.128                        |
| 3.    | Aliy Dam         | 0.032                       | 0.032                         | 0.064                        |
| 4.    | Amaravathi Dam   | 0.061                       | 0.061                         | 0.122                        |
| 5.    | Thirumoorthy Dam | 0.025                       | 0.025                         | 0.050                        |
|       | <b>Total</b>     | <b>3.257</b>                | <b>4.435</b>                  | <b>7.692</b>                 |

In respect of exploitation stocked variety during the year 2005-06 was found to be 3.26 tonnes, whereas the unstocked and naturally bred varieties yielded to a level of 4.44 tonnes. When one could examine the stocking rate and exploitation rate, the positive relationship is visible, though it is a hypothetical one. Better comparison can be made with one year lagged exploitation. What is required here is judicious stocking and exploitation after assessing the yield of fish species wise so as to take decisions on rearing and stocking of fishes.

**Table 5.14. Reservoir Fisheries – Exploitation (2005-2006)**

(in tonnes)

| S. No | Reservoir        | Stocked Variety |              | Unstocked variety |              | Total        |              |
|-------|------------------|-----------------|--------------|-------------------|--------------|--------------|--------------|
|       |                  | Target          | Achievement  | Target            | Achievement  | Target       | Achievement  |
| 1.    | Pillur Dam       | 6.000           | 1.662        | 2.500             | 2.666        | 8.500        | 4.328        |
| 2.    | Sholayar         | 7.000           | 1.477        | 3.000             | 1.651        | 10.000       | 3.128        |
| 3.    | Aliyar Dam       | 0.060           | 0.032        | 0.060             | 0.032        | 0.120        | 0.064        |
| 4.    | Amaravathi Dam   | 0.090           | 0.061        | 0.090             | 0.061        | 0.180        | 0.122        |
| 5.    | Thirumoorthy Dam | 0.070           | 0.025        | 0.070             | 0.025        | 0.140        | 0.050        |
|       | <b>Total</b>     | <b>13.22</b>    | <b>3.227</b> | <b>5.72</b>       | <b>4.435</b> | <b>18.94</b> | <b>7.692</b> |

The overall target and achievement scenario revealed that the target is achieved only one third. There is an urgent need to examine whether scientific methods are being adopted by the personnel is exploitation and stocking or not. For that research and development effort need to be strengthened.

### 5.4.3 Scope for Fisheries

The city of Coimbatore and other towns offer excellent scope for marketing of fish, prawns and ornamental fish. Since Coimbatore district is famous for water storage structures, the same may be converted into farm ponds for aquaculture activities to increase inland fish production. Here, the role of fishery extension is primarily important. The task may be entrusted through NGO's to offer private extension. The training for Ornamental fish culture was given by TNFDC in Aliyar reservoir which helps the people to start up their own enterprise. Fish seeds are available locally and also being procured from Kerala. Prawn seeds are available in plenty from the neighbouring state of Kerala and also from Chennai. The price of fresh water prawn is increasing and there is demand for prawns from other districts. Department of Fisheries and MPEDA provide subsidy @ 25 per cent of capital cost subject to Rs 50000/ per ha with maximum of Rs 2.5 lakh per beneficiary, for fresh water prawn farming.

In fisheries, strengths are many. Tapping these strengths into opportunities need an involvement among the staff. The involvement, role play, responsibility realization may well be achieved though self realization by orienting them to capacity building programs like change management with reputed Indian Institutes.

**Table 5.15. Fish Farms Details**

| Name of the centre | Total Seed rearing area | Brood Stock pond area | Total Water spread area | Fish Seed Rearing |                         |
|--------------------|-------------------------|-----------------------|-------------------------|-------------------|-------------------------|
|                    |                         |                       |                         | Target (in lakhs) | Achievement ( in lakhs) |
| Aliyar             | 13400                   | 10000                 | 23400                   | 25.00             | 10.00                   |
| Amaravathy         | 1030                    | 4420                  | 5450                    | 7.20              | N.A                     |
| Thirumoorthy       | 4110                    | 1480                  | 5590                    | 2.40              | N.A                     |

#### 5.4.4 Action Plan

- Research and Development facility fund for Inland Fisheries should be created.
- Cyber Extension, Marketing extension tools may be popularized in fisheries.
- Aquaculture in farm ponds, ornamental fish culture, prawn farming practices should be motivated. Wherever needed, tie-up possibilities may well be created.
- Creating of healthy competition among the reservoir staffs in Coimbatore region may be explored.
- Though there is a Deputy Director of Fisheries establishment, it is not well known even to the fisher folk.
- Fish being a delicious food, value added fast food canners may be created on joint venture with private sector in prime locations.

### 5.5 Agricultural Engineering Department

#### 5.5.1 Details of Ongoing Schemes

##### 1. Tractor Hiring Scheme

The sloppy, Waste Lands and undulated terrains of the Agricultural Lands are leveled to conserve soil and moisture and also to bring more are under cultivation. Earthmoving machineries like Bulldozers are being hired out to the farmers at a subsidised rate of Rs.625/- per hour for leveling works. For Ploughing and transport purposes, Tractors are being hired out at a subsidised rate Rs.150/= per hour.

In Coimbatore Division 9 Bulldozers and 4 Tractors are available for hiring purposes.

##### 2. Minor Irrigation Scheme

For digging of Bore wells and deepening of Open wells, minor irrigation machineries like, Percussion Drill, Rock Blasting Units are being hired out at a subsidised rates to farmers as below:

- |                        |    |                   |
|------------------------|----|-------------------|
| 1. Percussion Drill    | .. | Rs.300/= per day. |
| 2. Rock Blasting units | .. | Rs.250/= per day. |

There is one Percussion drill and 7 Rock blasting units available in Coimbatore Division for hiring purposes.

Geological survey is being done in agriculture fields to find the under ground water potential with the help of A/C Resistivity Meter. The selections of suitable points for digging of borewells are done at Rs.500/= per point for Agriculture Purpose and at Rs.1000/= per point for Non-Agricultural purpose.

### **3. Western Ghat Development Programme:**

Soil and Water Conservation measures are being executed in Western Ghat Areas in the selected high priority watersheds. Land Shaping, Construction of Check Dams, Farm Ponds and Percolation Ponds are the measures being taken up in this scheme by the user groups.

- The benefits of the Scheme are:
- Wastelands are converted into cultivable lands;
- Soil erosion is prevented;
- Rain Water is being harvested;
- Ground Water table is increased.

Now at present preparation works like sites selection plan preparations have been completed. Estimates preparation is under progress. Works will be commenced after the receipts of G.O.

### **Distribution of Agricultural Machineries Under Farm Mechanisation Scheme**

Under this, Tractor, Power Tiller, Rotovators, Disc Plough and Cultivator, Ridger, Power Reaper, Reversible M B Plough, Off-set Disc Harrow, Paddy Transplanter machineries are supplied with subsidy @ 25% of the total cost.

### **Replacement of Old Farm Pumpsets Under Subsidy Scheme in order to Increase the Irrigation Efficiency and to Save Power Consumption**

Under the scheme, the following subsidy is given to the farmers for replacement of old pumpsets.

1. Less than 5 H.P. Pumps : 25% of the total cost or Rs.2500/- whichever is less for other farmers  
50% of the total cost or Rs.3500/= whichever is less for Special category farmers (SC)
2. 5 HP and more than 5 HP : 25% of the total cost or Rs.5000/- whichever is less for other farmers  
50% of the total cost or Rs.6000/- whichever is less for Special category farmers (SC)
3. For electrical accessories : 50% of the total cost or Rs.1500/- whichever is less for all farmers

### **Soil Conservation Scheme**

Under the scheme, the following works are being carried out in Wastelands Micro Watersheds for Rain Water Harvesting and Run-off Management.

- Construction of Check Dams;
- Construction of Percolation Ponds;
- Construction of Farm Ponds;
- Providing recharge shaft in the already existing Percolation Ponds to recharge
- Ground Water aquifers.

Now at present preparation works like sites selection plan preparations have been completed. Estimates preparation is under progress. Works will be commenced after the receipts of G.O.

### **National Horticulture Mission**

- Under this scheme, funds are allotted for creation of Water Resources in order to provide supplementary irrigation to the existing and newly developed Horticulture Crops. This scheme will be implemented by the District Mission Committee with Collector, Coimbatore as Chairman and Assistant Director of Horticulture, Coimbatore as Member Secretary and Executive Engineer (Agrl.Engg. Dept.) Coimbatore as Member.
- Rs.100.00 lakhs (For 2005-2006: Rs. 40.00 Lakhs and For 2007-2007: Rs.60.00 Lakhs has been allotted for creation of water resources in Coimbatore District.
- For the year 2005-06, 9 Farm Ponds are constructed at a cost of Rs33.68 Lakhs. For the year 2006-07, 4 Farm Ponds are constructed at a cost of Rs. 22.19 Lakhs remaining works are nearing completion. For the year 2007-2008 the selection of works under progress.

### **Nabard Scheme**

In this scheme, in patta lands 75% is aided by NABARD bank and 25% contribution by the farmers, in Govt. lands 90% is aided by NABARD bank and 10% contribution by the Farmers, the following works are being carried out,

- Farm Ponds in patta lands.
- Rejuvenation of wells

These Water Harvesting structures are being carriedout in the selected villagaes viz.,Senjekarai, Krishnapuram, Thalakarai, Vadvedampatty, Kattampatty, Vadavalli, Idayarpalayam, Jallaipatty, Kammalapatty, Vadampachery, Varpatty, Anupatty, Melgoundenpalayam and Udumalpet.

Now at present preparation works like sites selection plan preparations have been completed. Estimates preparation is under progress. Works will be commenced after the receipts of G.O.

### **Irrigated Agriculture Modernisation and Water Bodies Restoration and Management Project ( TN-IAMWARM Project)**

To improve the Irrigation facilities in Palar and Aliyar sub-basins under Parambikulam Aliyar project. IAMWARM project is going to be implemented under World Bank Assistance.

The following works are going to be implemented:

#### **i) Drip Irrigation**

To overcome the shortage of Irrigation water and farm labour. To increase the crop yield and to increase the quality of product. 50% subsidy will be given to all crops for laying the Drip Irrigation System.

#### **ii) Sprinkler Irrigation**

To increase the yield in Horticulture Crops like, Vegetable, Flower etc., 50% subsidy will be given for Sprinkler Irrigation system. In this system, required quantity of water will be sprinkled like artificial rain over the crop. This irrigation will give good Agro climatic condition for good yield.

#### **iii) Precision Farming**

This new Technology is going to be implemented by AED with the co-operation of Horticulture Dept. Through precision farming Technology, New and advance farming Techniques will be introduced to increase the yield and quality of the crop.

**iv) Buried Pipe Laying**

To increase the water distribution without any wastage from a pipe point to all its command area, through a buried pipeline. This a pilot project.

**v). Farm Mechanisation**

To improve the mechanisation in agricultural activities. New Farm Implements will be given to water user association in 100% subsidy. This implement will be hired out to Farmer by the water user association for minimum cost, this amount will be utilized for the purpose of movement and maintenance of the machinery.

**vi) Rainwater Harvesting Structure**

To Harvest the available Rainwater completely, without any wastage to increase the ground water potential and to increase the soil moisture, Farm ponds, Check-dam, Percolation ponds are going to constructed with the 10% contribution from the farmers.

At present the applications are received from the farmers for laying of Drip and Sprinkler Irrigations System. So far 853 applications are received from the farmers for Drip Irrigation and 507 applications for Sprinkler Irrigation. For creation of Water Harvesting Structures preliminary works like sites selection plan preparations have been completed, now estimates preparations is under progress.

**Table 5.16 Tractor Hiring Scheme**

| Scheme Details | 2007-2008             |                                    | 2008-09 (upto31.5.08) |                                    |
|----------------|-----------------------|------------------------------------|-----------------------|------------------------------------|
|                | Annual Target (Hours) | Achievement as on 31.03.08 (Hours) | Annual Target (Hours) | Achievement as on 31.05.08 (hours) |
| Bulldozer      | 9900                  | 10189                              | 9900                  | 1597                               |
| Tractor        | 4200                  | 3563                               | 6400                  | 550                                |

**Table 5.17 Minor Irrigation**

| Scheme Details                               | 2007-2008             |                                    | 2008-09 (upto 31.5.08) |                                    |
|--|-----------------------|------------------------------------|------------------------|------------------------------------|
|  | Annual Target (Hours) | Achievement as on 31.03.08 (Hours) | Annual Target (Hours)  | Achievement as on 31.05.08 (Hours) |
| Tube Well Scheme - Percussion Drill (Wells.) | 5                     | 5                                  | 5                      | Work in progress in one well       |
| Rock Blasting Units (Blasting)               | 1050                  | 1099                               | 1050                   | 145                                |

**Table 5.18 Western Ghats Development Programme**

| Scheme Details          | Annual Target 2007 - 08 |                 | Achievement as on 31.03.08 |                 | 2008-09 (upto31.5.08)    |
|-------------------------|-------------------------|-----------------|----------------------------|-----------------|--------------------------|
|                         | Physical                | Finance (Lakhs) | Physical                   | Finance (Lakhs) |                          |
| Soil Conservation Works | 85 Ha.                  | 6.375           | 92 Ha.                     | 6.803           | Government order awaited |
|                         | 201 Nos.                | 109.29          | 203 Nos.                   | 108.87          |                          |
| EPA Works (Nos)         | 6                       | 5.4             | 6                          | 5.4             |                          |

**Table 5.19 Distribution of Agricultural Machineries to Farmers under Subsidy  
Physical in Nos and Fin.Rs. (in lakhs)**

| Sl.No | Scheme Details       | Annual Target 2007 - 08 |               | Achievement as on 31.03.08 |               | 2008-09 (upto 31.5.08)   |
|-------|----------------------|-------------------------|---------------|----------------------------|---------------|--------------------------|
|       |                      | Physical                | Finance       | Physical                   | Finance       |                          |
| 1     | Tractor              | 17                      | 5.100         | 17                         | 5.100         | Government Order Awaited |
| 2     | Power Tiller         | 33                      | 9.590         | 33                         | 9.590         |                          |
| 3     | Rotavator            | 38                      | 7.580         | 38                         | 7.580         |                          |
| 4     | Cultivator ploughing | 6                       | 0.424         | 6                          | 0.424         |                          |
| 5     | Disc ploughing       | 2                       | 0.200         | 2                          | 0.200         |                          |
|       | <b>Total</b>         | <b>96</b>               | <b>22.700</b> | <b>96</b>                  | <b>22.693</b> |                          |

**Table 5.20 Replacement of Old Pumpset under Subsidy Scheme****Physical in Nos and Fin.Rs. (in lakhs)**

| Scheme Details               | Annual Target<br>2007 - 08 |                    | Achievement as on<br>31.03.08 |                    | 2008-09<br>(Upto<br>31.05.08)              |
|------------------------------|----------------------------|--------------------|-------------------------------|--------------------|--|
|                              | Physical                   | Finance<br>(Lakhs) | Physical                      | Finance<br>(Lakhs) |  |
| Pumpset – General            | 1060                       | 64.300             | 1031                          | 64.260             | Government<br>order awaited<br>for 2008-09 |
| Special Component<br>(SC/ST) | 12                         | 0.930              | 12                            | 0.930              |  |

**Table 5.21. Soil Conservation Works****Physical in Nos and Fin. Rs. (in lakhs)**

| Sl. No | Scheme Details  | Annual Target<br>2007 - 08 |         | Achievement as on<br>31.03.08 |         | 2008-09 (Upto<br>31.05.2008)               |
|--------|---|----------------------------|---------|-------------------------------|---------|--|
|        |   | Physical                   | Finance | Physical                      | Finance |  |
| 1      | Rain Water<br>Harvesting and<br>Run off<br>Management | 95                         | 59.740  | 95                            | 59.610  | Government<br>Order awaited<br>For 2008-09 |

**Table 5.22 National Horticultural Mission****Physical in Nos and Fin.Rs. (in lakhs)**

| Scheme Details   | Annual Target |         | Achievement as on<br>31.03.08 |         | Remarks                                     |
|--|---------------|---------|-------------------------------|---------|---|
|  | Physical      | Finance | Physical                      | Finance |   |
| Creation of Water resources<br>2005-2006   | 10 Works      | 41.430  | 10                            | 41.430  | Two works<br>postponed to<br>2007-08        |
| Creation of Water resources<br>2006-2007   | 14 Works      | 58.570  | 12                            | 49.770  |   |
| Creation of Water resources<br>; 2007-2008<br>[The District Mission<br>Committee has approved<br>release of II instalment<br>(Rs.40 lakhs) to AED on<br>29.4.08] | 16 Works      | 48.380  | 9                             | 48.38*  | Remaining<br>Works now<br>under<br>progress |

**Table 5.23 NABARD Scheme****Physical in Nos and Fin.Rs. (in lakhs)**

| Scheme Details  | Annual Target 2007 - 08 |         | Achievement as on 31.03.08 |         | 2008-09 (Upto 31.05.08)              |
|---|-------------------------|---------|----------------------------|---------|--------------------------------------|
|   | Physical                | Finance | Physical                   | Finance |                                      |
| Construction of Rain Water Harvesting Structures to increase the ground water depth | 469                     | 209.390 | 240                        | 153.050 | Government Order awaited for 2008-09 |

**Table 5.24 Land Reclamation Scheme for Small and Marginal Farmers****Physical in Acres****Fin.Rs. (in lakhs)**

| Sl.No | Scheme Details | Target         |              | Achievement as on 31.05.08 |               | Remarks   |
|-------|----------------|----------------|--------------|----------------------------|---------------|---|
|       |                | Physical       | Finance      | Physical                   | Finance       |   |
| 1     | Phase.I        | 1000.93        | 17.05        | 1000.93                    | 17.05         | The reclamation works are under progress. Due to non receipt of funds from TAWDEVA payment has not been made. |
| 2     | Phase.II       | 648.65         | 7.86         | 648.65                     | 7.86          |   |
| 3     | Phase.III      | 95.95          | 1.98         | 95.95                      | 1.98          |   |
| 4     | Phase.IV       | 369.59         | 4.84         | 369.59                     | 4.84          |   |
| 5     | Phase.V        | 504.00         | 6.81         | 504.00                     | 6.81          |   |
| 6     | Phase.VI       | 559.51         | 6.45         | 559.51                     | 6.45          |   |
| 7     | Phase.VII      | 700.00         | 2.01         | 340.50                     | 0.27          |   |
| 8     | Phase.VIII     | 500.00         |              |                            |               |   |
|       | <b>Total</b>   | <b>4378.63</b> | <b>47.00</b> | <b>3519.13</b>             | <b>45.26*</b> |   |

**Table 5.25 Target and Achievement of Agricultural Engineering****Physical in Nos and Fin.Rs. (in lakhs)**

| Sl. No | Name of Machinery | Annual Target |              | Achievement as on 31.03.08 |              | 2008-09 (Upto 31.05.2008)            |
|--------|-------------------|---------------|--------------|----------------------------|--------------|--------------------------------------|
|        |                   | Physical      | Finance      | Physical                   | Finance      |                                      |
| 1      | Power Tiller      | 40            | 12.00        | 15                         | 4.36         | Government order awaited for 2008-09 |
| 2      | Rotavator         | 25            | 5.00         | 18                         | 3.59         |                                      |
| 3      | Wheel Barrow      | 302           | 7.25         | 302                        | 7.25         |                                      |
|        | <b>Total</b>      | <b>367</b>    | <b>24.25</b> | <b>338</b>                 | <b>15.35</b> |                                      |

**Table 5.26 Flood Relief Works 2007-2008****Fin.Rs. (in lakhs)**

| Scheme Details     | Annual Target |         | Achievement as on 31.03.08 |         |
|--------------------|---------------|---------|----------------------------|---------|
|                    | Physical      | Finance | Physical                   | Finance |
| Kallar Farm( NCRF) | 5 Works       | 21.5    | 5 Works                    | 21.50   |

**Table 5.27 Tamil Nadu IAMWARM Scheme**

| Sl. No | Name of work              | BASIN  | Annual Target 2007 - 08 |         | Achievement as on 31.03.08 |         | (Upto 31.05.2008) Target alone |         |
|--------|---------------------------|--------|-------------------------|---------|----------------------------|---------|--------------------------------|---------|
|        |                           |        | Physical                | Finance | Physical                   | Finance | Physical                       | Finance |
| 1      | Drip Irrigation (ha)      | Palar  | 725.00                  | 99.60   | 689.44                     | 65.216  | 1000.0                         | 132.21  |
|        |                           | Aliyar | 653.00                  | 84.89   | 680.26                     | 58.220  | 619.7                          | 89.01   |
|        |                           | Total  | 1378.00                 | 184.49  | 1369.70                    | 123.44  | 1619.7                         | 221.22  |
| 2      | Sprinkler Irrigation (ha) | Palar  | 150.00                  | 11.250  | 10.00                      | 0.737   | 877.00                         | 65.78   |
|        |                           | Aliyar | 22.00                   | 1.650   | 2.00                       | 0.140   | 103.00                         | 7.73    |
|        |                           | Total  | 172.00                  | 12.900  | 12.000                     | 0.877   | 980.00                         | 73.51   |
| 3      | Farm Pond                 | Palar  | 9                       | 3.24    | 9                          | 3.321   | 30                             | 10.80   |
|        |                           | Aliyar | 10                      | 3.6     | 10                         | 3.21    | 30                             | 10.80   |
|        |                           | Total  | 19                      | 7       | 19                         | 7       | 60                             | 21.60   |
| 4      | Check dam category I      | Palar  | 3                       | 10      | 3                          | 9.760   | Target not received            |         |
| 5      | Check dam category II     | Aliyar | 3                       | 10      | 3                          | 9.978   |                                |         |
| 6      | Percolation pond          | Total  | 6                       | 20      | 6                          | 19.738  |                                |         |

Target for 2008-09 is Received only During First Week of June 08

## 5.5 Watersheds

Table 5.28. Watersheds in Coimbatore District

| Sl. No | Sub Catchment     | Sub Catchment Name | Taluks   |
|--------|-------------------|--------------------|--|
| 1      | Bhavani           |                    |  |
|        |                   | Bhavani River West | Mettupalayam, Avinashi.  |
|        |                   | Kallar             | Coimbatore, Mettupalayam, Uthagamandalam, Coonur.  |
|        |                   | Upper Bhavani      | Coimbatore, Mettupalayam, Coonur, Nilgris, Palgat district of Kerala.                            |
| 2      | Noyyal            |                    |  |
|        |                   | Vananthagiri       | Avinashi, Palladam, Coimbatore, Perundurai, Taluk of Periyar.                                    |
|        |                   | Coimbatore         | Coimbatore, Palladam, Avinashi.  |
| 3      | Amaravathi        |                    |  |
|        |                   | Vattamalaikarai    | Udumalpet, Palladam and Dharapuram taluk of Periyar  |
|        |                   | Amaravathi         | Udumalpet, Valparai and Kodaikanal, Palani Taluk of Dindigal and Dharapuram of Periyar district. |
|        |                   | Uppar odai         | Udumalpet, Pollachi, Palladam, Dharapuram taluk of Periyar                                       |
| 4      | Periyar           |                    |  |
|        |                   | Puyankuti          | Udumalpet, Valparai.   |
| 5      | Periyar to Ponnai |                    |  |
|        |                   | Parambikulam       | Udumalpet, Pollachi.   |
| 6      | Ponnai            |                    |  |
|        |                   | Gayatri puzha      | Valparai, Pollachi   |
|        |                   | Aliyar             | Valparai, Pollachi, Udumalpet.   |
|        |                   | Koriyar            | Pollachi, Coimbatore, Palladam.  |

Source: All India Watershed Atlas, 1993.

## 5.6 Agro Based Industry and Agro Processing

### 5.6.1 Industrial Scenario

In Coimbatore district, majority of the taluks are industrially developed. About 30,316 ha is under cultivation of various horticulture crops like fruits, vegetables, spices, etc., in the district. The production of fruits and vegetable are mostly used for table consumption and major portion of the balance gets perished for want of good storage / processing facilities. It is in this context that agro-processing plays a major role in the district.

The details of major crop production which has scope for agro-processing and agro industries, their utilization and marketable surplus are given below:

**Table 5.29 Agro Industries and their Utilization**

| <b>Crop</b>                       | <b>Production</b> | <b>Consumption</b> | <b>Marketable surplus</b> |
|-----------------------------------|-------------------|--------------------|---------------------------|
| Banana                            | 21,087            | 6,326              | 14,761                    |
| Coconut Millets and Other cereals | 627,025           | 125,405            | 501,620                   |
| Sugarcane                         | 40,728            | 4,073              | 36,655                    |
| Groundnut                         | 17,194            | 1,719              | 15,475                    |
| Other Oilseeds                    | 1,568             | 158                | 1,410                     |
| Cotton                            | 13,189            | 650                | 12,539                    |

### 5.6.2 Small Scale Industries

Cottage and handicraft industries also play considerable role in the socioeconomic conditions of the people in the district providing, employment opportunities. Cotton bags, Tailoring, mini flour mill, Coir Industries, etc. are the important activities in this sector. The status of SSI Units in Coimbatore district (2006) is given in the following table.

**Table 5.30 Cottage and Handicraft Industries**

| S.No. | Particulars                      | No. of units |
|-------|----------------------------------|--------------|
| 1     | No. of SSI Units                 | 56,430       |
| 2     | Unregistered                     | 20,284       |
| 3     | Manufacturing                    | 24,812       |
| 4     | Services                         | 27,329       |
| 5     | Total employment                 | 149,480      |
| 6     | Per Unit employment              | 2.64         |
| 7     | Total investment (Rs. lakh)      | 121,969      |
| 8     | Per unit fixed investment (Rs.)  | 2.16 lakhs   |
| 9     | Total gross output (Rs. lakh)    | 306,317      |
| 10    | Per unit gross output (Rs. lakh) | 5.42         |
| 11    | Total Exports (Rs. crores )      | Rs 4379      |

Source: Records of DIC, Coimbatore

There are more than 25,000 small, medium, large sale industries and textile mill. Of which Coimbatore Corpn., Tiruppur (Mun), P.N.Palayam , Pollachi (mun), Madukarai, Tiruppur, Sulur and Palladam blocks are having over 1000 units of SSI.

### 5.6.3 Potential Sectors - Activities

The following non-farm sector activities have potential for development in the district. Under food products rice processing flour milling and masala powder preparations have great scope.

### 5.6.4 Agro Processing

Agro processing which plays a significant role in commercializing agriculture is yet another prosperous sector in the district. While India is the second largest producer of fruits and vegetables in the world, its food processing industry remains underdeveloped. The food processing industry sector includes sectors like grain processing, fruits and vegetable products, milk products, meat and dairy products, etc.

Fruits and vegetables are handled in a very crude manner in the domestic market in the country. These products are transported in lorries to the Agriculture Produce Market Committee, auctioned in open air and sold on pushcarts by roadside vendors. The commodities are marketed without cleaning, grading and proper packing. As a result there is considerable wastage to the tune of 25-30% in the value chain resulting to uncertainty of prices. At present, there is no significant handling of fresh fruits and vegetables under cold chain. Cold storages can be used to prolong the shelf life of fruits and vegetables. However, necessary further improvements in the selection of suitable products and marketing chain are needed so that the products are delivered at the consumer's door step before the quality of the product deteriorates after removal from the cold storage.

### **Major Categories of Agroprocessing Industries in Coimbatore District**

There are 1195 agro processing units engaged in different activities in Coimbatore district as given in the Table below:

**Table 5.31 Major Categories of Agroprocessing Industries**

| <b>S.No.</b> | <b>Type of Processing Mills</b> | <b>Nos.</b> |
|--------------|---------------------------------|-------------|
| 1.           | Agrochemical                    | 2           |
| 2.           | Coffee works                    | 5           |
| 3.           | Coir                            | 20          |
| 4.           | Ginning                         | 118         |
| 5.           | Milk Society                    | 334         |
| 6.           | Oil Mills                       | 31          |
| 7.           | Poultry                         | 226         |
| 8.           | Rice Mills                      | 102         |
| 9.           | Sugar Mills                     | 1           |
| 10.          | Tea                             | 28          |
| 11.          | Textiles                        | 311         |

Currently, most of the agro-processing industries depend on the normal trade channels for supply of raw material which often results in the industry getting the left over of the market. This is very acute in the horticulture based industries. The post harvest facilities are extremely poor, whether it be cold storage facilities, road transport, road network in the rural areas or dependable supply of electricity. Distribution system processed food items are still primitive leading to low volume of sales.

Production of agro- based items in small land holdings, unethical trade practices adopted by the contract farmers by diverting their produce to open market for taking advantage of the high retail price during lean seasons, affecting the raw material supply to processors are some of the bottlenecks. Projects already set up do not have a good record of utilization of full capacity barring the primary processing units.

Agro processing industry can play a significant role in increasing value addition in agriculture and horticultural produce, diversification and commercialization of agriculture, reduction in wastage of horticulture produce by increasing the processing level, generating new employment and enhancing export earnings. While India is the second largest producer of fruits and vegetables in the world, its processing industry remains underdeveloped. The agro processing industry sector includes sectors like grain processing, fruits and vegetable products, milk products, meat and dairy products, etc.

#### **5.6.5 Assessment of Raw Material Base in Coimbatore District for Agro processing Industries**

Paddy, Sugarcane, Coconut, Pulses, Millets and Other Cereals and Groundnut are the principal crops cultivated in the district. The area and production of these crops are as under:

**Table 5.32 Raw Material Base in Coimbatore**

| S.No. | Raw material              | Area (ha) | Production (tones) |
|-------|---------------------------|-----------|--------------------|
| 1.    | Paddy                     | 7,329     | 21,087             |
| 2.    | Millets and Other cereals | 120,235   | 627,025            |
| 3.    | Pulses                    | 34,761    | 89,161             |
| 4.    | Sugarcane                 | 5,883     | 40,728             |
| 5.    | Groundnut                 | 19,147    | 17,194             |
| 6.    | Cotton                    | 9,927     | 2104 (Lint)        |

Considering the potential of Paddy cultivation in the district, modernization of rice milling is one such area that has to be dovetailed into agro-based industry. There are around 102 rice mills in Coimbatore district. The groundnut oil production has been steadily increasing on par with ever raising demand. There are few units engaged in extraction of groundnut oil in the district. Most of the units are power ghanis and rotary types. There is good potential for setting up small scale coconut oil extraction units in the district.

### **5.6.6 Fruit and Vegetable Processing**

The wide raw material base and feasibility to grow some of the fruit and vegetable crops throughout the year are the factors favoring promotion of fruit and vegetable processing industry in the district. Good scope exists for the production of multi-product based processing units for better capacity utilization of processing infrastructure.

### **5.6.7 Other Food Products**

Other food products based activities like Jaggery, Bakery, Squash, Sauce, Bread, Sweets, Pickle making have good potential in the district. Some of the potential regions that could be considered for promoting processing industry are given in the following table.

**Table 5.33 Block wise Potential for Agro Processing Industries in Coimbatore**

| S.No. | Block         | Agro-based activities   |
|-------|---------------|---|
| 1.    | Anamalai      | Coir industries, Coconut shell powder, Coconut Oil, Jaggery, Bakery, Pickles making, Masala Powder making, Vermicelli |
| 2.    | Annur         | Poultry feed, Tomato Products, Groundnut Oil  |
| 3.    | Avinashi      | Poultry Feed, Cotton Fabrics, Coconut shell powder  |
| 4.    | Gudimangalam  | Poultry Feed, Tomato Products, Vermicelli, Poultry Feed   |
| 5.    | Karamadai     | Pickles, Leaf Plates  |
| 6.    | Kinathukadavu | Pickles, tomato Jam, Coir Industries pickles, Vermicelli, Herbal based, Tomato Products, Poultry                      |
| 7.    | Madathukulam  | Feed  |
| 8.    | Madukkarai    | Pickles, Tomato Products, Bakery, Vermicelli  |
| 9.    | Pollachi      | Pickles, Tomato Products, Vermicelli, Coir Products, Coconut Shell powder,  |
| 10.   | Pongalur      | Poultry Feeds   |
| 11.   | Sulthanpet    | Pickles, Poultry Feed   |
| 12.   | Thondamuthur  | Pickels, Tomato Products, Agro based Industries, Silk Reeling   |
| 13.   | Udumalpet     | Coir Products, Pickles, Tomato Products, Silk Reeling   |

#### **5.6.8 Details of Existing arrangements for networking the Production, Marketing, Storage, Post-harvest handling & Processing , etc.**

Besides the regulated markets, godowns are maintained by Civil Supplies Department, Agriculture Department, Cooperatives, Panchayat Unions and TN Warehousing corporation. There are also local shandies used for marketing of fruits and vegetables.

To generate employment opportunities in rural areas and to improve rural economy, the Government of Tamil Nadu is implementing Anna Marumalarchi Pudhia Thittam to promote agro based and food processing industries, under which capital subsidy, Power Tariff Subsidy is provided by DIC to units (with minimum capital outlay

of Rs. 20 lakh, Rs. 10 lakh in uncovered blocks). The escort support in the preparation of project reports, access to funding, obtaining, statutory clearances and power connection for the, projects are provided by the General Manager, District Industries Center.

### **5.7 Scope in Allied Sector**

There is a great demand for poultry products in the district. In fact, the state government has taken up contract farming for maize in the potential areas so that the poultry growers are able to get better priced poultry feed. There are good number of milk societies in the district. Therefore, there is scope for milk processing plants and manufacture of milk products.

Availability and Gaps in Infrastructure and Support Services - Existing infrastructure for promotion of agro & food processing industry.

The rural network and communication in the place are good, which provides opportunity for developing agro based industries. TNAU has been maintaining incubator units for agro processing wherein farmers/ plantation and fruit crop growers could process their produce at cost and then could commence processing product on a commercial basis. In fact, there is ample scope for tender coconut water and sugarcane juice, to be sold in sachets/tetra pack. There is also good scope for units for drying of coconut. The Coconut oil producing companies are demanding copra, dried coconut and there is growing demand for drier unit. It was indicated that recently farmers cultivating mushroom had visited TNAU and processed the mushroom and its juice was packed in tins for export. Similarly, it was indicated that there is a great scope for bakery units. Because of the advantages of high concentration of industries, especially small and medium, there is good potential for engineering industries under this sector.

### **5.8 Marketing Infrastructure and Support Services Available – Coimbatore District**

State ware houses are located at Avinashi, Coimbatore, Mettupalayam, Palladam, Pollachi and Tiruppur, while central ware houses located at Coimbatore, Kovaipudur, Udumalpet and Neelikonampalayam. There are four cold storage units in the district,

three at Mettupalayam and one at Coimbatore city, with a total capacity of 12400MT of produce. The unit located at Coimbatore with a capacity of 1500 MT is mainly used for tamarind and chillies. However, one unit at Mettupalayam (2500MT) is mainly used for storage of potato and vegetable produced in Coimbatore and Nilgris districts. The remaining two units at Mettupalayam are used for multi purposes. As regards storage Godowns, all the existing 419 Godowns are owned by the government. The details of the ware houses, storage Godowns available in the district as on 31 march 2005 are furnished below.

**Table 5.34. Warehouses and Storage Godowns Available in the District**

| Sl.No | Ware housing Godown                         | No.        | Capacity (MT) |
|-------|---|------------|---------------|
| 1.    | Food corporation of India (central Govt.)   | 2          | 165250        |
| 2     | TN warehousing corporation (State govt.)    | 3          | 33375         |
| 3     | Agriculture department (State govt.)        | 33         | 216500        |
| 4     | Cooperation department (State govt)         | 368        | 68035         |
| 5     | TN civil supplies corporation (State govt.) | 12         | 46270         |
| 6     | Private (CISS assisted)                     | 1          | 528           |
|       | <b>Total</b>                                | <b>419</b> | <b>529958</b> |

There are 18 regulated markets, 2 sub markets and one marketing committee in Coimbatore district. The Regulated Markets are located at Tiruppur, Avanashi, Sevur, Annur, Karamadai, Coimbatore, Sulur, Palladam, Udumalpet, Anamalai, Kinathukadavu, Pollachi, Malayadi palayam, Negamam, Thondamuthur, Madathukulam, Pethampatti and Pongalur.

Regulated Markets for Coconut are located at Pollachi, Udumalpet, Anamalai, Kinathukadavu and Negamam.

- for Maize at Palladam, Tiruppur and Udumalpet;
- for Paddy at Pollachi and Anamalai;

- for Cotton at Tiruppur, Avanashi, Sevur and Annur;
- for Tobacco at Palladam, Pongalur, Annur and Karamadai; and
- for Red Chilli at Pollachi and Tiruppur.

Majority of these Regulated Markets (RMs) are provided with the necessary infrastructure such as godowns, transaction sheds, drying yards, farmers' rest sheds etc. The total arrival of agricultural produce to these markets during 2004 – 05 was of the order of Rs. 384 lakhs. In order to avoid distress sale by the small and marginal farmers in the peak season, some of the RMs have been identified for providing pledge loans to the farmers. Under this scheme, the farmers can store their produce in these godowns for a maximum period of 6 months and take pledge loan at a maximum of 75 per cent of the value of the produce upto the maximum limit of Rs. 25000. During 2002 – 03, market committee had issued Rs. 335.37 lakhs under pledge loans. The sector depends, to a large extent, on the support from the government. A capital investment subsidy scheme for construction / expansion / modernization of multi chamber / multi product cold storages and storages for horticultural produce was introduced by the GOI. Cold storages would help in minimizing post harvest losses being suffered by farmers, particularly small and marginal farmers. The scheme is implemented by National Horticulture Board in collaboration with NABARD / National Cooperative Development Corporation (NCDC) in IX Five Year Plan starting from 1999 – 2000. The cold storage capacity may vary from 10 MT to 5000 MT depending upon the volume, value, etc. of the products to be stored such as horticultural produce and other perishable items such as dairy products, meat, fish, chicken, etc. The permissible subsidy is subject to a maximum of Rs. 50 lakhs per project. The scheme has been extended for implementation during the X plan period also. Many bankers are encouraging the farmers in taking up this credit linked subsidy scheme.

### **Infrastructure to be Developed**

The availability of subsidy under the Government schemes for Cold storages/ godowns etc. may generate investments from the private sector. Infrastructure like Rural

Godowns, Drying Yards, Agribusiness Centre are planned to be established under the Irrigated Agriculture Modernization and Water Bodies Restoration and Management (IAM WARM) Project in Coimbatore district under sub basin frame work of Aliyar and Palar. Initiatives on Agribusiness Development Facility is made under IAM WARM Project by Government of Tamil Nadu with World Bank Funds. Since Coimbatore city is the place known for diversification of commercial crops which would naturally attract investments on agro processing. For that, Agribusiness Development Facility funds will be useful for capacity building.

## **5.9 Agricultural Credit**

### **5.9.1 Banking facilities – Coimbatore District**

The district has great advantage of having a large number of banks. Of the total 47 banks in the district, 45 are Commercial banks, 1 District Central Cooperative Bank (DCCB) and the remaining one is Tamil Nadu Cooperative Agricultural and Rural Development Bank (TNSCARD). The district does not have any Regional Rural Bank (RRB). The Commercial banks have the maximum number of branches of 414. Among the Commercial banks, State Bank of India (SBI) has the maximum number of 47 branches, followed by Canara Bank, the lead Bank of the district, has 40 branches. The CDCC bank has 25 branches and Tamil Nadu State Agricultural and Rural Development Bank(TNSCARD) has 13 branches. The district has the benefit of having the controlling offices of eight Commercial banks. Among the private banks, South Indian Bank has the maximum number of 23 branches.

Of the total branches of 452, 122 branches are in the rural areas, 96 are in semi-urban and the remaining 234 are in Urban. Canara Bank has the maximum number of 16 branches in rural areas. Of the 45 commercial banks, 27 banks do not have any branches in the rural areas.

During 2005-06, the advances have gone up to Rs.19384.38 crores. The total priority sector has gone up to reach the level of Rs.7,996.61 crores. The PMRY targets were achieved during last year.

## **CHAPTER - VI**

### **DISTRICT PLAN**

#### **6.1 Agriculture**

##### **6.1.1 Paddy**

###### **Introduction**

In Coimbatore District, Paddy is cultivated in Aliyar Old and New Ayacut areas and Amaravathy Old and New Ayacut areas. After the introduction of 4 Zone pattern in Parambikulam Aliyar Project, Paddy cultivation was discontinued. In 1980-81, 40000 hectare were under Paddy cultivation. This area was reduced to 6148 Hectares in the year 2006-2.007. This year the area covered under Paddy is 5101 Hectares, Paddy is cultivated in two seasons Kuruvai (June-July), Samba (August-September).

###### **Productivity and Production**

Though the area under Paddy is decreasing, Department of Agriculture is keen in concentrating efforts to increase the productivity by all improved Technologies. Steps were taken to increase the productivity from 4100 kgs/Ha. to 5000 kgs.

The District Agriculture Plan for Paddy will be implemented with cluster approach using SRI Techniques in four Blocks of Anamalai, Madathukulam, Thondamuthur and Udumalpet with an area of 6500 Hectare in 2008-09

###### **The Project Plan Components include**

1. Incentive for seed production to Self Help Groups @ Rs.3/-Kg. (TANW ABE) 35 -Metric Tons.
2. Seed distribution subsidy for the seeds produced (that is 35 MT) by Self Help Groups Rs. 5/kg.
3. Supply of quality certified seeds at nominal cost to enhance the Seed Replacement Ratio (SRR) @ R.s.5/Kg. (for public and private seeds - 10 Metric Tonnes)
4. Distribution of Green manure seeds at 75 per cent subsidy for 10 Metric Tonnes @ Rs. 1 5/kg.

5. Assistance to start Vermi Compost production Unit @ Rs, 20000 per unit especially for Women Self Help Groups 10 Nos,
6. Transplanter to TANWABE /FIG/ Farmers at 50% Subsidy or Rs.75000/No. 1 No
7. Distribution of Paddy transplanter at 50% cost or Rs.75000/-whichever is less-2 Nos:
8. Power Thrasher @ Rs. 50000/No. 2 Nos.
9. Tarpaulins Rs.2000/No. 100 Nos
10. Thrashing floor @ Rs.100000/No. 1 No
11. Seed Processing Machine for State Seed Farm, Pappankulam 1 No.
12. Back closer 1/Block@ Rs.8000./- 20 Nos.

### **Description**

- Green Manure Seeds are required to raise Green Manure Crop thereby the soil will be enriched.
- Paddy transplanter, power, thrasher are necessary to overcome the labour shortage.
- Thrashing floor and Tarpaulins back closure are necessary to process and get good seeds.
- Moisture meters are necessary to find out the moisture in the harvested produce and store them without affecting the germination:

In the State Seed Farm Pappankulam, there is one processing machine which is very old. All the seeds from State Seed Farm, Pappankulam and the seeds received from other blocks has to be processed. So purchasing a seed processing machine is a must.

### **Conclusion**

Considering the facts, the District Agricultural Plan for Paddy may be approved.

**Table 6.1 Project Proposal for Paddy – 2008-09**

| Sl. No | Component  | Unit          | 2008-09 |              |
|--------|--|---------------|---------|--------------|
|        |  |               | Phy.    | Fin (Lakhs)  |
| 1      | Incentive for seed production to Self Help Groups @ Rs.3 / kg. - TABWAVE Groups                                  | Metric tonnes | 35      | 1.05         |
| 2      | Seed distribution subsidy for the seeds produced by Self Help Groups @ Rs.5 / kg.                                | Metric tonnes | 35      | 1.75         |
| 3      | Supply of Quality Certified seeds at nominal cost to enhance the SRR @ Rs.5/- per kg. (Public and Private seeds) | Metric tonnes | 10      | 0.50         |
| 4      | Distribution of Green Manure seeds at 75% subsidy of Rs.15/kg.   | Metric tonnes | 10      | 1.13         |
| 5      | Assistance to start vermicompost production unit @ Rs.20000 per unit (Self Help Group women farmers)             | L.Nos         | 10      | 2.00         |
| 6      | Transplanter to TANWABE / FIG / farmers @ Rs.75000 each or 50% subsidy   | Nos           | 1       | 0.75         |
| 7      | Distribution of paddy transplanter @ 75000 or 50 % subsidy   |               | 2       | 1.50         |
| 8      | Power Thrasher @ Rs. 50000/ per No.  |               | 2       | 1.00         |
| 9      | Tarpaulin @ Rs. 2000/ per No.  |               | 100     | 2.00         |
| 10     | Thrashing Floor @ Rs. 100000 per No.   |               | 1       | 1.00         |
| 11     | Seed processing Machine for State Seed Farm, Pappankulam   |               | 1       | 1.00         |
| 12     | Back closer 1 per Block @ Rs.8000  |               | 20      | 1.60         |
|        |  |               |         | <b>15.28</b> |

## **6.1.2 Maize**

### **Introduction**

In Coimbatore District, Maize is becoming a cash crop. Since there is a lot of demand from poultry producers and the prevailing good market rate, ryots are voluntarily switching over to Maize.

Area under Maize in 1980s was 11000 Hectare. Now the area under Maize is 33000 Hectare. In Parambikulam Aliyar Project area and in well irrigated areas maize is the major crop. There is a large potential to increase the yield (now obtained i.e.3000kgs) from 3000 to 4000 kgs/Hectare. This is possible by distributing Hybrid seeds to farmers and advocating new technologies from seed to seed, introduction of machineries, increasing the efficiency of pump sets by replacing new ones.

### **2008-09 District Plan was Chalked Out With the Following**

1. Seed distribution subsidy for private Hybrids 21 MT. (75% subsidy). Because Private Hybrid is a must to get more yield.
2. PVC pipes supply to conduct water 25 sets. Because it is required to conduct water without wastage.
3. Technical Consultant is necessary to spread latest technologies. Hence, Technical Consultant 4 Nos, in B.Sc (Agriculture) Cadre.
4. Farmers Training is necessary to know the latest technologies before the season. Farmers Training 50 farmers/ day -10 Nos
5. Tarpaulins are necessary to get good grains and drying. Tarpaulins supply - 50 Nos.
6. Bund former is necessary to form bunds and channels thereby ryots can maintain the optimum spacing. Bund Farmer distribution - 100 Nos.
7. Chaff cutters are necessary for the ryots to cut maize stalks for their cattle. Chaff cutter distribution - 100 Nos.
8. Combined harvester is a necessary to tackle the labour scarcity. Combined harvester - 3 Nos.
9. Replacing the old pump sets is necessary to bring more areas under Maize cultivation. Increasing efficiency of pump sets by replacing old one@ Rs.15000/pump set - 60 Nos.

## Conclusion

Considering the above facts, the District Plan for Maize may be approved.

**Table 6.2 Project Proposal for Maize – 2008-09**

| S. No. | Component  | Unit | 2008-09 |              |
|--------|--|------|---------|--------------|
|        |  |      | Phy.    | Fin(Lakhs)   |
| 1      | Seed distribution subsidy for private hybrids @50% subsidy limited to Rs.75/Kg | MT   | 20      | 15.00        |
| 2      | PVC pipeline @15000  | Nos. | 25      | 1.88         |
| 3      | Technical Consultant   | Nos. | 4       | 4.00         |
| 4      | Farmers Training   | Nos. | 10      | 1.00         |
| 5      | Tarpaulin @ Rs. 2000/ per No.  | Nos. | 50      | 1.00         |
| 6      | Bund Former  | Nos. | 100     | 15.00        |
| 7      | Chaff cutter @ 30000   | Nos. | 100     | 30.00        |
| 8      | Combined Harvester @15 lakhs   | Nos. | 3       | 2.25         |
| 9      | Shredder @ 1 lakh  | Nos. | 5       | 2.50         |
| 10     | Increasing Efficiency of pumpsets by replacing old @ Rs. 15000/ pumpset        | Nos. | 60      | 9.00         |
|        |  |      |         | <b>81.63</b> |

### 6.1.3 Cotton

#### Introduction

Once Coimbatore District was called 'Manchester of South India'. Area under Cotton in 1980-81 was 15200 Hectares, and in 1992-93 it was 25000 Hectares The area under cotton cultivation diminished due to following factors: 1) Labour shortage, 2) High cost- of inputs, 3) Pest and disease problem and 4) Cotton price is low.

Area under cotton has come down to 2750 Hectare in 2007-08. Increasing the area is very important to feed the Textile mills, Private Bt Cotton Hybrid introduced is giving very high yield. The price of cotton is also increasing. At this juncture, it is necessary to help the farmers by providing some important inputs at subsidized cost.

### **The District Plan contains the following components**

1. Distribution of Bt Cotton private Hybrid seeds 100 kgs @ 75% subsidy.
2. BT. Cotton technology demonstration @ Rs.1 5000/No,- 10 Nos
3. Distribution of Power Sprayer at 50% cost- 100Nos
4. Distribution of Hand Operated Sprayers at 50%o cost- 50Nos
5. Distribution of PVC pipes to conduct water 150 sets.

Bt Cotton Technology Demonstration and Distribution of Bt Cotton Hybrid Seeds are included with the aim of showing its results, yield and income, thereby the ryots will come forward without inhibition. Sprayers are necessary to take up plant protection measures if necessary. PVC pipes *distribution is necessary to* conduct water without wastage.

### **Conclusion**

To increase area under cotton cultivation step by step; the components mentioned in the District Plan may be approved.

**Table 6.3 Project Proposal for Cotton – 2008-09**

| Sl. No. | Component  | 2008-09 |               |
|---------|--|---------|---------------|
|         |  | Phy.    | Fin(Lakhs)    |
| 1       | Distribution of Bt. Cotton Private Hybrid seeds @ 75 | 100 Kgs | 0.075         |
| 2       | Bt. Cotton technology demonstration @ 15000/ No.     | 10      | 1.50          |
| 3       | Distribution of Power sprayer @20000                 | 100     | 10.00         |
| 4       | Distribution of Hand operated Sprayer @10000         | 50      | 2.50          |
| 5       | Distribution of PVC Pipes @15000                     | 150     | 11.25         |
|         |  |         | <b>25.325</b> |

#### **6.1.4 Groundnut**

In the year 1992-93, area under Groundnut was 59000 hectares: In 1997-99 the area was 900 hectares. This has come down to 13133 hectares in 2007-08.

#### **Reasons for the decrease in areas are**

1. Seed cost,
2. High price of fertilizer & pesticides,
3. Cost of cultivation more and
4. Yield is low. To overcome these limitations and to encourage the farmers to bring more areas Ground nut District Plan for Groundnut was prepared.

#### **The following components are included in 2008-09 District Plan**

1. Seed production subsidy for 50 Metric Tonnes. @ Rs,10/kg,
2. Seed distribution subsidy for 50 Metric Tonnes. @ Rs.12/Kg.
3. Enriched Farm Yard Manure preparation and Demonstration 200 Nos. @Rs.1000/No.
4. Distribution of Decorticator 20 Nos. at 50% cost or Rs,15000/ No.
5. Farmers Training 50 farmers @ Rs.10000/training-12 Nos.
6. Distribution of Gypsum 100 Hectare @ Rs, 500/Ha.

Seed Production subsidy and seed distribution subsidy are suggested to encourage the farmers to involve in seed production and distribution activities. Application of Enriched Farm Yard Manure is the base for the better growth of Groundnut crop. Ryots are not using it due to cost factor. Ryots will prepare if subsidy is available. Decorticators helps to reduce the overall cost of cultivation. Gypsum application will boost the yield. Farmers Training will help to know the low cost and no cost technologies and interact with each other.

## Conclusion

Considering the above facts, District Plan for Groundnut may be approved.

**Table 6.4 Project Proposal for Groundnut – 2008-09**

| Sl. No. | Component  | Unit          | 2008-09 |              |
|---------|--|---------------|---------|--------------|
|         |  |               | Phy.    | Fin(Lakhs)   |
| 1       | Seed production subsidy @ Rs.10 / kg.                          | Metric tonnes | 50      | 5.00         |
| 2       | Seed distribution subsidy for the seeds produced @ Rs.12 / kg. | Metric tonnes | 50      | 6.00         |
| 3       | Enriched FYM preparation & Demo @ Rs. 1000 / No                | Metric tonnes | 200     | 2.00         |
| 4       | Distribution of Decordicator @ 50 % subsidy or Rs. 15000       | Metric tonnes | 20      | 3.00         |
| 5       | Farmers Training 5 Nos. @ Rs. 10000                            |               | 12      | 1.20         |
| 6       | Distribution of Gypsum @ Rs. 500/ Ha                           | Ha            | 100     | 0.50         |
|         | <b>Total</b>   |               |         | <b>17.70</b> |

### 6.1.5 Coconut

Coimbatore District has an area of 101510 Hectares under Coconut cultivation.

Major Taluks and area are given below:

| Taluk        | Ha    |
|--------------|-------|
| Coimbatore   | 10100 |
| Mettupalayam | 1336  |
| Avinashi     | 692   |
| Tiruppur     | 3937  |
| Palladam     | 10568 |
| Pollachi     | 49265 |
| Udumalpet    | 24662 |

Though the area is increasing day by day, the yield/ tree is low. In order to get more nuts/tree Hybrid & High yielding varieties should be distributed at subsidized cost,

Study tours should be arranged for the coconut growers to visit Coconut Research Station, Kasargode, Kerala. Tirupur, Hebbal (Karnataka). Pheromone traps and lures should be supplied to irradiate Rhinoceros and Red Palm Weevil. Tree climbers should be distributed to tackle the labour problems.

**Having these points in mind Coconut District Plan for 2008-7009 was prepared with following components**

1. Hybrid Coconut T x Seedlings distribution 15000 nos. subsidy @ Rs.15/seedling.
2. High yielding Arasamparty Tail Seedlings distribution 20000 Nos, subsidy @ Rs. 7.50 / seedling.
3. Tree climber 50%o subsidy or Rs,2000/No. 30 Nos.
4. Study tour to Coconut Research Station, Kasargode
5. (Kerala), Tiptur, Hebbal. (Karnataka). 20 trips.
6. Pheromone Traps distribution for Rhinoceros and
7. Red Palm Weevil 250 + 250 Nos.

To increase the Coconut Hybrid Yield from 150 to 250 nuts and to increase the Coconut High Yielding Variety Yield from 120 to 200, above components are necessary.

### **Conclusion**

Considering these facts the District Plan for Coconut, Coimbatore District may be approved.

**Table 6.5 Project Proposal for Coconut – 2008-09**

| Sl. No. | Component  | Unit                           | 2008-09 |              |
|---------|--|--------------------------------|---------|--------------|
|         |  |                                | Phy.    | Fin (Lakhs)  |
| 1       | Coconut T x D seedling distribution @ Rs. 15/ seedlings                          | (Nos)                          | 15000   | 2.25         |
| 2       | Tall Seedling distribution @ Rs. 7.5 / seedling                                  | (Nos)                          | 20000   | 1.50         |
| 3       | Tree climber @ Rs. 2000 / No @ 50 % subsidy                                      | (Nos)                          | 30      | 0.30         |
| 4       | Study tour to Coconut Research Station, Kasargode, Kerala and Tiptur, Karnataka, | Officers 20 Nos and            | 20      | 2.00         |
|         |  | Ryots 50 Nos/ trip for 5 trips | 250     | 15.00        |
| 5       | Pheramone trap distribution for Rhinoceros and Red weevil                        | No                             | 250+250 | 5.00         |
|         |  |                                |         | <b>26.05</b> |

**Table 6.6 Detailed Budget Split up for Agriculture 2008-09**

| S.No | Particulars  | 2008-2009 (Rs. in Lakhs) |
|------|--------------|--------------------------|
| 1.   | Paddy        | 15.275                   |
| 2.   | Maize        | 81.625                   |
| 3.   | Cotton       | 25.325                   |
| 4.   | Ground nut   | 17.700                   |
| 5.   | Coconut      | 26.050                   |
|      | <b>Total</b> | <b>165.975</b>           |

**Table 6.7 Project Proposal for Paddy - 2008-2012****(Rs. in Lakhs)**

| S. No | Component  | Unit          | 2008-09  |           | 2009-10  |           | 2010-11  |           | 2011-12  |           | Total Amount |
|-------|--|---------------|----------|-----------|----------|-----------|----------|-----------|----------|-----------|--------------|
|       |  |               | Physical | Financial | Physical | Financial | Physical | Financial | Physical | Financial |              |
| 1     | Incentive for seed production to Self Help Groups @ Rs.3 / kg. - TABWAVE Groups                                  | Metric tonnes | 35       | 1.05      | 35       | 1.05      | 35       | 1.05      | 35       | 1.05      | 4.20         |
| 2     | Seed distribution subsidy for the seeds produced by Self Help Groups @ Rs.5 / kg.                                | Metric tonnes | 35       | 1.75      | 35       | 1.75      | 35       | 1.75      | 35       | 1.75      | 7.00         |
| 3     | Supply of Quality Certified seeds at nominal cost to enhance the SRR @ Rs.5/- per kg. (Public and Private seeds) | Metric tonnes | 10       | 0.50      | 10       | 0.50      | 15       | 0.75      | 15       | 0.75      | 2.50         |
| 4     | Distribution of Green Manure seeds at 75% subsidy of Rs.15/kg.   | Metric tonnes | 10       | 1.13      | 10       | 1.13      | 10       | 1.13      | 10       | 1.13      | 4.50         |
| 5     | Assistance to start vermicompost production unit @ Rs.20000 per unit (Self Help Group women farmers)             | L.Nos         | 10       | 2.00      | 10       | 2.00      | 15       | 3.00      | 20       | 4.00      | 11.00        |

Table 6.7 Contd.....

| S. No | Component  | Unit | 2008-09  |               | 2009-10  |               | 2010-11  |               | 2011-12  |               | Total Amount |
|-------|--|------|----------|---------------|----------|---------------|----------|---------------|----------|---------------|--------------|
|       |  |      | Physical | Financial     | Physical | Financial     | Physical | Financial     | Physical | Financial     |              |
| 6     | Transplanter to TANWABE / FIG / farmers @ Rs.75000 each or 50% subsidy | Nos  | 1        | 0.75          | 1        | 0.75          | -        | 0.00          | -        | 0.00          | 1.50         |
| 7     | Distribution of paddy t @ 75000 or 50 % subsidyransplanter             |      | 2        | 1.50          | 2        | 1.50          | 2        | 1.50          | 2        | 1.50          | 6.00         |
| 8     | Power Thrasher @ Rs. 50000/ per No.                                    |      | 2        | 1.00          | 2        | 1.00          | 2        | 1.00          | 2        | 1.00          | 4.00         |
| 9     | Tarpaulin @ Rs. 2000/ per No.  |      | 100      | 2.00          | 100      | 2.00          | 100      | 2.00          | 100      | 2.00          | 8.00         |
| 10    | Thrashing Floor @ Rs. 100000 per No.                                   |      | 1        | 1.00          | 1        | 1.00          | 1        | 1.00          | 1        | 1.00          | 4.00         |
| 11    | Seed processing Machine for State Seed Farm, Pappankulam               |      | 1        | 1.00          | 1        | 1.00          | -        | 0.00          | -        | 0.00          | 2.00         |
| 12    | Back closer 1 per Block @ Rs.8000                                      |      | 20       | 1.60          | 0        |               | 0        |               | 0        |               | 1.60         |
| 13    | Miosture metre   |      | 10       |               | 10       |               | 0        |               | 0        |               |              |
|       | <b>Total</b>   |      |          | <b>15.275</b> |          | <b>13.675</b> |          | <b>13.175</b> |          | <b>14.175</b> | <b>56.30</b> |

**Table 6.8 Project Proposal for Maize - 2008-2012****(Rs. in Lakhs)**

| Sl. No. | Component  | Unit          | 2008-09  |               | 2009-10  |               | 2010-11  |               | 2011-12  |               | Total Amount  |
|---------|--|---------------|----------|---------------|----------|---------------|----------|---------------|----------|---------------|---------------|
|         |  |               | Physical | Financial     | Physical | Financial     | Physical | Financial     | Physical | Financial     |               |
| 1       | Seed distribution subsidy for private hybrids                          | Metric tonnes | 20       | 15.00         | 20       | 15.00         | 25       | 18.75         | 25       | 18.75         | 67.50         |
| 2       | PVC pipeline   | Nos.          | 25       | 1.88          | 30       | 2.25          | 25       | 1.88          | 35       | 2.63          | 8.63          |
| 3       | Technical Consultant   | Nos.          | 4        | 4.00          | 4        | 4.00          | 6        | 6.00          | 6        | 6.00          | 20.00         |
| 4       | Farmers Training   | Nos.          | 10       | 1.00          | 15       | 1.00          | 20       | 2.00          | 25       | 2.50          | 6.50          |
| 5       | Tarpaulins   | Nos.          | 50       | 1.00          | 100      | 2.00          | 150      | 3.00          | 150      | 3.00          | 9.00          |
| 6       | Bund Former  | Nos.          | 100      | 15.00         | 100      | 15.00         | 100      | 15.00         | 100      | 15.00         | 60.00         |
| 7       | Chaff cutter   | Nos.          | 100      | 30.00         | 200      | 60.00         | 250      | 75.00         | 300      | 90.00         | 255.00        |
| 8       | Combined Harvester   | Nos.          | 3        | 2.25          | 5        | 3.75          | 2        | 1.50          | 2        | 1.50          | 9.00          |
| 9       | Shredder @ 1 lakh  | Nos.          | 5        | 2.50          |          | 0.00          |          | 0.00          |          | 0.00          | 2.50          |
| 10      | Increasing Efficiency of pumpsets by replacing old @ Rs.15000/ pumpset | Nos.          | 60       | 9.00          | 50       | 7.50          | 50       | 7.50          | 50       | 7.50          | 31.5          |
|         | <b>Total</b>   |               |          | <b>81.625</b> |          | <b>110.50</b> |          | <b>130.63</b> |          | <b>146.88</b> | <b>469.63</b> |

**Table 6.9 Project Proposal for Cotton - 2008-2012****(Rs. in Lakhs)**

| Sl. No. | Component  | Unit | 2008-09  |               | 2009-10  |               | 2010-11  |               | 2011-12  |               | Total Amount  |
|---------|--|------|----------|---------------|----------|---------------|----------|---------------|----------|---------------|---------------|
|         |  |      | Physical | Financial     | Physical | Financial     | Physical | Financial     | Physical | Financial     |               |
| 1       | Distribution of Bt. Cotton Private Hybrid @ 75 % seeds | Kgs  | 100      | 0.075         | 100      | 0.075         | 100      | 0.075         | 100      | 0.075         | 0.30          |
| 2       | Bt. Cotton technology demonstration @ 15000/ No.       |      | 10       | 1.50          | 15       | 2.25          | 15       | 2.25          | 20       | 3.00          | 9.00          |
| 3       | Distribution of Power sprayer                          |      | 100      | 10.00         | 100      | 10.00         | 150      | 15.00         | 150      | 15.00         | 50.00         |
| 4       | Distribution of Hand operated Sprayer                  |      | 50       | 2.50          | 100      | 5.00          | 50       | 2.50          | 50       | 2.50          | 12.50         |
| 5       | Distribution of PVC Pipes                              |      | 150      | 11.25         | 200      | 15.00         | 250      | 18.75         | 300      | 22.50         | 67.50         |
|         |  |      |          | <b>25.325</b> |          | <b>32.325</b> |          | <b>38.575</b> |          | <b>43.075</b> | <b>139.30</b> |

**Table 6.10 Project Proposal for Ground nut - 2008-2012****(Rs. in Lakhs)**

| Sl. No. | Component  | Unit          | 2008-09  |              | 2009-10  |              | 2010-11  |              | 2011-12  |              | Total Amount |
|---------|--|---------------|----------|--------------|----------|--------------|----------|--------------|----------|--------------|--------------|
|         |  |               | Physical | Financial    | Physical | Financial    | Physical | Financial    | Physical | Financial    |              |
| 1       | Seed production subsidy @ Rs.10/kg.                            | Metric tonnes | 50       | 5.00         | 55       | 5.50         | 60       | 6.00         | 60       | 6.00         | 22.50        |
| 2       | Seed distribution subsidy for the seeds produced @ Rs.12 / kg. | Metric tonnes | 50       | 6.00         | 55       | 6.60         | 60       | 7.20         | 60       | 7.20         | 27.00        |
| 3       | Enriched FYM preparation & Demo @ Rs. 1000 / No                | No            | 200      | 2.00         | 250      | 2.50         | 300      | 3.00         | 300      | 3.00         | 10.50        |
| 4       | Distribution of Decordicator @ 50 % subsidy or Rs. 15000       | No            | 20       | 3.00         | 20       | 3.00         | 20       | 3.00         | 20       | 3.00         | 12.00        |
| 5       | Farmers Training 5 Nos.@ Rs. 10000                             |               | 12       | 1.20         | 10       | 1.00         | 10       | 1.00         | 10       | 1.00         | 4.20         |
| 6       | Distribution of Gypsum @ Rs. 500/ Ha                           | Ha            | 100      | 0.50         | 150      | 0.75         | 200      | 1.00         | 200      | 1.00         | 3.25         |
|         |  |               |          | <b>17.70</b> |          | <b>19.35</b> |          | <b>21.20</b> |          | <b>21.20</b> | <b>79.45</b> |

**Table 6.11 Project Proposal for Coconut – 2008-2012****(Rs. in Lakhs)**

| Sl. No. | Component   | Unit                | 2008-09  |           | 2009-10  |           | 2010-11  |           | 2011-12  |           | Total Amount |
|---------|---|---------------------|----------|-----------|----------|-----------|----------|-----------|----------|-----------|--------------|
|         |   |                     | Physical | Financial | Physical | Financial | Physical | Financial | Physical | Financial |              |
| 1       | Coconut T x D seedling distribution @ Rs. 15/ seedlings                         | (Nos)               | 15000    | 2.25      | 20000    | 3.00      | 25000    | 3.75      | 30000    | 4.50      | 13.50        |
| 2       | Tall Seedling distribution @ Rs. 7.5 / seedling                                 | (Nos)               | 20000    | 1.50      | 3000     | 0.23      | 3000     | 0.23      | 30000    | 2.25      | 4.20         |
| 3       | Tree climber @ Rs. 2000 / No @ 50 % subsidy                                     | (Nos)               | 30       | 0.30      | 50       | 0.50      | 50       | 0.50      | 50       | 0.50      | 1.80         |
| 4       | Study tour to Coconut Research Station, Kasargode, Kerala and Tiptur, Karnataka | Officers 20 Nos and | 20       | 2.00      | 30       | 3.00      | 30       | 3.00      | 20       | 2.00      | 10.00        |



## 6.2 Horticulture

Coimbatore district, the Manchester of South India, lies in the North western part of Tamilnadu with an area of 7469 sq.kms. The maximum and minimum temperature ranges between 40°C and 15°C respectively. The annual average rainfall is about 700mm and is favoured by both South west and North east monsoon. This district has a very bright future for Horticulture crops and efforts are on the anvil by the Government to provide necessary help for increasing the overall production of horticultural produces grown in this district.

Precision farming, which has gained momentum during the past few years, has proved beyond doubt that the production of horticultural crops can be increased by following certain production techniques. It is planned to implement precision farming through centrally assisted scheme called National Agriculture Development Programme. The aim of this programme is to achieve four per cent annual growth during the XI plan period by ensuring holistic development of horticulture related sectors. It is also planned to educate and help the farmers to gain accessibility to the markets by upgrading the market yards and by developing agri- business hubs.

The National Agriculture Development Programme is planned to be implemented in all the 19 blocks of this district based on the potentiality of the concerned block. Cluster approach will be followed in the implementation of the project and the project component includes establishment of drip irrigation system, application of water soluble fertilizers, establishment of support system for crops and laying of demonstration plots so that the farmers can have a practical glimpse of the techniques to be followed.

The ultimate result of this programme is improvement in yield, efficient water and fertilizer use, improvement of soil health which ultimately fetches additional income to the farmer.

**i) Problems Focus**

The farmers are unaware of the latest cultivation techniques and are mostly depending on the monsoon rains. They are in the habit of applying excess fertilizers/ other inputs and are reluctant to adhere to the latest mechanisms which are frequently thrust upon them both by officials and by way of trainings being conducted by scientists in the krishi vigyan kendras / FTCs. This reluctance and lack of knowledge leads to poor yield and effective use of fertilizers and other inputs are not made.

**ii) Constraints**

- 1) Uneven distribution of rainfall
- 2) Poor cultivation practices
- 3) Lack of knowledge on latest varieties, cultivation practices etc.
- 4) Shortage of labourers
- 5) In efficient Use of fertilizers
- 6) Lack of marketing pool.

**iii) Project Rationale**

The cultivation of vegetables & other horticultural crops have gained momentum in the past few years. As these crops have been newly introduced, the exact cultivation practices/ techniques to be followed are lacking in the field. The farmers are unaware of the techniques and the prevailing situation like erratic climate, monsoon etc. & excess use of fertilizer without proper management leads to reduced yield.

Further the end product, which earns the farmer his bread, is sold at throw away prices because of which he gets dejected & takes hasty decisions.

Summarizing the above facts, proper guidance through effective training, early and correct cultivation practices, efficient use of fertilizers (Water Soluble Fertilizers through drip systems) and appropriate market pool will go a long way in helping the farmer to improve his standard of living. The National Agriculture Development Programme will be a major turning point in the cultivation of Horticulture Crops in the District.

**iv) Project Area**

As of now all the 19 blocks available in this district will be considered for implementation of the project. An area of 500 hectares will be distributed among all the 19 blocks and the target group will be small & marginal farmers only. This scheme will be implemented mostly on cluster approach.

**v) Officers Involved**

- 1) Assistant Director of Horticulture
- 2) Horticultural Officer
- 3) Assistant Agricultural Officer
- 4) Department of Agricultural Engineering
- 5) TNAU (Technical Support & Training
- 6) Field Consultants

| <b>Activities</b>                      | <b>Implementing Agency</b>  |
|--|---|
| Selection of beneficiaries in clusters | Horticulture Officers Assistant Agriculture Officers                          |
| Inputs distribution (seeds etc)        | Assistant Director of Horticulture Officers<br>Assistant Agriculture Officers |
| Drip Irrigation                        | Department of Agril. Engineering  |
| Technical guidance                     | TNAU  |
| Post harvest and value addition        | TNAU  |
| Marketing & Training                   | TNAU  |

**vi) Project Goals**

- 1) To improve production of Horticultural produces.
- 2) Make efficient use of fertilizers by fertigation (drip & water soluble fertilizers)
- 3) Organized marketing by proper channelling.
- 4) To educate the farmers and increase the income of farmers.

**vii) Project Components****a. Drip System for Banana**

Drip system in Banana enhances the water use efficiency, thereby increasing the productivity. Fertigation can be done simultaneously and therefore tangible saving of labour charges can be made. The farmers of the northern side of Coimbatore district which is a potential area for banana will be highly benefited by drip systems and all other technical aspects will be carried out with the help of scientists from TNAU - Coimbatore.

**b. Net House Structure & Pandal for Nursery & Vegetable Production**

Raising of quality, pest free, disease free planting materials in portray is the need of the hour. Moreover under a net house / pandal seedlings can be raised in a compact area & distributed to the farmers according to their demand. Therefore it is proposed to extend financial help to the farmers who are willing to establish net house for raising seedling.

**c. Plastic Crates for Vegetable Handling**

Post harvest handling of vegetable plays important role in getting fair prices to the farmers. Because of damages during post harvest handling, the actual price of the product is reduced. Therefore provision of plastic crates to farmers will go a long way in improving the quality and fetching a better price for the product. Hence it is proposed to distribute plastic crates at subsidised rates.

**d. Banana Bunch Cover**

Provision of bunch cover to banana help the farmers in many ways. It avoids blemishes in the fruit, it is protected by pests, uniformity in fruit colour, quality of the fruit is improved & ultimately the farmer gets a very good price for the quality producers. Therefore it is proposed to provide bunch covers to Banana growers under this schemes.

**e. Humic Acid I Effective Microbes**

Humic acid and application of effective microbes plays a very significant role in general cultivation practices of crop .

**f. Support System for Crops Banana**

Establishment of support system for banana is gaining momentum as providing support system prevents any damage due to wind/ hailstorm, etc. Any sort of mechanical/ physical damage to the crop is prevented by the support system and ultimately the farmer gets a better price for the produce.

**g. Banana Corm Injector**

Cultivation of banana is gaining importance in this district and recently due to the efforts made by this department, farmers have started growing tissue culture plants in Pollachi area. Occurrence of pest and disease in banana crop is unavoidable and hence introduction of corm injector will help the farmers to protect their crop from dreaded diseases which will lead to an increase in the yield.

**h. District Level Farmers Workshop**

Educating the farmers on the latest technology will help in the overall increase in production. Therefore involving enthusiastic farmers/ farmers groups in monthly workshop will help in disseminating the latest technologies to the field. Such workshops will help the farmers to gain better knowledge in the latest cultivation aspects and the same can be shared with other farmers also which will lead to a better management of the crop.

**i. Interstate Exposure Visit**

Practical knowledge & the concept of knowing by seeing helps the farmers to improve their skills in increasing the production and to follow appropriate cultivation techniques. Therefore taking farmers to different states, different research institutions will help them in gaining on hand information on the latest technologies being followed there so that they can implement the same in their own field.

**j. Ten Hectare Mega Demo Plot**

A demonstration plot with all cultivation technologies will go a long way in educating not only farmers from this district but also from other districts & even from

other states. All the latest cultivation aspects will be on display so that the farmers can have first hand knowledge & ultimately will try to follow the technologies in their field. Hence it is proposed to have one 10 hectare mega demonstration field.

#### **k. Enterprising Farmers Association**

Encouraging the group of farmer will lead to major achievements in Horticulture, the group concept is gaining momentum as all the infrastructure available can be shared among them. Therefore providing financial assistance to group of farmers will enhance the sharing of infrastructure available and ultimately the group of farmers will be benefited. Therefore, well established, recognized associations will be enthused to take action to create common infrastructural facilities so that a cluster of small and marginal farmers can take advantage of the same.

#### **viii) Project Cost & Financing**

The project cost & financial details are enclosed.

#### **ix) Implementation Chart of the Project**

|   |   |            |
|---|---|------------|
| Selection of block  |   | 15 days    |
| Identification of beneficiaries   |   | 15 days    |
| Preparation of consolidated plan by involving all departments (AED, DOH & TNAU) | } | 15 days    |
| Training to farmers   | } | 15 days    |
| Installation of drip systems procurement of seeds,                              | } | 2 days     |
| Water Soluble Fertilizers, other inputs   |   |            |
| Implementations of technologies   |   | 2 months   |
| Monitoring and evaluation   |   | 2 months   |
| Data collection   |   | 1 month    |
| Final evaluation documentation  |   | Next month |
| onwards   |   |            |

**Table 6.12 Detailed Budget Split up for Horticulture 2008-09**

| Particulars                        | Rupees in Lakhs 2008-09 |
|------------------------------------|-------------------------|
| Increasing vegetable production    | 58.73                   |
| Increasing banana production       | 325.84                  |
| Horticultural extension activities | 31.25                   |
| <b>Total</b>                       | <b>415.82</b>           |

**Table 6.13 Project Components for banana****(Rs. in Lakhs)**

| S.No | Project Component for banana                         | Unit cost          | 2008-09  |               |
|------|--|--------------------|----------|---------------|
|      |  |                    | Physical | Financial     |
| 1    | Precision Farming                                    | Banana             |          |               |
|      | a. Drip component                                    | Rs. 11,200         | 60       | 24.72         |
|      | b. Input cost  | Rs. 25,000         |          |               |
|      | c. Nursery   | Rs. 5,000          |          |               |
|      | d. Operational cost                                  | 41200              |          |               |
| 2    | Plastics Crates for Vegetable handling and transport | Rs. 250 / crate    | 50       | 0.125         |
| 3    | Banana Bunch cover                                   | Rs. 10 /piece      | 400      | 0.04          |
| 4    | Humic acid / Effective E Microbes                    | Rs.400/litre       | 200      | 0.80          |
| 5    | Support system for crops                             |                    |          |               |
|      | a. Banana  | Rs. 1.5 lakhs / ha | 200      | 300.00        |
| 6    | Banana Corm injector                                 | Rs. 300 / No.      | 50       | 0.150         |
|      | <b>Total</b>   |                    |          | <b>325.84</b> |

**Table 6.14 Project Component for Vegetables****(Rs. in Lakhs)**

| S.No. | Project Component for vegetables                     | Unit cost                   | 2008-09  |              |
|-------|--|-----------------------------|----------|--------------|
|       |  |                             | Physical | Financial    |
| 1     | Precision Farming                                    | <b>Tomato</b>               |          |              |
|       | a. Drip component                                    | Rs. 11,200                  |          |              |
|       | b. Input cost  | Rs. 25,000                  | 50       | 20.60        |
|       | c. Nursery   | Rs. 5,000                   |          |              |
|       | d. Operational cost                                  | 41200                       |          |              |
| 2     | Net House structure                                  |                             |          |              |
|       | a. Nursery & Vegetable production                    | Rs. 1.00 lakh /<br>300 Sq.m | 3        | 3.00         |
| 3     | Pandal for vegetable production                      | Rs. 1.00 lakh /<br>ha       | 10       | 10.00        |
| 4     | Plastics Crates for Vegetable handling and transport | Rs. 250 / crate             | 50       | 0.125        |
| 5     | 10 hectare mega demo plot for the districts          | Rs. 25.00 lakhs each        | 1        | 25.00        |
|       | <b>Total</b>   |                             |          | <b>58.73</b> |

**Table 6.15 Training for Horticulture Farmers**

| Sl. No | Training for horticulture farmers                         | Unit cost                        | Physical | Financial (Rs. in Lakhs) |
|--------|---|----------------------------------|----------|--------------------------|
| 1      | District Level Farmers Workshop                           | Rs.400/farmer/<br>day for 2 days | 300      | 2.40                     |
| 2      | Inter State Exposure visit ( 5 days)                      | Rs. 5,000 /farmer                | 25       | 1.25                     |
| 3      | Enterprising framers associations                         | Rs. 25.00 lakhs each             | 1        | 25.00                    |
|        | Sales outlay points in district (Rent and infrastructure) |                                  | 1        | 2.60                     |
|        | <b>Total</b>  |                                  |          | <b>31.25</b>             |
|        | <b>Total for Horticulture</b>                             |                                  |          | <b>415.82</b>            |

**Table 6.16 Intervention for Horticulture in Coimbatore-2008-09**  
(Rs. in Lakhs)

| S. No | Project Component                                    | Unit cost              |        | 2008-09  |               |
|-------|--|------------------------|--------|----------|---------------|
|       |  |                        |        | Physical | Financial     |
| 1     | Precision Farming                                    |                        |        |          |               |
|       | a. Drip component                                    | Rs. 11,200             | Banana | 60       | 24.72         |
|       | b. Input cost  | Rs. 25,000             | Tomato | 50       | 20.60         |
|       | c. Nursery   | Rs. 5,000              |        |          |               |
|       | d. Operational cost                                  | 41200                  |        |          |               |
| 2     | Net House structure                                  |                        |        |          |               |
|       | a. Nursery & Vegetable production                    | Rs.1.00 lakh/ 300 Sq.m |        | 1        | 1             |
| 3     | Pandal for vegetable production                      | Rs.1.00 lakh / ha      |        | 10       | 10.00         |
| 4     | Plastics Crates for Vegetable handling and transport | Rs. 250 / crate        |        | 100      | 0.175         |
| 5     | Banana Bunch cover                                   | Rs. 10 /piece          |        | 400      | 0.04          |
| 6     | Humic acid / Effective E Microbes                    | Rs.400/litre           |        | 200      | 0.8           |
| 7     | Support system for crops                             |                        |        |          |               |
|       | a. Banana  | Rs. 1.5 lakhs / ha     |        | 200      | 300           |
| 8     | Banana Corm injector                                 | Rs. 300 / No.          |        | 50       | 0.15          |
| 9     | Sales outlay point for district                      |                        |        | 1        | 2.60          |
| 10    | District Level Farmers Workshop                      | Rs. 400/farmer/ day    | 2 days | 300      | 2.40          |
| 11    | Inter State Exposure visit (5 days)                  | Rs. 5,000 / farmer     |        | 25       | 1.25          |
| 12    | 10 hectare mega demo plot for the districts          | Rs. 25.00 lakhs each   |        | 1        | 25.00         |
| 13    | Enterprising framers associations                    | Rs. 25.00 lakhs each   |        | 1        | 25.00         |
|       | <b>Total for Horticulture</b>                        |                        |        |          | <b>415.82</b> |

**Table 6.17 Budget Abstract for Horticulture- Coimbatore District**

| Year         | (Rs.in lakhs)  |
|--------------|----------------|
| 2008-2009    | 415.82         |
| 2009-2010    | 421.45         |
| 2010-2011    | 421.45         |
| 2011-2012    | 421.45         |
| <b>Total</b> | <b>1680.17</b> |



Table 6.18 Contd.....

(Rs. in Lakhs)

| S.No. | Activities  | Unit cost                  | 2008 - 09   |               | 2009 -10    |                | 2010-11    |                | 2011 -12   |                |
|-------|---|----------------------------|-------------|---------------|-------------|----------------|------------|----------------|------------|----------------|
|       |   |                            | Phy         | Fin           | Phy         | Fin            | Phy        | Fin            | Phy        | Fin            |
| 12    | Grapes bird net   | Rs.1.00lakh /ha            | 0           | 0             | 0           | 0              | 0          | 0              | 0          | 0              |
| 13    | Tractor mounted steam boiler                              | Rs.50,000/No               | 0           | 0             | 0           | 0              | 0          | 0              | 0          | 0              |
| 14    | Support system for crops                                  |                            |             |               |             |                |            |                |            |                |
|       | a.Banana  | Rs.1.5lakhs /ha            | 200         | 300.00        | 200         | 300.00         | 200        | 300.00         | 200        | 300.00         |
|       | b.Gloriosa  | Rs.30,000/ha               |             |               |             |                |            |                |            |                |
| 15    | Banana corm injector                                      | Rs.300/No                  | 50          | 0.150         | 50          | 0.150          | 50         | 0.150          | 50         | 0.150          |
| 16    | Mango harvester "   | Rs.500/No                  | 0           | 0             | 0           | 0              | 0          | 0              | 0          | 0              |
| 17    | Sales outlet points in district (Rent and infrastructure) |                            | 1           | 2.600         | 0           | 0              | 0          | 0              | 0          | 0              |
| 18    | District level farmers workshop                           | Rs.400 /farmer /day        | 300/ 2 days | 2.40          | 300/ 2 days | 2.40           | 300/ 2days | 2.40           | 300/ 2days | 2.40           |
| 19    | Inter State Exposure visit (5days)                        | Rs.5,000/ farmer           | 25          | 1.250         | 25          | 1.250          | 25         | 1.250          | 25         | 1.250          |
| 20    | Banana/Amla in noon meal scheme (TANHOPE)                 | Rs.50,000/ group/ district | 0           | 0             | 0           | 0              | 0          | 0              | 0          | 0              |
| 21    | 10 hectare mega demo plot for the District                | Rs.25.00 lakhs each        | 1           | 25.00         | 1           | 25.00          | 1          | 25.00          | 1          | 25.00          |
| 22    | Enterprising farmers associations                         | Rs.25.00 lakhs each        |             | 25.00         | 1           | 25.00          | 1          | 25.00          | 1          | 25.00          |
| 23    | Community fencing   |                            | 0           | 0             | 0           | 0              | 0          | 0              | 0          | 0              |
| 24    | Support for betelvine                                     | Rs.40,000 for 20 cents     | 0           | 0             | 0           | 0              | 0          | 0              | 0          | 0              |
| 25    | Support senna cultivation                                 | Rs.15,000/ha               | 0           | 0             | 0           | 0              | 0          | 0              | 0          | 0              |
|       | <b>Total</b>  |                            |             | <b>415.82</b> |             | <b>421.450</b> |            | <b>421.450</b> |            | <b>421.450</b> |

**Table 6.19 Coimbatore District – Animal Husbandry Sector - Budget 2008-12**

| S. No.                 | Scheme Components   | 2008-2009 |              |            | 2009-2010 |              |            | 2010-2011 |              |            | 2011-2012 |              |            | Total     |              |            |
|------------------------|---|-----------|--------------|------------|-----------|--------------|------------|-----------|--------------|------------|-----------|--------------|------------|-----------|--------------|------------|
|                        |   | Unit Cost | No. of Units | Total Cost | Unit Cost | No. of Units | Total Cost | Unit Cost | No. of Units | Total Cost | Unit Cost | No. of Units | Total Cost | Unit Cost | No. of Units | Total Cost |
| <b>CATTLE/ BUFFALO</b> |   |           |              |            |           |              |            |           |              |            |           |              |            |           |              |            |
| <b>I</b>               | <b>FEED AND FODDER DEVELOPMENT</b>  |           |              |            |           |              |            |           |              |            |           |              |            |           |              |            |
| 1                      | Augmentation of fodder production (Co-3) through SHGs/women entrepreneurs 0.235 lakhs/acre, 10 acres/block, 19 blocks, 190 acres/year for 4 years, 760 acres in 4 years (DAH) | 0.235     | 190          | 44.65      | 0.235     | 190          | 44.65      | 0.235     | 190          | 44.65      | 0.235     | 190          | 44.7       | 0.235     | 760          | 178.60     |
| 2                      | Establishment of 6x6x6 feet silo to ensile sugarcane tops Rs.0.15 Lakh/unit, 75% subsidy, 50 units/year, 200 units in 4 years (DAH)   | 0.113     | 50           | 5.625      | 0.113     | 50           | 5.625      | 0.1125    | 50           | 5.625      | 0.113     | 50           | 5.63       | 0.113     | 200          | 22.50      |
| 3                      | Supply of mineral mixture to dairy cows @ Rs.600/cow/year, 1 kg/cow/month @ Rs.50/kg, 12 kg/year, 5000 cows/year, 20,000 cows in 4years - 4 blocks (DAH)                      | 0.006     | 5000         | 30         | 0.006     | 5000         | 30         | 0.006     | 5000         | 30         | 0.006     | 5000         | 30         | 0.006     | 20000        | 120.00     |
| 4                      | Supply of hand operated chaff cutters to SHG farmers @ Rs.0.20 Lakh/unit, 50% subsidy, 1 unit/block/year, 19 blocks, for 4 years, 76 units totally, 50 % subsidy (DAH)        | 0.1       | 19           | 1.9        | 0.1       | 19           | 1.9        | 0.1       | 19           | 1.9        | 0.1       | 19           | 1.9        | 0.1       | 76           | 7.60       |
| 5                      | Supply of mineral mixture to the milch animals at subsidized cost (50% subsidy), @ 18 kg per year, (DDD)  | 0.005     | 1500         | 7.5        | 0.005     | 2000         | 10         | 0.005     | 2000         | 10         | 0.005     | 1000         | 5          | 0.005     | 6500         | 32.50      |

Table 6.19 Contd.....

| S. No.    | Scheme Components  | 2008-2009 |              |            | 2009-2010 |              |            | 2010-2011 |              |            | 2011-2012 |              |            | Total     |              |            |
|-----------|--|-----------|--------------|------------|-----------|--------------|------------|-----------|--------------|------------|-----------|--------------|------------|-----------|--------------|------------|
|           |  | Unit Cost | No. of Units | Total Cost | Unit Cost | No. of Units | Total Cost | Unit Cost | No. of Units | Total Cost | Unit Cost | No. of Units | Total Cost | Unit Cost | No. of Units | Total Cost |
| 6         | Supply of by-pass protein feed to the milch animals (360 kg/animal/year @ 50% subsidized cost of Rs.9/- per kg (DDD)           | 0.033     | 1250         | 41.25      | 0.033     | 1250         | 41.25      | 0.033     | 1250         | 41.25      | 0.033     | 1250         | 41.3       | 0.033     | 5000         | 165.00     |
| 7         | Chaff cutters for IDF Villages on community basis (mechanized) (DDD)   | 0.7       | 25           | 17.5       | 0         | 0            | 0          | 0         | 0            | 0          | 0         | 0            | 0          | 0.7       | 25           | 17.50      |
| 8         | Chaff cutters for elite farmers (small type) @ Rs.0.20 Lakhs as 100% subsidy (DDD)   | 0.2       | 10           | 2          | 0         | 0            | 0          | 0         | 0            | 0          | 0         | 0            | 0          | 0.2       | 10           | 2.00       |
| 9         | Fodder development activities (for production of fodder seed/slips in dairy or chilling centres and land of DDD) 5 Acres (DDD) | 2.1       | 5            | 10.5       | 0         | 0            | 0          | 0         | 0            | 0          | 0         | 0            | 0          | 2.1       | 5            | 10.50      |
| 10        | Fodder development activities(125 acres in 25 IDF villages and 50 acres in farmers field) (DDD)                                | 0.235     | 125          | 29.38      | 0.235     | 20           | 4.7        | 0.235     | 15           | 3.525      | 0.235     | 15           | 3.53       | 0.235     | 175          | 41.125     |
| <b>II</b> | <b>GENETIC UPGRADATION</b>   |           |              |            |           |              |            |           |              |            |           |              |            |           |              |            |
| 1         | Identification and traceability of breedable bovines @ Rs.20/animal, for 1,91,100 animals (DAH and Dairy Devpt. Dept.)         | 20        | 191100       | 38.22      | 0         | 0            | 0          | 0         | 0            | 0          | 0         | 0            | 0          | 20        | 191100       | 38.22      |
| 2         | Programmed breeding indigenous cattle and buffalo to increase conception rate (DDD)  | 0.007     | 1600         | 11.2       | 0.007     | 1600         | 11.2       | 0.007     | 1600         | 11.2       | 0.007     | 1600         | 11.2       | 0.007     | 6400         | 44.80      |

Table 6.19 Contd.....

| S. No.     | Scheme Components   | 2008-2009 |              |            | 2009-2010 |              |            | 2010-2011 |              |            | 2011-2012 |              |            | Total     |              |            |
|------------|---|-----------|--------------|------------|-----------|--------------|------------|-----------|--------------|------------|-----------|--------------|------------|-----------|--------------|------------|
|            |   | Unit Cost | No. of Units | Total Cost | Unit Cost | No. of Units | Total Cost | Unit Cost | No. of Units | Total Cost | Unit Cost | No. of Units | Total Cost | Unit Cost | No. of Units | Total Cost |
| <b>III</b> | <b>IMPROVEMENT OF LIVESTOCK HEALTH</b>  |           |              |            |           |              |            |           |              |            |           |              |            |           |              |            |
| 1          | Establishment of mobile veterinary clinics @ Rs.5.832 Lakhs/unit, one unit/taluk, 7 taluks, 7 units, (DAH)  | 5.832     | 7            | 40.82      | 0         | 0            | 0          | 0         | 0            | 0          | 0         | 0            | 0          | 5.832     | 7            | 40.82      |
| 2          | Institutional Development-Strengthening of veterinary institutions with basic facilities like fencing, bore-wells, water troughs, minor repairs etc. @ Rs.5.0 Lakh /Institution, for 44 units (DAH) | 5         | 44           | 220        | 0         | 0            | 0          | 0         | 0            | 0          | 0         | 0            | 0          | 5         | 44           | 220.00     |
| 3          | Control of parasitic diseases through treatment to enhance vaccine response @ Rs.1/sheep or goat and Rs.3/calf, 4 times per year, Rs.30.0 Lakhs/year, for 4 years (DAH)                             |           |              | 30         |           |              | 30         |           |              | 30         |           |              | 30         |           |              | 120.00     |
| 4          | Buffalo calf development programme (200 calves/year) (DDD)  | 0.148     | 200          | 29.6       | 0.148     | 200          | 29.6       | 0.148     | 200          | 29.6       | 0.148     | 200          | 29.6       | 0.148     | 800          | 118.40     |
| 5          | Mobile input units @ Rs.4.5 Lakhs/unit, 6 units (DDD)   | 4.5       | 6            | 27         | 0         | 0            | 0          | 0         | 0            | 0          | 0         | 0            | 0          | 4.5       | 6            | 27.00      |
| <b>IV</b>  | <b>PROCESSING AND MARKETING FACILITIES</b>  |           |              |            |           |              |            |           |              |            |           |              |            |           |              |            |
| 1          | Milking machines for ID farms (DDD)   | 1         | 25           | 25         | 0         | 0            | 0          | 0         | 0            | 0          | 0         | 0            | 0          | 1         | 25           | 25.00      |
| 2          | Portable milking machines for farmers (DDD)   | 0.18      | 25           | 4.5        | 0.18      | 25           | 4.5        | 0.18      | 25           | 4.5        | 0.18      | 25           | 4.5        | 0.18      | 100          | 18.00      |
| 3          | Bulk milk cooler (DDD)  | 30        | 1            | 30         | 30        | 1            | 30         | 0         | 0            | 0          | 0         | 0            | 0          | 30        | 2            | 60.00      |

Table 6.19 Contd.....

| S. No.   | Scheme Components   | 2008-2009 |              |            | 2009-2010 |              |            | 2010-2011 |              |            | 2011-2012 |              |            | Total     |              |            |
|----------|---|-----------|--------------|------------|-----------|--------------|------------|-----------|--------------|------------|-----------|--------------|------------|-----------|--------------|------------|
|          |   | Unit Cost | No. of Units | Total Cost | Unit Cost | No. of Units | Total Cost | Unit Cost | No. of Units | Total Cost | Unit Cost | No. of Units | Total Cost | Unit Cost | No. of Units | Total Cost |
| 4        | Walk-in coolers (DDD)   | 30        | 1            | 30         | 0         | 0            | 0          | 0         | 0            | 0          | 0         | 0            | 0          | 30        | 1            | 30.00      |
| 5        | Revival of dormant MPCs (DDD)   | 1         | 5            | 5          | 1         | 10           | 10         | 1         | 5            | 5          | 1         | 5            | 5          | 1         | 25           | 25.00      |
| 6        | Manufacturing facilities for milk khoa(DDD)   | 0.77      | 1            | 0.77       | 0.77      | 1            | 0.77       | 0         | 0            | 0          | 0         | 0            | 0          | 0.77      | 2            | 1.54       |
| 7        | Manufacturing facilities for panneer (DDD)  | 1.02      | 1            | 1.02       | 1.02      | 1            | 1.02       | 0         | 0            | 0          | 0         | 0            | 0          | 1.02      | 2            | 2.04       |
| 8        | Manufacturing facilities for ice-cream (DDD)  | 1.12      | 1            | 1.12       | 1.12      | 1            | 1.12       | 0         | 0            | 0          | 0         | 0            | 0          | 1.12      | 2            | 2.24       |
| 9        | Milk weighing machines for milk producers co-operated societies (DDD)                                       | 0.17      | 72           | 12.24      | 0.17      | 70           | 11.9       | 0.17      | 70           | 11.9       | 0.17      | 70           | 11.9       | 0.17      | 282          | 47.94      |
| 10       | PC based automatic milk collection stations to IDF villages and milk producers co-operative societies (DDD) | 1.75      | 35           | 61.25      | 1.75      | 6            | 10.5       | 1.75      | 6            | 10.5       | 1.75      | 6            | 10.5       | 1.75      | 53           | 92.75      |
| 11       | MMPO laboratory (DDD)   | 56        | 1            | 56         | 0         | 0            | 0          | 0         | 0            | 0          | 0         | 0            | 0          | 56        | 1            | 56.00      |
| 12       | Quality assurance lab strengthening (DDD)   | 10        | 1            | 10         | 0         | 0            | 0          | 0         | 0            | 0          | 0         | 0            | 0          | 10        | 1            | 10.00      |
| 13       | Energy management system (DDD)  | 10        | 1            | 10         | 0         | 0            | 0          | 0         | 0            | 0          | 0         | 0            | 0          | 10        | 1            | 10.00      |
| <b>V</b> | <b>EXTENSION FACILITIES</b>   |           |              |            |           |              |            |           |              |            |           |              |            |           |              |            |
| 1        | Farmers study tour @ Rs.5000/farmer (DDD)   | 0.05      | 70           | 3.5        | 0.05      | 60           | 3          | 0.05      | 60           | 3          | 0.05      | 60           | 3          | 0.05      | 250          | 12.50      |
| 2        | Skill development training for technical staff (DDD)  | 0.05      | 25           | 1.25       | 0.05      | 25           | 1.25       | 0.05      | 25           | 1.25       | 0.05      | 25           | 1.25       | 0.05      | 100          | 5.00       |
| 3        | Orientation training/workshop for milk producers at society level (DDD)                                     | 0.2       | 4            | 0.8        | 0.2       | 4            | 0.8        | 0.2       | 4            | 0.8        | 0.2       | 4            | 0.8        | 0.2       | 16           | 3.20       |

**Table 6.19 Contd.....**

| S. No.   | Scheme Components  | 2008-2009 |              |            | 2009-2010 |              |            | 2010-2011 |              |            | 2011-2012 |              |            | Total     |              |            |
|----------|--|-----------|--------------|------------|-----------|--------------|------------|-----------|--------------|------------|-----------|--------------|------------|-----------|--------------|------------|
|          |  | Unit Cost | No. of Units | Total Cost | Unit Cost | No. of Units | Total Cost | Unit Cost | No. of Units | Total Cost | Unit Cost | No. of Units | Total Cost | Unit Cost | No. of Units | Total Cost |
| 4        | Strengthening of TANUVAS Centre at Coimbatore with a mobile disease investigation cum training unit @ Rs.10.00 Lakhs /unit, 1 unit, Van (Rs.7 Lakhs), Microscope (0.20 lakhs),LCD Projector (2.5 Lakhs) and AV Aids (0.30 Lakhs) (TANUVAS) | 10        | 1            | 10         | 0         | 0            | 0          | 0         | 0            | 0          | 0         | 0            | 0          | 10        | 1            | 10.00      |
| 5        | Strengthening of TANUVAS Centres at Coimbatore and Tiruppur with facilities for Transfer of Technology – Training @ Rs.10.00 Lakhs/unit, 2 units (TANUVAS)   | 10        | 2            | 20         | 0         | 0            | 0          | 0         | 0            | 0          | 0         | 0            | 0          | 10        | 2            | 20.00      |
| 6        | Training programmes on modern technologies in livestock farming under CAT, 2 days, 20 farmers per batch, Rs.10,000/batch, 20 batches, (TANUVAS)  | 0.1       | 5            | 0.5        | 0.1       | 5            | 0.5        | 0.1       | 5            | 0.5        | 0.1       | 5            | 0.5        | 0.1       | 20           | 2.00       |
| 7        | Skill oriented training programmes on value-addition of milk and meat to women SHGs, 2 days, 20 members/batch, Rs.10,000/ batch, 20 batches (TANUVAS)  | 0.1       | 5            | 0.5        | 0.1       | 5            | 0.5        | 0.1       | 5            | 0.5        | 0.1       | 5            | 0.5        | 0.1       | 20           | 2.00       |
|          | <b>SHEEP&amp;GOAT</b>  |           |              |            |           |              |            |           |              |            |           |              |            |           |              |            |
| <b>I</b> | <b>FEED AND FODDER DEVELOPMENT</b>   |           |              |            |           |              |            |           |              |            |           |              |            |           |              |            |
| 1        | Supply of salt licks to SHG goat farmers with 10 goats, @ Rs.50/salt lick, 4 salt licks/year, Rs.200/farmer/year , 1000 farmers/year, for 4000 farmers in 4 years (DAH)  | 0.002     | 1000         | 2          | 0.002     | 1000         | 2          | 0.002     | 1000         | 2          | 0.002     | 1000         | 2          | 0.002     | 4000         | 8.00       |

Table 6.19 Contd.....

| S. No.      | Scheme Components  | 2008-2009 |              |               | 2009-2010 |              |               | 2010-2011 |              |               | 2011-2012 |              |               | Total     |              |                |
|-------------|--|-----------|--------------|---------------|-----------|--------------|---------------|-----------|--------------|---------------|-----------|--------------|---------------|-----------|--------------|----------------|
|             |  | Unit Cost | No. of Units | Total Cost    | Unit Cost | No. of Units | Total Cost    | Unit Cost | No. of Units | Total Cost    | Unit Cost | No. of Units | Total Cost    | Unit Cost | No. of Units | Total Cost     |
| <b>II</b>   | <b>GENETIC UPGRADATION</b>   |           |              |               |           |              |               |           |              |               |           |              |               |           |              |                |
| 1           | Supply of Tellicherry bucks (40 no.s) and Mecheri rams (40 no.s) to women SHG farmers @ Rs.4000/buck or ram (DAH)  | 0.04      | 80           | 3.2           | 0         | 0            | 0             | 0         | 0            | 0             | 0         | 0            | 0             | 0.04      | 80           | 3.20           |
| <b>III.</b> | <b>EXTENSION FACILITIES</b>  |           |              |               |           |              |               |           |              |               |           |              |               |           |              |                |
| 1           | Training programmes on scientific sheep and goat rearing to women SHGs, 2 days, 20 members/ batch, Rs.10,000/batch, 40 batches, (TANUVAS)  | 0.1       | 10           | 1             | 0.1       | 10           | 1             | 0.1       | 10           | 1             | 0.1       | 10           | 1             | 0.1       | 40           | 4.00           |
| 2           | Training programmes on hygienic meat production, processing and establishment of modern retail meat units to women SHGs, 2 days, 20 members/ batch, Rs.10,000/batch, 40 batches, (TANUVAS) | 0.1       | 10           | 1             | 0.1       | 10           | 1             | 0.1       | 10           | 1             | 0.1       | 10           | 1             | 0.1       | 40           | 4.00           |
| <b>IV</b>   | <b>OTHERS</b>  |           |              |               |           |              |               |           |              |               |           |              |               |           |              |                |
|             | Supply of stall-fed goat units (20+1 unit) to SHGs @ Rs.0.42 Lakhs/unit, one unit/block/year, 19 blocks, 4 years, 76 units (DAH)   | 0.42      | 19           | 7.98          | 0.42      | 19           | 7.98          | 0.42      | 19           | 7.98          | 0.42      | 19           | 7.98          | 0.42      | 76           | 31.92          |
|             | <b>DISTRICT TOTAL</b>  |           |              | <b>885.72</b> |           |              | <b>296.70</b> |           |              | <b>257.68</b> |           |              | <b>252.79</b> |           |              | <b>1692.89</b> |

## **A. Feed and Fodder Development**

### **Abstract**

Intensive fodder production activity will be taken up by the Department of Animal Husbandry, Coimbatore, covering a total area of 760 acres at the rate of 10 acres/block/year in all the 19 blocks of the district for a total period of 4 years through Self Help Groups and women entrepreneurs at a total cost of Rs. 178.60 lakhs. The Aavin, Coimbatore, will also take up fodder cultivation activity in the proposed 25 Integrated Dairy Farm (IDF) villages at 5 acres / IDFV (125 acres totally) and additional 50 acres of fodder production will be carried out by the Aavin, Coimbatore in the land available at Unions, Chilling Centers, and Milk Producers Co-operative Societies. The Aavin, Coimbatore will produce fodder slips and seeds in the 5 acres of land available at dairy and chilling centers. The total cost of fodder and fodder seeds and slips production through Aavin, Coimbatore will be Rs. 51.625 lakhs for 180 acres totally.

Mineral mixture will be supplied to the dairy cows through the Department of Animal Husbandry, Coimbatore to the small farmers at Rs.600/- per cow per year (One kg/animal/month, 12 kg for one year, @ Rs.50/kg) at subsidized rate for 5000 farmers per year, for 4 years. A total of 20,000 cows will be supplemented with mineral mixture at a total cost of Rs.120.00 lakhs. The Aavin, Coimbatore will supply mineral mixture to the milch animals of the society members at subsidized cost (50 % subsidy) @ Rs. 500/- for 18 kg per year/cow, A total number of 6500 animals will be benefited at a total cost of Rs. 32.5 lakhs. Improvement in milk yield and fertility rates is expected from these 26,500 cows benefited. Salt licks will be supplied by the Department of Animal Husbandry, Coimbatore to the SHG goat farmers with 10 goats @ Rs.50/salt lick, 4 salt licks per year/farmer, Rs.200/year/farmer, for 4000 farmers at a total cost of Rs. 8.00 lakhs.

Hand operated chaff cutters will be supplied by the Department of Animal Husbandry, Coimbatore to the SHG farmers at Rs.20,000/- per unit (50% subsidy) , one unit per block per year, 19 units per year, 76 units in a total period of 4 years at a total

cost of Rs. 7.6 lakhs. The Aavin, Coimbatore will supply 25 numbers of mechanically operated chaff cutters to the 25 IDF Villages @ Rs. 0.70 lakhs/unit, at one unit per IDF Village, at a total cost of Rs. 17.50 lakhs and 10 numbers of hand operated chaff cutters @ Rs.0.20 lakh/unit will be supplied to the elite members at one unit/farmer at a total cost of Rs. 2.00 lakhs.

The Aavin, Coimbatore will supply by-pass protein feed to the milch animals of the members of the society (360 kg/animal/year) for 5000 cows @ 50% subsidy of Rs.9/- per kg. The total cost will be Rs. 165 lakhs. A total number of 200 units of silo pits will be established for ensiling of sugarcane tops in a period of 4 years through the Department of Animal Husbandry, Coimbatore @ 50 units per year @ Rs. 0.15 lakhs/unit @ 75% subsidy. The total cost of the project will be Rs. 22.5 lakhs.

### Budget

(Rs. in lakhs)

| Sl. No. | Particulars  | Amount |
|---------|--|--------|
| 1.      | Augmentation of fodder production (Co-3) through SHG/women entrepreneurs, Rs. 0.235 lakhs/acre, 10 acres/block/year, 19 blocks, for 4 years, 760 acres totally (DAH)   | 178.60 |
| 2.      | Fodder production at 25 IDF Villages, @ Rs.0.235 lakhs/acre, 5 acres/IDFV, 125 acres and fodder production at Unions, Chilling Centers, Dairies and MPCS @ Rs.0.235 lakhs/acre, 50 acres. Total area – 175 acres (DDD) | 41.125 |
| 3.      | Fodder slips and seeds production in dairy and chilling centers @ Rs.2.1 lakhs/acre, 5 acres totally (DDD)   | 10.50  |
| 4.      | Supply of mineral mixture to dairy cows @ Rs.600/cow/year, for 20,000 cows (DAH)   | 120.00 |
| 5.      | Supply of mineral mixture at 50% subsidy @ Rs. 500/- for 18 kg. (one year supply) for 6500 animals (DDD)   | 32.50  |

(Rs. in lakhs)

| Sl. No. | Particulars   | Amount         |
|---------|---|----------------|
| 6.      | Supply of salt licks to SHG goat farmers with 10 goats, @ Rs.50/salt lick, 4 salt licks per year/farmer, Rs.200/year/farmer, for 4000 farmers (DAH)                       | 8.00           |
| 7.      | Supply of hand operated chaff cutters to SHG farmers @ Rs.0.20 lakhs/unit, 50% subsidy, 1 unit/block/year, 19 blocks, 76 units for 4 years (DAH)                          | 7.60           |
| 8.      | Provision of mechanically operated chaff cutters, @ Rs. 0.70 lakhs/unit, for 25 IDF Villages @ one unit/IDFV, 25 units totally (DDD)                                      | 17.50          |
| 9.      | Provision of hand operated chaff cutters to elite farmers @ Rs.0.20 lakh/unit, one unit/farmer, 10 units totally for 10 farmers (DDD)                                     | 2.00           |
| 10.     | Supply of by-pass protein feed to the milch animals (360 kg/animal/year) @ 50 % subsidy, Rs.9/kg, Rs.3,300/- per animal /year, for 5000 cows in a period of 4 years (DDD) | 165.00         |
| 11.     | Establishment of 6x6x6 feet silo to ensile sugarcane tops Rs.0.15 lakhs/unit, 75% subsidy, 50 units/year, 200 units in 4 years (DAH)                                      | 22.50          |
|         | <b>Total</b>  | <b>605.325</b> |

### Background / Problem Focus

With shrinkage of pasture lands, rapid urbanization and conversion of agricultural lands into residential sites, Coimbatore district is facing a severe shortage of fodder. The district is 86.6% deficit in green fodder and 55.2% deficit in dry fodder. Many farmers do not supplement minerals in the feed of dairy cattle due to lack of awareness. Supplementation of minerals in dairy cows will improve milk production and reduce infertility problems. Supplementation of micronutrients in small ruminants is not a common practice among the poor farmers. In ruminants, decreasing the particle size of fodder will enhance the utilization of nutrients and improve the production. Most of the dairy farmers are unaware of this technology. By-pass protein feeding is a newer technology in dairy nutrition. It enhances milk production and nutrient utilization with an

overall improvement in production and productivity in dairy cows. Conventional feeding although is cheaper does not provide a complete feed to the dairy cows leading to nutritional deficiencies and decreased production and productivity.

### **Project Rationale**

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

### **Project Strategy**

- Self Help Groups and interested women entrepreneurs will be selected from each block. Augmentation in quality and quantity of fodder from common property resources through group approach is proposed. Fodder slips will be procured from State Agricultural University and members who have water source alone will be selected. 10 acres of Co-3 fodder will be produced per block involving the SHGs and interested women entrepreneurs. They will be supplied with all inputs for fodder production. Training on scientific fodder production will be given to the SHGs @ Rs.0.035 lakh/SHG. Inputs for fodder production will be provided @ Rs.0.20 lakhs/acre. A total number of 19 Groups will be involved in fodder production in all the 19 blocks @ 10 acres/block/year for a period of 4 years. The project will be implemented by the Department of Animal Husbandry, Coimbatore.

- Fodder production will be taken up by Aavin, Coimbatore in all the proposed 25 IDF Villages @ Rs.0.235 lakhs/acre, 5 acres/IDFV, 125 acres totally and additional 50 acres of fodder will be produced at the members' fields. The cost of production of fodder per acre will be Rs.0.235 lakh and the total cost of fodder production for 175 acres will be Rs.41.125 lakhs. Further Aavin, Coimbatore will produce fodder seeds and slips in the 5 acres of land available at the dairy or chilling centres @ Rs.2.1 lakhs per acre and the total cost of production will be Rs. 10.5 lakhs.
- There are 19 blocks in the district with a total cross-bred cattle population of about 3 lakhs numbers. Infertility is the major problem and deficiency of minerals in the feed of cattle is common since most of the farmers do not provide a complete feed to their cows. Hence supply of 40 grams of mineral mixture per cow per day for one year will largely help to augment milk production and to improve the fertility rate in the cows. The cost of a kg of mineral mixture is Rs.50/- and is sufficient to feed a cow for one month. A total of Rs.600/- is necessary to provide 40 grams of mineral mixture per day per cow for one year. A total of 20,000 cows will be supplied with mineral mixture. Improvement in milk yield and fertility rates is expected from the 20,000 cows benefited. This project will be taken up by the Department of Animal Husbandry, Coimbatore.
- Mineral mixture will also be supplied to the milch animals of the members of the society at subsidized cost (50%), @ 18 kg/year/cow @ Rs.500/cow/year. A total number of 6500 cows will be benefited at a total cost of Rs. 32.50 lakhs.
- Salt licks will be supplied by the Department of Animal Husbandry, Coimbatore to the SHG goat farmers with 10 goats. A total number of 4 salt licks will be supplied to each farmer per year, @ Rs.50/salt lick. A total number of 4000 farmers will be supplied with salt licks at a total cost of Rs.8.00 lakhs.

- Hand operated chaff cutters will be supplied by the Department of Animal Husbandry, Coimbatore to the SHG farmers at Rs.20,000/- per unit (50% subsidy), one unit per block per year, 19 units per year, 76 units in a total period of 4 years at a total cost of Rs. 7.6 lakhs.
- Mechanized chaff cutters @ Rs.0.70 lakhs per unit will be supplied at one unit per IDfV, 25 units for all the 25 IDfV. This project will be implemented by Aavin, Coimbatore at a total cost of Rs. 17.5 lakhs.
- Hand operated chaff cutters will be supplied to elite farmers @ Rs.0.20 lakh/unit at one unit/farmer as 100% subsidy, for 10 farmers totally at a cost of Rs.2.00 lakhs. This project will be implemented by Aavin, Coimbatore.
- The Aavin, Coimbatore will supply by-pass protein feed to the milch animals of the members of the society (360 kg/animal/year) for 5000 cows @ 50% subsidy of Rs.9/- per kg. The total cost will be Rs. 165 lakhs.
- A total number of 200 units of silo pits will be established for ensiling of sugarcane tops in a period of 4 years through the Department of Animal Husbandry, Coimbatore @ 50 units per year @ Rs. 0.15 lakhs/unit @ 75% subsidy. The total cost of the project will be Rs. 22.5 lakhs.

### **Project Goals**

- Augmentation of fodder production to meet the fodder shortage (935 acres totally)
- Supplementation of micronutrients in the feed of dairy cows and goats to enhance production and fertility.
- Enhancement of nutrient utilization in fodder by use of hand-operated and mechanized chaff cutters to enhance the nutrient utilization.
- Supply of by-pass protein to 5000 milch animals to enhance production.

- Production of fodder seeds and slips to augment fodder production (5 acres totally)
- Establishment of 200 units of silo pits for ensiling sugarcane tops to enhance the availability and utilization of nutrients.

### Project Components

- Fodder production in 935 acres
- Fodder seeds and slips production in 5 acres
- Mineral mixture supply to 26,500 cows
- Supply of salt lick to 4000 goat farmers
- Provision of mechanized chaff cutters 25 units at IDFV on community basis
- Provision of hand operated chaff cutters to elite farmers – 86 units
- Establishment of 200 units of silo pits to ensile sugarcane tops.
- Supply of by-pass protein feed to 5000 milch animals.

### Project Cost and Financing

#### Unit Cost of Fodder Production

| S.No.     | Details  |   | Amount<br>(in Rs.) |
|-----------|--|---|--------------------|
| <b>I.</b> | <b>Training Cost</b>   |   |                    |
| 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             |
|           | <b>Total training cost per SHG</b>   | : | <b>3,525.00</b>    |

| <b>II.</b> | <b>Fodder Cultivation of Fodder</b>   |          |                  |
|------------|---|----------|------------------|
| 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<br>N 150 Kg @ Rs.5.48/kg – 822.00<br>P 50 Kg @ Rs.10.88/kg – 544.00<br>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        |
|            | <b>Total cost of cultivation of fodder per acre</b>   | <b>:</b> | <b>23,525.00</b> |

(Rs. in lakhs)

| <b>Project</b>   | <b>2008-<br/>2009</b> | <b>2009-<br/>2010</b> | <b>2010-<br/>2011</b> | <b>2011-<br/>2012</b> | <b>Total<br/>amount</b> |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-------------------------|
| 1. Augmentation of fodder production (CO-3) through SHG/women entrepreneurs, Rs. 0.235 lakhs/acre, 10 acres/block/year, 19 blocks, for 4 years, 760 acres totally (DAH)  | 44.65                 | 44.65                 | 44.65                 | 44.65                 | <b>178.60</b>           |
| 2. Fodder production at 25 IDF Villages, 5 acres/IDFV, 125 acres of fodder production at Unions, Chilling Centers, Dairies and MPCs + 50 acres in members field @ Rs.0.235 lakhs / acre. Total area – 175 acres (DDD)  | 29.375                | 4.70                  | 3.525                 | 3.525                 | <b>41.125</b>           |
| 3. Fodder slips and seeds production in dairy and chilling centers @ 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), 5 acres totally (DDD) | 10.50                 | -                     | -                     | -                     | <b>10.50</b>            |
| 4. Supply of mineral mixture to dairy cows @ Rs.600/cow/year, for 20,000 cows in 4 years (DAH)   | 30.00                 | 30.00                 | 30.00                 | 30.00                 | <b>120.00</b>           |
| 5. Supply of mineral mixture at 50 % subsidy @ Rs. 500/- for 18 kg (one year supply) for 6500 animals in 4 years (DDD)   | 7.50                  | 10.00                 | 10.00                 | 5.00                  | <b>32.50</b>            |

(Rs. in lakhs)

| <b>Project</b>  | <b>2008-<br/>2009</b> | <b>2009-<br/>2010</b> | <b>2010-<br/>2011</b> | <b>2011-<br/>2012</b> | <b>Total<br/>amount</b> |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-------------------------|
| 6. Supply of salt licks to SHG goat farmers with 10 goats, @ Rs.50/salt lick, 4 salt licks per year/farmer, Rs.200/year/farmer, for 4000 farmers in 4 years (DAH)             | 2.00                  | 2.00                  | 2.00                  | 2.00                  | <b>8.00</b>             |
| 7. Supply of hand operated chaff cutters to SHG farmers @ Rs.0.20 lakhs/unit, 50% subsidy, 1 unit/block/year, 19 blocks, 76 units for 4 years (DAH)                           | 1.90                  | 1.90                  | 1.90                  | 1.90                  | <b>7.60</b>             |
| 8. Provision of mechanically operated chaff cutters, @ Rs. 0.70 lakhs/unit, for 25 IDF Villages @ one unit/IDFV, 25 units totally (DDD)                                       | 17.50                 | -                     | -                     | -                     | <b>17.50</b>            |
| 9. Provision of hand operated chaff cutters to elite farmers @ Rs.0.20 lakh/unit, one unit/farmer, 10 units totally for 10 farmers (DDD)                                      | 2.00                  | -                     | -                     | -                     | <b>2.00</b>             |
| 10. Supply of by-pass protein feed to the milch animals (360 kg/animal/year) @ 50 % subsidy, Rs.9/kg, Rs.3,300/- per animal /year, for 5000 cows in a period of 4 years (DDD) | 41.25                 | 41.25                 | 41.25                 | 41.25                 | 165.00                  |
| 11. Establishment of 6x6x6 feet silo to ensile sugarcane tops Rs. 0.15 lakhs/unit, 75% subsidy, 50 units/year, 200 units in 4 years (DAH)                                     | 5.625                 | 5.625                 | 5.625                 | 5.625                 | 22.50                   |
| <b>Total</b>  | <b>192.30</b>         | <b>46.875</b>         | <b>46.875</b>         | <b>46.875</b>         | <b>605.325</b>          |

**Implementation Chart of the Project**

| Activity  | 2008-2009 | 2009-2010 | 2010-2011 | 2011-2012 |
|---|-----------|-----------|-----------|-----------|
| 1. Augmentation of fodder production (CO-3) through SHG/women entrepreneurs, Rs. 0.235 lakhs/acre, 10 acres/block/year, 19 blocks, for 4 years, 760 acres totally (DAH)   | ✓         | ✓         | ✓         | ✓         |
| 2. Fodder production at 25 IDF Villages, 5 acres/IDFV, 125 acres of fodder production at Unions, Chilling Centers, Dairies and MPCS + 50 acres in members field @ Rs.0.235 lakhs / acre. Total area – 175 acres (DDD) | ✓         | ✓         | ✓         | ✓         |
| 3. Fodder slips and seeds production in dairy and chilling centers @ Rs.2.1 lakhs/acre, 5 acres totally (DDD)   | ✓         |           |           |           |
| 4. Supply of mineral mixture to dairy cows @ Rs.600/cow/year, for 20,000 cows (DAH)   | ✓         | ✓         | ✓         | ✓         |
| 5. Supply of mineral mixture at 50 % subsidy @ Rs. 500/- for 18 kg (one year supply) for 6500 animals (DDD)   | ✓         | ✓         | ✓         | ✓         |
| 6. Supply of salt licks to SHG goat farmers with 10 goats, @ Rs.50/salt lick, 4 salt licks per year/farmer, Rs.200/year/farmer, for 4000 farmers (DAH)  | ✓         | ✓         | ✓         | ✓         |
| 7. Supply of hand operated chaff cutters to SHG farmers @ Rs.0.20 lakhs/unit, 50% subsidy, 1 unit/block/year, 19 blocks, 76 units for 4 years (DAH)   | ✓         | ✓         | ✓         | ✓         |
| 8. Provision of mechanically operated chaff cutters, @ Rs. 0.70 lakhs/unit, for 25 IDF Villages @ one unit/IDFV, 25 units totally (DDD)   | ✓         |           |           |           |
| 9. Provision of hand operated chaff cutters to elite farmers @ Rs.0.20 lakh/unit, one unit/farmer, 10 units totally for 10 farmers (DDD)  | ✓         |           |           |           |
| 10. Supply of by-pass protein feed to the milch animals (360 kg/animal/year) @ 50 % subsidy, Rs.9/kg, Rs.3,300/- per animal /year, for 5000 cows in a period of 4 years (DDD)   | ✓         | ✓         | ✓         | ✓         |
| 11. Establishment of 6x6x6 feet silo to ensile sugarcane tops Rs. 0.15 lakhs/unit, 75% subsidy, 50 units/year, 200 units in 4 years (DAH)   | ✓         | ✓         | ✓         | ✓         |

## **Reporting**

### **Fodder and Fodder Seeds and Slips Production**

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

### **Supply of Mineral Mixture and by-pass Protein Feed to the Dairy Cows and Salt Licks to Goat Farmers**

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

### **Provision of Mechanized Chaff Cutters and Hand Operated Chaff Cutters**

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

### **Establishment of 200 units of 6x6x6 Feet Silo to ensile Sugarcane Tops**

The Regional Joint Director of Animal Husbandry, Coimbatore will implement the project. Monthly progress of the project will be submitted to the concerned higher authorities.

## **B. Genetic upgradation of Livestock and Improvement of Livestock Health**

### **Abstract**

#### **a. Tracking the Breedable Bovines in the District**

It is estimated that the district has a total number of 1,91,100 breedable bovine population. Tracking the breedable bovines with an ear tag and a passbook at a cost of

Rs.20/- per animal is proposed. The total outlay is Rs. 38.22 lakhs. The project will be jointly implemented by the Department of Animal Husbandry, Coimbatore and Aavin, Coimbatore.

**b. Synchronized Breeding of Cattle and Buffaloes**

Estrus synchronization will be carried out in 6400 numbers of cattle and buffaloes to increase the conception rate at a total cost of Rs. 44.80 lakhs @ Rs.700 / animal. The project will be implemented by Aavin, Coimbatore.

**c. Genetic upgradation of Sheep and Goats**

Mecheri rams and Tellicherry bucks (Superior germ plasm) will be maintained by the Self Help Group Women in the district for cross-breeding of the non-descript poorly performing sheep and goats to augment the mutton and chevon production. Each active SHG will be provided with one Mecheri ram and one Tellicherry buck @ Rs. 4,000/- per ram/buck. A total number of 40 rams and 40 bucks will be supplied at a total cost of Rs. 3.20 lakhs. The project will be implemented by the Department of Animal Husbandry, Coimbatore.

**d. Establishment of Mobile Veterinary Clinics and Mobile Input Units**

Mobile veterinary clinics (7 units) will be established at a total cost of Rs. 40.82 lakhs @ Rs.5.832 lakhs/unit under the Department of Animal Husbandry, Coimbatore for provision of health cover facilities in remote areas in the district. Mobile input routes (6 units) will be established under the Aavin, Coimbatore at a total cost of Rs. 27.00 lakhs @ Rs.4.50 lakhs/unit to provide additional health cover and timely insemination services to the members of the Societies.

**e. Strengthening of Veterinary Institutions**

A total number of 44 veterinary institutions in the district will be strengthened with basic facilities like fencing, provision of bore-wells, water troughs and minor repair works also will be carried out at a total cost of Rs. 220.00 lakhs @ Rs.5.00 lakhs / institution. The project will be implemented by the Department of Animal Husbandry, Coimbatore.

**f. Control of Parasitic Diseases to enhance Vaccine Response**

The sheep, goats and calves below one year of age will be dewormed 4 times in a year before vaccinating them to enhance the vaccine response in them. The cost of the project will be Rs.30.0 lakhs per year. The total cost will be Rs. 120 lakhs for 4 years. The project will be implemented by the Department of Animal Husbandry, Coimbatore.

**g. Buffalo calf Development Programme**

The total cost for the supply of feed, vaccines and deworming will be Rs.14,800/- per buffalo calf. A total number of 800 calves will be benefited at a period of 4 years @ 200 calves per year. The total project cost will be Rs.118.4 lakhs. The project will be implemented by the Aavin, Coimbatore.

**h. Supply of Stall-fed Goat Units**

Goat units (20+1) will be supplied to the self help groups in the district @ Rs.0.42 lakh /unit. One unit/block/year, for 4 years, 19 blocks, 76 units totally at a total cost of Rs. 31.92 lakhs. The project will be implemented by the Department of Animal Husbandry, Coimbatore.

**Budget****(Rs. in lakhs)**

|    |  |       |
|----|--|-------|
| 1. | Tracking the breedable bovine population with an ear tag and a passbook @ Rs.20/- animal, for 1,91,100 animals (DAH and DDD) | 38.22 |
| 2. | Programmed breeding of cattle and buffaloes @ Rs.700/animal, for 6400 cows and buffaloes (DDD)                               | 44.80 |
| 3. | Supply of 40 Mecheri rams and 40 Tellicherry bucks to the self help groups @ Rs.4,000/- per buck/ram                         | 3.20  |
| 4. | Establishment of mobile veterinary clinics @ Rs.5.832 lakhs/unit, 7 units totally (DAH)                                      | 40.82 |
| 5. | Establishment of mobile input units @ Rs. 4.5 lakhs/unit, 6 units totally (DDD)  | 27.00 |

(Rs. in lakhs)

|    |  |               |
|----|--|---------------|
| 6. | Strengthening of 44 veterinary institutions with basic facilities like fencing, provision of bore-wells, water troughs and minor repair works @ Rs.5.00 lakhs/unit (DAH)   | 220.00        |
| 7. | Control of parasitic diseases to enhance vaccine response @ Rs.1/- per sheep or goat and Rs.3/- per calf below one year, 4 times /year, Rs. 30.0 lakhs/year, for 4 years (85742 calves, 206835 sheep and 286499 goats) - DAH | 120.00        |
| 8. | Buffalo calf development programme @ Rs. 14,800/- per calf, 200 calves/year, 800 calves for 4 years (DDD)  | 118.40        |
| 9. | Supply of stall-fed goat units (20+1) to SHG @ Rs.0.42 lakhs/unit, one unit/block/year, for 4 years, 19 blocks, 76 units totally   | 31.92         |
|    | <b>Total</b>   | <b>644.36</b> |

### **Background/ Problem Focus**

#### **a. Tracking the Breedable Bovines in the District**

It is estimated that the district has a total number of 1,91,100 breedable bovine population. Tracking the breedable bovines with an ear tag and a passbook will help to follow the animals and will be the first step in the registration of bovines with accurate details about the animal, its health status etc.

#### **b. Synchronized Breeding of Cattle and Buffaloes**

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

#### **c. Genetic upgradation of Sheep and Goats**

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

**d. Establishment of Mobile Veterinary Clinics and Mobile Input Units**

There is a 48% shortfall in the number of veterinary institutions in the district as against the total livestock population. Further, door-to-door timely health cover facilities especially in the remote villages of the district is very essential as these villages have a considerable livestock population and the farmers mainly depend on these animals for their livelihood. Mobile input units are also proposed with the same background.

**e. Strengthening of Veterinary Institutions**

A total number of 44 veterinary institutions in the district are not provided with certain basic facilities like fencing, provision of bore-wells, water troughs and minor repair works need to be carried out.

**f. Control of Parasitic Diseases to enhance Vaccine Response**

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

**g. Buffalo Calf Development Programme**

The district has a total buffalo population of 40,000 heads. There is a decline in the production and productivity of buffaloes in the district. There is mortality in the buffalo calves due to under nourishment. The farmers must be encouraged to raise buffaloes through the care and management of buffalo calves to improve the production of buffaloes in the district.

**h. Supply of Stall-fed Goat Units**

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

**Project Rationale****a. Tracking the Breedable Bovines in the District**

It is estimated that the district has a total number of 1,91,100 breedable bovine population. Tracking the breedable bovines with an ear tag and a passbook will help to follow the animals and will be the first step in the registration of bovines with accurate details about the animal, its health status etc.

**b. Synchronized Breeding of Cattle and Buffaloes**

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

**c. Genetic upgradation of Sheep and Goats**

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

**d. Establishment of Mobile Veterinary Clinics and Mobile Input Units**

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

intimated well in advance. Six mobile input units will be established by the Aavin, Coimbatore to provide inputs to the members of the society @ Rs.4.5 lakhs/unit. The total cost will be Rs.27 lakhs for 6 units. .

**e. Strengthening of Veterinary Institutions in the District**

A total number of 44 veterinary institutions in the district will be strengthened with basic facilities like fencing, provision of bore-wells, water troughs and minor repair works also will be carried out at a total cost of Rs. 220.00 lakhs @ Rs.5.00 lakhs / institution.

**f. Control of Parasitic Diseases to enhance Vaccine Response**

The sheep, goats and calves below one year of age will be dewormed 4 times in a year before vaccinating them to enhance the vaccine response in them. The cost of deworming will be Rs.1/- per sheep or goat and Rs. 3 /- for a calf below 1 year of age. The deworming will be done 4 times a year, before vaccination. The total cost of the project will be Rs.30.0 lakhs per year. The total cost will be Rs. 120 lakhs for 4 years. The project will be implemented by the Department of Animal Husbandry, Coimbatore.

**g. Buffalo Calf Development Programme**

The total cost for the supply of feed, vaccines and deworming will be Rs.14,800/- per buffalo calf. A total number of 800 calves will be benefited at a period of 4 years @ 200 calves per year. The total project cost will be Rs.118.4 lakhs. The project will be implemented by the Aavin, Coimbatore.

**h. Supply of Stall-fed Goat Units to SHG**

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

## **Project Strategy**

### **a. Tracking the Breedable Bovines in the District**

It is estimated that the district has a total number of 1,91,100 breedable bovine population. Tracking the breedable bovines with an ear tag and a passbook at a cost of Rs.20/- per animal is proposed. The total outlay is Rs. 38.22 lakhs.

### **b. Synchronized Breeding of Cattle and Buffaloes**

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

### **c. Genetic upgradation of Sheep and Goats**

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

### **d. Establishment of Mobile Veterinary Clinics and Mobile Input units**

Each mobile veterinary clinic will consist of one VAS and one driver. The staff for the clinic will be sourced from the available staff in the department. The unit will be provided with one vehicle at a cost of Rs. 4.75 lakhs. The VAS will be in-charge of the vehicle. The vehicle will cover remote and inaccessible villages on a scheduled programme of operation. Medicines will be sourced from the veterinary institutions available in the block itself. Necessary equipment like gags, scalpels, scissors, suture needles, forceps, A.I. guns etc. apart from Liquid Nitrogen containers and sheath will be provided to each unit. Diesel worth Rs.45,000/- will be provided per year to each unit. The unit will prepare a tour programme on 6 days a week basis and the farmers will be intimated well in advance. Six mobile input units will be established by the Aavin, Coimbatore to provide inputs to the members of the society @ Rs.4.5 lakhs/unit. The total cost will be Rs.27 lakhs for 6 units.

**e. Strengthening of Veterinary Institutions in the District**

A total number of 44 veterinary institutions in the district will be strengthened with basic facilities like fencing, provision of bore-wells, water troughs and minor repair works also will be carried out at a total cost of Rs. 220.00 lakhs @ Rs.5.00 lakhs / institution.

**f. Control of Parasitic Diseases to enhance Vaccine Response**

The sheep, goats and calves below one year of age will be dewormed 4 times in a year before vaccinating them to enhance the vaccine response in them. The cost of deworming will be Rs.1/- per sheep or goat and Rs. 3 /- for a calf below 1 year of age. The deworming will be done 4 times a year, before vaccination. The total cost of the project will be Rs.30.0 lakhs per year. The total cost will be Rs. 120 lakhs for 4 years. The project will be implemented by the Department of Animal Husbandry, Coimbatore.

**g. Buffalo Calf Development Programme**

The total cost for the supply of feed, vaccines and deworming will be Rs.14,800/- /buffalo calf. A total number of 800 calves will be benefited at a period of 4 years @ 200 calves per year. The total project cost will be Rs.118.4 lakhs. The project will be implemented by the Aavin, Coimbatore.

**h. Supply of Stall-fed Goat Units to SHG**

Supply of stall-fed goat units (20+1) to SHG @ Rs.0.42 lakhs/unit, one unit/block/year, for 4 years, 19 blocks, 76 units totally

**6. Project Goals**

- Tracing the breedable bovines in the district
- Estrus synchronization in selected 6400 cattle and buffaloes

- Upgradation of the existing native non-descript sheep and goats through cross-breeding with Mecheri rams and Tellicherry bucks (40 numbers each) to increase the mutton and chevon production
- Establishment of 7 mobile veterinary clinics and 6 mobile input units
- Strengthening of 44 veterinary institutions in the district with basic facilities
- Control of parasitic diseases in sheep, goats and calves (below one year of age) through deworming to enhance vaccine response
- To develop 800 buffalo calves through supply of feed
- To establish 76 stall-fed goat units to promote intensive management of goats

### **Project Components**

#### **a. Tracking the Breedable Bovines in the District**

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

#### **b. Synchronized Breeding of Cattle and Buffaloes**

Estrus synchronization will be carried out in 6400 numbers of cattle and buffaloes at a total cost of Rs. 44.80 lakhs @ Rs.700/animal. It involves use of hormones, deworming, monitoring etc.

#### **c. Genetic upgradation of Sheep and Goats**

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

**d. Establishment of Mobile Veterinary Clinics and Mobile Input Units**

Each mobile veterinary clinic will consist of one VAS and one driver. The staff for the clinic will be sourced from the available staff in the department. The unit will be provided with one vehicle at a cost of Rs. 4.75 lakhs. The VAS will be in-charge of the vehicle. The vehicle will cover remote and inaccessible villages on a scheduled programme of operation. Medicines will be sourced from the veterinary institutions available in the block itself. Necessary equipment like gags, scalpels, scissors, suture needles, forceps, A.I. guns etc. apart from Liquid Nitrogen containers and sheath will be provided to each unit. Diesel worth Rs.45,000/- will be provided per year to each unit. The unit will prepare a tour programme on 6 days a week basis and the farmers will be intimated well in advance. Six mobile input units will be established by the Aavin, Coimbatore to provide inputs to the members of the society @ Rs.4.5 lakhs/unit. The total cost will be Rs.27 lakhs for 6 units. .

**e. Strengthening of Veterinary Institutions in the District**

A total number of 44 veterinary institutions in the district will be strengthened with basic facilities like fencing, provision of bore-wells, water troughs and minor repair works also will be carried out at a total cost of Rs. 220.00 lakhs @ Rs.5.00 lakhs / institution.

**f. Control of Parasitic Diseases to enhance Vaccine Response**

The sheep, goats and calves below one year of age will be dewormed 4 times in a year before vaccinating them to enhance the vaccine response in them. The cost of deworming will be Rs.1/- per sheep or goat and Rs. 3 /- for a calf below 1 year of age. The deworming will be done 4 times a year, before vaccination. The total cost of the project will be Rs.30.0 lakhs per year. The total cost will be Rs. 120 lakhs for 4 years. The project will be implemented by the Department of Animal Husbandry, Coimbatore.

**g. Buffalo Calf Development Programme**

The total cost for the supply of feed, vaccines and deworming will be Rs.14,800/-/buffalo calf. A total number of 800 calves will be benefited at a period of 4 years @ 200 calves per year. The total project cost will be Rs.118.4 lakhs. The project will be implemented by the Aavin, Coimbatore.

**h. Supply of Stall-fed Goat Units to SHG**

Supply of stall-fed goat units (20+1) to SHG @ Rs.0.42 lakhs/unit, one unit/block/year, for 4 years, 19 blocks, 76 units totally

**Project Cost and Financing**

(Amount in Rs. lakhs)

| Activity  | 2008-2009 | 2009-2010 | 2010-2011 | 2011-2012 | Total Cost |
|---|-----------|-----------|-----------|-----------|------------|
| 1. Tracking the breedable bovine population with an ear tag and a passbook @ Rs.20/-/animal, for 1,91,100 animals (DAH, DDD)  | 38.22     | -         | -         | -         | 38.22      |
| 2. Programmed breeding of cattle and buffaloes @ Rs.700/animal, for 6400 animals.(DDD)  | 11.20     | 11.20     | 11.20     | 11.20     | 44.80      |
| 3. Supply of 40 Mecheri rams and 40 Tellicherry bucks to the self help groups @ Rs.4,000/- per buck/ram (DAH)   | 3.20      | -         | -         | -         | 3.20       |
| 4. Establishment of mobile veterinary clinics @ Rs.5.832 lakhs/unit (Jeep – Rs. 4.75 lakhs, Equipments – Rs. 0.30 lakhs, LN2 container large and small – Rs. 0.35 lakhs, Recurring Expenditure - Rs. 0.432 lakhs) 7 units totally (DAH) | 40.82     | -         | -         | -         | 40.82      |

(Amount in Rs. lakhs)

| Activity  | 2008-2009     | 2009-2010    | 2010-2011    | 2011-2012    | Total Cost    |
|---|---------------|--------------|--------------|--------------|---------------|
| 5. Establishment of mobile input units @ Rs. 4.5 lakhs/unit, (Salary for veterinarian and attendant and traveling expenses – Rs. 3.60 lakhs, Equipments – Rs. 0.66 lakh, Administrative charges – Rs. 0.24 lakhs) - 6 units totally (DDD) | 27.00         | -            | -            | -            | 27.00         |
| 6. Strengthening of 44 veterinary institutions with basic facilities like fencing, provision of bore-wells, water troughs and minor repair works @ Rs.5.00 lakhs/unit (DAH)   | 220.0         | -            | -            | -            | 220.00        |
| 7. Control of parasitic diseases to enhance vaccine response @ Rs.1/- per sheep or goat and Rs.3/- per calf below one year, 4 times /year, Rs. 30.0 lakhs/year, for 4 years (85742 calves, 206835 sheep and 286499 goats) - (DAH)         | 30.0          | 30.0         | 30.0         | 30.0         | 120.00        |
| 8. Buffalo calf development programme @ Rs. 14,800/- per calf, The cost includes feed cost, identification, insurance, deworming, vaccination, breeding and health cover, 200 calves/year, 800 calves for 4 years (DDD)                   | 29.6          | 29.6         | 29.6         | 29.6         | 118.40        |
| 9. Supply of stall-fed goat units (20+1) to SHG @ Rs.0.42 lakhs/unit, one unit/block/year, for 4 years, 19 blocks, 76 units totally (DAH)   | 7.98          | 7.98         | 7.98         | 7.98         | 31.92         |
| <b>Total</b>  | <b>408.02</b> | <b>7.878</b> | <b>7.878</b> | <b>7.878</b> | <b>644.36</b> |

**Implementation Chart of the Project**

| Activity  | 2008-2009 | 2009-2010 | 2010-2011 | 2011-2012 |
|---|-----------|-----------|-----------|-----------|
| 1. Tracking the breedable bovine population with an ear tag and a passbook  | ✓         |           |           |           |
| 2. Programmed breeding of cattle and buffaloes  | ✓         | ✓         | ✓         | ✓         |
| 3. Supply of 40 Mecheri rams and 40 Tellicherry bucks to the self help groups   | ✓         |           |           |           |
| 4. Establishment of mobile veterinary clinics, 7 units totally  | ✓         |           |           |           |
| 5. Establishment of mobile input units, 6 units totally   | ✓         |           |           |           |
| 6. Strengthening of 44 veterinary institutions with basic facilities like fencing, provision of bore-wells, water troughs and minor repair works                            | ✓         |           |           |           |
| 7. Control of parasitic diseases to enhance vaccine response @ Rs.1/- per sheep or goat and Rs.3/- per calf below one year, 4 times /year, Rs. 30.0 lakhs/year, for 4 years | ✓         | ✓         | ✓         | ✓         |
| 8. Buffalo calf development programme @ Rs. 14,800/- per calf, 200 calves/year, 800 calves for 4 years  | ✓         | ✓         | ✓         | ✓         |
| 9. Supply of stall-fed goat units (20+1) to SHG @ Rs.0.42 lakhs/unit, one unit/block/year, for 4 years, 19 blocks, 76 units totally   | ✓         | ✓         | ✓         | ✓         |

## **Reporting**

### **a. Tracking the Breedable Bovines in the District**

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

### **b. Synchronized Breeding of Cattle and Buffaloes**

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

### **c. Genetic upgradation of Sheep and Goats**

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

### **d. Establishment of Mobile Veterinary Clinics**

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

### **e. Establishment of Mobile Input Units**

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

### **f. Strengthening of Veterinary Institutions**

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

### **g. Control of Parasitic Diseases to enhance Vaccine Response**

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

**h. Buffalo Calf Development Programme**

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

**i. Supply of Stall-fed Goat Units to SHG**

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

**C. Improvement of Facilities for Milk Collection, Marketing, Processing and Value Addition****Abstract**

Twenty-five milking machines will be provided to the Integrated Dairy Farms at one unit per IDF Village at a total cost of Rs. 25 lakhs @ Rs. 1.0 lakh/unit. One hundred portable milking machines will be supplied to the members of the society at a total cost of Rs.18.0 lakhs @ Rs.0.18 lakhs/unit. Provision of milking machines will help to improve the collection and quality of milk. Two bulk milk coolers will be established, one at the Tiruppur chilling center and another at Shanmugapuram chilling centre to improve the keeping quality of milk until it is processed. The total cost will be Rs.60.0 lakhs. One unit of walk-in-cooler will be established at Tiruppur chilling Centre at a total cost of Rs. 30.0 lakhs. A total number of 25 dormant societies will be revived with necessary inputs @ Rs.1.0 lakh per unit at a total cost of Rs. 25 lakhs. Two khoa manufacturing units (@ Rs.0.77 lakhs/unit), two paneer making units (@ Rs.1.02 lakhs/unit) and two ice-cream making units (@ Rs. 1.12 lakhs/unit) will be established at a total cost of Rs. 5.82 lakhs to promote value-addition of milk. A total of 282 numbers of milk weighing machines will be established at milk producers' co-operative societies for accurate weighment of milk at a total cost of 47.94 lakhs. A total number of 53 PC-based automatic milk collection stations will be established at IDF villages and milk producers' co-operative societies at a total cost of Rs.92.75 lakhs @ Rs.1.75 lakhs/unit. A regional MMPO Laboratory will be established by the Dairy Development Department at a total cost of Rs. 56.0 lakhs. The quality assurance laboratory at Coimbatore dairy will be strengthened at a total cost of Rs. 10.0 lakhs. A project on energy management system will be implemented at a total cost of Rs.10.0 lakhs.

**Budget****(Rs. in lakhs)**

|     |   |               |
|-----|---|---------------|
| 1.  | Milking machines for ID farms @ Rs.1.0 lakh per unit, 25 units totally (DDD)  | 25.00         |
| 2.  | Supply of portable milking machines to members of the Society @ Rs. 0.18 lakhs, 100 Units totally (DDD)   | 18.00         |
| 3.  | Provision of bulk milk coolers @ Rs.30.0 lakhs/unit, 2 units (DDD)  | 60.00         |
| 4.  | Provision of a walk-in-cooler @ Rs. 30.0 lakhs/unit (DDD)   | 30.00         |
| 5.  | Revival of 25 dormant milk producers' co-operative societies @ Rs.1.0 lakhs/unit, 25 societies (DDD)  | 25.00         |
| 6.  | Establishment of two khoa manufacturing units @ Rs. 0.77 lakhs/unit (DDD)   | 1.54          |
| 7.  | Establishment of two paneer manufacturing units @ Rs. 1.02 lakhs/unit (DDD)   | 2.04          |
| 8.  | Establishment of two ice-cream manufacturing units @ Rs. 1.12 lakhs/unit (DDD)  | 2.24          |
| 9.  | Supply of 282 milk weighing machines to milk producers' co-operative societies @ Rs. 0.17 lakhs/unit (DDD)  | 47.94         |
| 10. | Provision of PC-based automatic milk collection stations to IDF villages and milk producers' co-operative societies @ Rs. 1.75 lakhs/unit, 53 units (DDD) | 92.75         |
| 11. | Establishment of a MMPO Laboratory @ Rs. 56.00 lakhs (DDD)  | 56.00         |
| 12. | Strengthening of the quality assurance laboratory @ Rs. 10.0 lakhs (DDD)  | 10.00         |
| 13. | Energy management system @ Rs. 10.00 lakhs (DDD)  | 10.00         |
|     | <b>Total</b>  | <b>380.51</b> |

**Background/ Problem Focus**

Presently hand-milking is practiced by the farmers. There is shortage of milkmen and problems of mastitis are common in hand milking. Automatic milking machines save time, labour and prevents the occurrence of mastitis in cows. The processing plant at the main dairy of Aavin located at Pachhapalayam, Coimbatore has a capacity of 2 lakh litres but the present handling is 2.05 lakh litres. Four Chilling Centres are located at Shanmugapuram (34,000 litres), Sulthanpet (54,000 litres), Tiruppur (25,000 litres) and Annur (36,000 litres). The main dairy and all the 4 chilling centers handle more than their actual capacities. Further, the chilled milk from the chilling centers are being transported to the Main dairy at Coimbatore and inturn, packaged milk is being transported from Coimbatore to Tiruppur (40,000 litres) for sale at Tiruppur.

Establishment of a bulk milk coolers and walk-in-coolers will help to maintain the quality of milk until it is processed and marketed. A total number of 25 milk producers' co-operative societies are dormant. This leads to decrease in the quantity of milk procured. They have to be revived with necessary inputs to improve the quantum of milk production in the district. Facilities for the manufacture of value-added milk products like khoa, paneer and ice-cream have to be strengthened to utilize surplus milk during certain seasons. Also this will meet to the demand for these products by the urban population. Electronic weighing balances are to be provided to small societies to weigh milk. Further, in societies handling more than 500 litres of milk per day, it is essential to establish PC-based automatic milk collection stations.

A MMPO Laboratory has to be established for the milk and milk products to meet to the standards for the domestic and export demand under the control of registering authority in adherence to the rule 23 of MMPO. The quality assurance laboratory at the Aavin main dairy needs to be strengthened with certain basic facilities for assessment of milk quality at different stages of processing and marketing. Energy management system in the main processing plant will save power and will be economical.

**Project Rationale**

Milking machines will save labour, time and prevent the occurrence of mastitis in dairy cows. Bulk milk coolers and walk-in-coolers will help to keep the quality of milk until it is processed and marketed. Revival of dormant milk producers' co-operative societies will boost the milk production. Establishment of manufacturing units for khoa, paneer and ice-cream will help in value-addition of milk. Provision of milk weighing machines to societies will help in the accurate weighing of milk. Automatic PC-based milk collection stations will save time, manpower, provide accurate weighing of milk, stores the milk data for several months and provide confidence among the members of the societies. A MMPO Laboratory will be established for the milk and milk products to meet to the standards for the domestic and export demand. The quality assurance laboratory at the Aavin main dairy will be strengthened with certain basic facilities for assessment of milk quality at different stages of processing and marketing. Energy management system in the main processing plant will save power and will be economical.

**Project Strategy**

Twenty-five milking machines will be provided to the Integrated Dairy Farms at one unit per IDF Village at a total cost of Rs. 25 lakhs @ Rs. 1.0 lakh/unit. One hundred portable milking machines will be supplied to the members of the society at a total cost of Rs.18.0 lakhs @ Rs.0.18 lakhs/unit. Provision of milking machines will help to improve the collection and quality of milk. Two bulk milk coolers will be established, one at the Tiruppur chilling center and another at Shanmugapuram chilling centre to improve the keeping quality of milk until it is processed. The total cost will be Rs.60.0 lakhs. One unit of walk-in-cooler will be established at Tiruppur chilling Centre at a total cost of Rs. 30.0 lakhs. A total number of 25 dormant societies will be revived with necessary inputs @ Rs.1.0 lakh per unit at a total cost of Rs. 25 lakhs. Two khoa manufacturing units (@ Rs.0.77 lakhs/unit), two paneer making units (@ Rs.1.02 lakhs/unit) and two ice-cream making units (@ Rs. 1.12 lakhs/unit) will be established at a total cost of Rs. 5.82 lakhs to promote value-addition of milk. A total of 282 numbers of milk weighing machines

will be established at milk producers' co-operative societies for accurate weighing of milk at a total cost of 47.94 lakhs. A total number of 53 PC-based automatic milk collection stations will be established at IDF villages and milk producers' co-operative societies at a total cost of Rs.92.75 lakhs @ Rs.1.75 lakhs/unit. A regional MMPO Laboratory will be established by the Dairy Development Department at a total cost of Rs. 56.0 lakhs. This will cater to the needs of the co-operative dairy and other private dairies in the district. The quality assurance laboratory at Coimbatore dairy will be strengthened at a total cost of Rs. 10.0 lakhs. A project on energy management system will be implemented at a total cost of Rs.10.0 lakhs.

### **Project Goals**

- Clean milk production, saving labour and time and prevention of mastitis through installation of milking machines.
- Improvement of the milk quality until processing and marketing through establishment of bulk milk coolers and walk-in-coolers.
- Augmentation of milk production through revival of dormant societies.
- Value-addition of milk by establishing khoa, paneer and ice-cream making units.
- Accurate weighing of milk in societies through supply of weighing machines.
- Saving time, labour and accurate weighing of milk through establishment of automatic PC-based milk collection stations.
- Improvement of quality standards for milk and milk products, prevention of adulteration, analysis of statutory samples and third party samples for quality through establishment of MMPO Laboratory,
- Improvement in the assessment of milk quality through strengthening of quality assurance laboratory.
- Energy conservation in the main dairy processing plant.

### Project Components

Twenty-five milking machines will be provided to the Integrated Dairy Farms at one unit per IDF Village at a total cost of Rs. 25 lakhs @ Rs. 1.0 lakh/unit. One hundred portable milking machines will be supplied to the members of the society at a total cost of Rs.18.0 lakhs @ Rs.0.18 lakhs/unit. Provision of milking machines will help to improve the collection and quality of milk. Two bulk milk coolers will be established, one at the Tiruppur chilling centre and another at Shanmugapuram chilling centre to improve the keeping quality of milk until it is processed. The total cost will be Rs.60.0 lakhs. One unit of walk-in-cooler will be established at Tiruppur chilling Centre at a total cost of Rs. 30.0 lakhs. A total number of 25 dormant societies will be revived with necessary inputs @ Rs.1.0 lakh per unit at a total cost of Rs. 25 lakhs. Two khoa manufacturing units (@ Rs.0.77 lakhs/unit), two paneer making units (@ Rs.1.02 lakhs/unit) and two ice-cream making units (@ Rs. 1.12 lakhs/unit) will be established at a total cost of Rs. 5.82 lakhs to promote value-addition of milk. A total of 282 numbers of milk weighing machines will be established at milk producers' co-operative societies for accurate weighing of milk. A total number of 53 PC-based automatic milk collection stations will be established at IDF villages and milk producers' co-operative societies at a total cost of Rs.92.75 lakhs @ Rs.1.75 lakhs/unit. A regional MMPO Laboratory will be established by the Dairy Development Department at a total cost of Rs. 56.0 lakhs. The quality assurance laboratory at Coimbatore dairy will be strengthened at a total cost of Rs. 10.0 lakhs. A project on energy management system will be implemented at a total cost of Rs.10.0 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.      | Autoclave             | 0.30            |

| Sl. No. | Name of the equipment             | Amount in lakhs |
|---------|-----------------------------------|-----------------|
| 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            |
|         | <b>Total</b>                      | <b>10.00</b>    |

### Project Cost and Financing

(Rs. in lakhs)

| S. No. | Project  | 2008<br>-2009 | 2009<br>-2010 | 2010<br>-2011 | 2011<br>-2012 | Total<br>Cost |
|--------|--|---------------|---------------|---------------|---------------|---------------|
| 1.     | Milking machines for ID farms @ Rs.1.0 lakh per unit, 25 units totally (DDD)                           | 25.00         | -             | -             | -             | 25.00         |
| 2.     | Supply of portable milking machines to members of the Society @ Rs. 0.18 lakh, 100 Units totally (DDD) | 4.50          | 4.50          | 4.50          | 4.50          | 18.00         |
| 3.     | Provision of bulk milk coolers @ Rs.30.0 lakhs/unit, 2 units (DDD)                                     | 30.00         | 30.00         | -             | -             | 60.00         |
| 4.     | Provision of a walk-in-cooler @ Rs. 30.0 lakhs/unit (DDD)  | 30.00         | -             | -             | -             | 30.00         |
| 5.     | Revival of 25 dormant milk producers' co-operative societies @ Rs.1.0 lakh/unit, 25 societies (DDD)    | 5.00          | 10.00         | 5.00          | 5.00          | 25.00         |

(Rs. in lakhs)

| S. No. | Project  | 2008<br>-2009 | 2009<br>-2010 | 2010<br>-2011 | 2011<br>-2012 | Total<br>Cost |
|--------|--|---------------|---------------|---------------|---------------|---------------|
| 6.     | Establishment of two khoa manufacturing units @ Rs. 0.77 lakh/unit (DDD)   | 0.77          | 0.77          | -             | -             | 1.54          |
| 7.     | Establishment of two paneer manufacturing units @ Rs. 1.02 lakhs/unit (DDD)  | 1.02          | 1.02          | -             | -             | 2.04          |
| 8.     | Establishment of two ice-cream manufacturing units @ Rs. 1.12 lakhs/unit (DDD)   | 1.12          | 1.12          | -             | -             | 2.24          |
| 9.     | Supply of 282 milk weighing machines to milk producers' co-operative societies @ Rs. 0.17 lakh/unit (DDD)  | 12.24         | 11.90         | 11.90         | 11.90         | 47.94         |
| 10.    | Provision of PC-based automatic milk collection stations to IDF villages and milk producers' co-operative societies @ Rs. 1.75 lakhs/unit, 53 units (DDD)  | 61.25         | 10.50         | 10.50         | 10.50         | 92.75         |
| 11.    | Establishment of a MMPO Laboratory @ Rs. 56.00 lakhs (DDD)<br><br>The cost includes civil works for Rs. 12.00 lakhs for 1000 sq.ft. @ Rs. 1,200/sq.ft, laboratory equipment for Rs. 30.00 lakhs, glassware and chemicals for Rs.5 lakhs, furniture, computer and accessories for Rs. 1 lakh and a jeep for Rs. 6 lakhs and training for Rs. 2 lakhs. | 56.00         | -             | -             | -             | 56.00         |
| 12.    | Strengthening of the quality assurance laboratory @ Rs. 10.0 lakhs (DDD)   | 10.00         | -             | -             | -             | 10.00         |
| 13.    | Energy management system @ Rs.10 lakhs (Solar water heating unit - 5000 litres – 1 unit ) - (DDD)  | 10.00         | -             | -             | -             | 10.00         |
|        | <b>Total</b>   | <b>246.90</b> | <b>69.81</b>  | <b>31.90</b>  | <b>31.90</b>  | <b>380.51</b> |

**Implementation Chart of the Project**

| Project   | 2008-2009 | 2009-2010 | 2010-2011 | 2011-2012 |
|---|-----------|-----------|-----------|-----------|
| 1. Milking machines for ID farms  | ✓         |           |           |           |
| 2. Supply of portable milking machines to members of the Society  | ✓         | ✓         | ✓         | ✓         |
| 3. Provision of bulk milk coolers   | ✓         | ✓         |           |           |
| 4. Provision of a walk-in-cooler  | ✓         |           |           |           |
| 5. Revival of 25 dormant milk producers' co-operative societies   | ✓         | ✓         | ✓         | ✓         |
| 6. Establishment of two khoa manufacturing units  | ✓         | ✓         |           |           |
| 7. Establishment of two paneer manufacturing units  | ✓         | ✓         |           |           |
| 8. Establishment of two ice-cream manufacturing units   | ✓         | ✓         |           |           |
| 9. Supply of 282 milk weighing machines to milk producers' co-operative societies                                       | ✓         | ✓         | ✓         | ✓         |
| 10. Provision of PC-based automatic milk collection stations to IDF villages and milk producers' co-operative societies | ✓         | ✓         | ✓         | ✓         |
| 11. Establishment of a MMPO Laboratory  | ✓         |           |           |           |
| 12. Strengthening of the quality assurance laboratory   | ✓         |           |           |           |
| 13. Energy management system  | ✓         |           |           |           |

**Reporting**

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

**D. Capacity Building of Farmers / Technical Staff****Abstract**

The following training programmes will be conducted by the Veterinary University Training and Research Centres, Coimbatore and Tiruppur to the farmers and women SHGs at a total cost of Rs.12.00 lakhs.

1. Modern technologies in livestock farming
2. Skill-oriented programmes on value-addition of milk and meat
3. Scientific sheep and goat rearing
4. Hygienic meat production, processing and establishment of modern retail meat units.

The following training programmes will be conducted by the Aavin, Coimbatore to the technical staff and dairy farmers at a total cost of Rs. 20.70 lakhs.

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

**Budget****I. Training Programmes to be conducted by the TANUVAS Centres at Coimbatore and Tiruppur****(Rs. in lakhs)**

|  |      |
|--|------|
| 1. Training programmes on modern technologies in livestock farming under CAT, 2 days, 20 farmers / batch, Rs. 500/farmer, Rs.10,000 /batch, 20 batches @ 5 batches/year, (TANUVAS)           | 2.00 |
| 2. Skill-oriented training programmes on value-addition of milk and meat to women SHGs, 2 days, 20 members / batch, Rs. 500/member, Rs.10,000 /batch, 20 batches @ 5 batches/year, (TANUVAS) | 2.00 |

(Rs. in lakhs)

|   |              |
|---|--------------|
| 3. Training programmes on scientific sheep and goat rearing to women SHGs, 2 days, 20 members / batch, Rs. 500/member, Rs.10,000 /batch, 40 batches @ 10 batches/year, (TANUVAS)  | 4.00         |
| 4. Training programmes on hygienic meat production, processing and establishment of modern retail meat units to women SHGs, 2 days, 20 members / batch, Rs. 500/member, Rs.10,000 /batch, 40 batches @ 10 batches/year, (TANUVAS) | 4.00         |
| <b>Total</b>  | <b>12.00</b> |

**II. Training Programmes to be conducted by the Aavin, Coimbatore**

(Rs. in lakhs)

|  |              |
|--|--------------|
| 1. Farmers study tour @ Rs.5000/farmer, 250 farmers for 4 years (70 farmers for first year and 60 farmers each for subsequent three years) | 12.50        |
| 2. Skill development training for technical staff of Aavin, Coimbatore 25 staff per year, @ Rs.5000/- per staff, for 4 years               | 5.00         |
| 3. Orientation training/workshop for milk producers' at society level Rs.20,000 per programme, 4 programmes/year, for 4 years              | 3.20         |
| <b>Total</b>   | <b>20.70</b> |
| <b>TOTAL BUDGET FOR TRAINING</b>   | <b>32.70</b> |

**Background/ Problem Focus**

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

**Project rationale**

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

### **Project Strategy**

The Training Programmes will be conducted by the Veterinary University Training and Research Centres, Coimbatore and Tiruppur and by the Aavin, Coimbatore.

### **Project Goals**

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

### **Project Components**

The following training programmes will be conducted by the Veterinary University Training and Research Centres, Coimbatore and Tiruppur to the farmers and women SHGs at a total cost of Rs. 12.00 lakhs.

1. Modern technologies in livestock farming
2. Skill-oriented programmes on value-addition of milk and meat
3. Scientific sheep and goat rearing
4. Hygienic meat production, processing and establishment of modern retail meat units.

The following training programmes will be conducted by the Aavin, Coimbatore to the technical staff and dairy farmers at a total cost of Rs. 20.70 lakhs.

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

**Project Cost and Financing****I. Training Programmes to be conducted by the TANUVAS Centres at Coimbatore and Tiruppur****(Amount in Rs. lakhs)**

| <b>Project</b>  | <b>2008-<br/>2009</b> | <b>2009<br/>-2010</b> | <b>2010-<br/>2011</b> | <b>2011-<br/>2012</b> | <b>Total<br/>Cost</b> |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| 1. Training programmes on modern technologies in livestock farming under CAT, 2 days, 20 farmers / batch, Rs. 500/farmer, Rs.10,000 /batch, 20 batches @ 5 batches/year   | 0.50                  | 0.50                  | 0.50                  | 0.50                  | 2.00                  |
| 2. Skill-oriented training programmes on value-addition of milk and meat to women SHGs, 2 days, 20 members / batch, Rs. 500/member, Rs.10,000 /batch, 20 batches @ 5 batches/year,                                      | 0.50                  | 0.50                  | 0.50                  | 0.50                  | 2.00                  |
| 3. Training programmes on scientific sheep and goat rearing to women SHGs, 2 days, 20 members / batch, Rs. 500/member, Rs.10,000 /batch, 40 batches @ 10 batches/year,  | 1.00                  | 1.00                  | 1.00                  | 1.00                  | 4.00                  |
| 4. Training programmes on hygienic meat production, processing and establishment of modern retail meat units to women SHGs, 2 days, 20 members / batch, Rs. 500/member, Rs.10,000 /batch, 40 batches @ 10 batches/year, | 1.00                  | 1.00                  | 1.00                  | 1.00                  | 4.00                  |
| <b>Total</b>  | <b>3.00</b>           | <b>3.00</b>           | <b>3.00</b>           | <b>3.00</b>           | <b>12.00</b>          |

**II. Training Programmes to be conducted by the Aavin, Coimbatore****(Amount in Rs. lakhs)**

| <b>Activity</b>   | <b>2008-2009</b> | <b>2009-2010</b> | <b>2010-2011</b> | <b>2011-2012</b> | <b>Total Cost</b> |
|---|------------------|------------------|------------------|------------------|-------------------|
| 1. Farmers study tour @ Rs.5000/farmer, 250 farmers for 4 years   | 3.50             | 3.00             | 3.00             | 3.00             | 12.50             |
| 2. Skill development training for technical staff of Aavin, Coimbatore 25 staff per year, @ Rs.5000/- per staff, for 4 years  | 1.25             | 1.25             | 1.25             | 1.25             | 5.00              |
| 3. Orientation training/workshop for milk producers' at society level Rs.20,000 per programme, 4 programmes/year, for 4 years | 0.80             | 0.80             | 0.80             | 0.80             | 3.20              |
| <b>Total</b>  | <b>5.55</b>      | <b>5.05</b>      | <b>5.05</b>      | <b>5.05</b>      | <b>20.70</b>      |
| <b>Total Budget for Training</b>  | <b>8.55</b>      | <b>8.05</b>      | <b>8.05</b>      | <b>8.05</b>      | <b>32.70</b>      |

**Implementation Chart of the Project****1. Training Programmes to be conducted by the TANUVAS Centres at Coimbatore and Tiruppur**

| <b>Activity</b>  | <b>2008-2009</b> | <b>2009-2010</b> | <b>2010-2011</b> | <b>2011-2012</b> |
|--|------------------|------------------|------------------|------------------|
| 1. Training programmes on modern technologies in livestock farming under CAT   | ✓                | ✓                | ✓                | ✓                |
| 2. Skill-oriented training programmes on value addition of milk and meat to women SHGs                                     | ✓                | ✓                | ✓                | ✓                |
| 3. Training programmes on scientific sheep and goat rearing to women SHGs  | ✓                | ✓                | ✓                | ✓                |
| 4. Training programmes on hygienic meat production, processing and establishment of modern retail meat units to women SHGs | ✓                | ✓                | ✓                | ✓                |

**2. Training Programmes to be conducted by the Aavin, Coimbatore**

| Activity  | 2008-2009 | 2009-2010 | 2010-2011 | 2011-2012 |
|---|-----------|-----------|-----------|-----------|
| 1. Farmers study tour @ Rs.5000/farmer, 250 farmers for 4 years   | ✓         | ✓         | ✓         | ✓         |
| 2. Skill development training for technical staff of Aavin, Coimbatore 25 staff per year, @ Rs.5000/- per staff, for 4 years  | ✓         | ✓         | ✓         | ✓         |
| 3. Orientation training/workshop for milk producers' at society level Rs.20,000 per programme, 4 programmes/year, for 4 years | ✓         | ✓         | ✓         | ✓         |

**Reporting**

The Heads of the Veterinary University Training and Research Centres, Coimbatore and Tiruppur and the General Manager, Aavin, Coimbatore will submit to periodical progress report on the training programmes conducted to the higher authorities.

**E. Institutional development for the effective disease surveillance, monitoring and extension services****Abstract**

The TANUVAS Centres at Coimbatore and Tiruppur will be strengthened for the effective disease surveillance, monitoring and extension services at a total cost of Rs. 30.00 lakhs.

**Budget****(Rs. in lakhs)**

|    |  |              |
|----|--|--------------|
| 1. | Strengthening of the TANUVAS Centre at Coimbatore with a mobile disease investigation cum training unit (TANUVAS)  | 10.00        |
| 2. | Strengthening of the TANUVAS Centres at Coimbatore and Tiruppur with facilities for Transfer of Technology – Training @ Rs.10.00 lakhs/unit, 2 units (TANUVAS) | 20.00        |
|    | <b>Total</b>   | <b>30.00</b> |

**Background/ Problem Focus**

The Veterinary University Training and Research Centres, Coimbatore and Tiruppur are the peripheral Centers of the Tamil Nadu Veterinary and Animal Sciences University, Chennai with jurisdiction of the Coimbatore as well as the Nilgiris districts for the farmers to contact and to get technical help and guidance regarding all matters of animal health and production. The services rendered by the staff of the Centres to the Animal Husbandry Department in tackling problems in repeat breeders, infertility and abortion are immense and it has been well appreciated by the dairy farmers in the district. Infectious infertility and mastitis cases are studied by culture and antibiogram and the service to dairy farmers in the district ensures successful treatment of such economic diseases. The services are extended to the poultry industry in tackling the disease problems like Infectious Bursal Disease, Infectious Bronchitis, Ranikhet disease, and Infectious Hydropericarditis. The training programmes offered on various disciplines of livestock farming by these Centres have motivated and helped the farmers to start successful livestock farms. These Centres does not have certain basic facilities. Strengthening of the Veterinary University Training and Research Centres, Coimbatore and Tiruppur will help in the effective surveillance and monitoring of livestock diseases and conduct of extension activities in the district.

**Project Rationale**

The Veterinary University Training and Research Centres at Coimbatore and Tiruppur are the peripheral Centres of the Tamil Nadu Veterinary and Animal Sciences University, Chennai. These Centres serve the farmers of the Coimbatore and the Nilgiris districts in the areas of livestock health and production. The technical services and training programmes offered by these Centres are being utilized by the farming community. Strengthening of these Centres will help in the effective surveillance and monitoring of livestock diseases and conduct of extension activities in the district.

### Project Strategy

The Veterinary University Training and Research Centre, Coimbatore will be strengthened with provision of a mobile disease investigation cum training unit at a total cost of Rs.10.00 lakhs and with provision of audio-visual aids at a total cost of Rs.10.00 lakhs. The Veterinary University Training and Research Centre, Tiruppur will be strengthened with audio-visual aids at a total cost of Rs.10.00 lakhs.

### Project Goals

Strengthening of the Veterinary University Training and Research Centres, Coimbatore and Tiruppur for the effective surveillance and monitoring of livestock diseases and conduct of extension activities in the district.

### Project Components

The Veterinary University Training and Research Centre, Coimbatore will be strengthened with provision of a mobile disease investigation cum training unit at a total cost of Rs.10.00 lakhs and with provision of audio-visual aids at a total cost of Rs.10.00 lakhs. The Veterinary University Training and Research Centre, Tiruppur will be strengthened with audio-visual aids at a total cost of Rs.10.00 lakhs.

### Project Cost and Financing

(Rs. in lakhs)

| Project   | 2008-2009 | 2009-2010 | 2010-2011 | 2011-2012 | Total Cost   |
|---|-----------|-----------|-----------|-----------|--------------|
| 1. Strengthening of the TANUVAS Centre at Coimbatore with a mobile disease investigation cum training unit comprising of a van (Rs. 7.00 lakhs), binocular microscope (Rs.0.20 lakhs), LCD Projector and other accessories (Rs. 2.50 lakhs) and other AV Aids (Rs.0.30 lakhs) | 10.00     |           |           |           | <b>10.00</b> |

(Rs. in lakhs)

| <b>Project</b>   | <b>2008-2009</b> | <b>2009-2010</b> | <b>2010-2011</b> | <b>2011-2012</b> | <b>Total Cost</b> |
|--|------------------|------------------|------------------|------------------|-------------------|
| 2. Strengthening of the TANUVAS Centres at Coimbatore and Tiruppur with facilities for Transfer of Technology – Training @ Rs.10.00 lakhs/unit , Laptop Computer with printer - Rs. 0.75 lakh Teaching aids (projector, digital camera, television with accessories, public address system, generator etc.)- Rs. 5.25 lakhs, Model units (Rabbit, Quail, Desi chicken and Turkey) - Rs. 4.00 lakhs | 20.00            |                  |                  |                  | <b>20.00</b>      |
| <b>Total</b>   | <b>30.00</b>     |                  |                  |                  | <b>30.00</b>      |

**Implementation Chart of the Project**

| <b>Activity</b>  | <b>2008-2009</b> | <b>2009-2010</b> | <b>2010-2011</b> | <b>2011-2012</b> |
|--|------------------|------------------|------------------|------------------|
| 1. Strengthening of the TANUVAS Centre at Coimbatore with a mobile disease investigation cum training unit               | ✓                |                  |                  |                  |
| 2. Strengthening of the TANUVAS Centres at Coimbatore and Tiruppur with facilities for Transfer of Technology – Training | ✓                |                  |                  |                  |

**Reporting**

The Heads of the Centres will implement the projects and the progress of the projects will be submitted to the Tamil Nadu Veterinary and Animal Sciences University, Chennai.

**Table 6.20 Coimbatore District – Fisheries Sector – Budget – 2008-12**

| 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       | Strengthening of Thirumurthy, Amaravathy and Aliyar Dams                                   | TNFDC                | 185.00                 | 1.60  | 2.00    | 295.00 |         |      |         |       |         |      | 295.00                  |
| 2       | Development of Post harvest infrastructure in selected landing centres                     | Fisheries Department | 10.00                  | 2.00  | 1.00    | 10.00  |         |      | 1.00    | 10.00 |         |      | 20.00                   |
| 3       | Supply of fishing implements (50% Subsidy)   | Fisheries Department | 0.10                   | 25    | 10.00   | 1.00   | 5.00    | 0.50 | 5.00    | 0.50  | 5.00    | 0.50 | 2.50                    |
| 4       | Expansion of fish culture by providing subsidy 50% assistance to fish farmers for stocking | Fisheries Department | 0.01                   | 1250  | 250.00  | 2.50   | 200.00  | 2.00 | 400.00  | 4.00  | 400.00  | 4.00 | 12.50                   |

Table 6.20 Contd....

| 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         |                         |
| 5       | Establishment of endemic ornamental fish culture and breeding units. | TNFDC               | 35.00                  | 1     | 1.00    | 35.00         |         |               |         |               |         |              | 35.00                   |
| 6       | Establishment of whole sale fish market at Coimbatore                | TNFDC               | 300.00                 | 1     |         |               | 1.00    | 300.00        |         |               |         |              | 300.00                  |
| 7       | Retail outlet  | TNFDC               | 10.00                  | 5     | 2.00    | 20.00         | 1.00    | 10.00         | 1.00    | 10.00         | 1.00    | 10.00        | 50.00                   |
| 8       | Subsidy for quick transportation (Moped with Ice Box) (50% subsidy)  | TAFCOFED            | 0.15                   | 50    | 10.00   | 1.50          | 20.00   | 3.00          | 10.00   | 1.50          | 10.00   | 1.50         | 7.50                    |
| 9       | Establishment of GIF Tilapia breeding unit at Aliyar                 | TNFDC               | 100.00                 | 2     | 1       | 100.00        |         |               | 1       | 100.00        |         |              | 200.00                  |
|         | <b>Fisheries Total</b>   |                     |                        |       |         | <b>465.00</b> |         | <b>315.50</b> |         | <b>126.00</b> |         | <b>16.00</b> | <b>922.50</b>           |

Table 6.20 Contd....

| 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       | Farmers training                               | TANUVAS             | 0.01                   | 400   | 100     | 1.00          | 100     | 1.00          | 100     | 1.00          | 100     | 1.00         | 4.00                    |
| 2       | Development of marketing strategies for fishes | TANUVAS             | 3.00                   | 1     |         |               | 1       | 3.00          |         |               |         |              | 3.00                    |
|         | <b>TANUVAS - Total</b>                         |                     |                        |       |         | <b>1.00</b>   |         | <b>4.00</b>   |         | <b>1.00</b>   |         | <b>1.00</b>  | <b>7.00</b>             |
|         | <b>Grand Total</b>                             |                     |                        |       |         | <b>466.00</b> |         | <b>319.50</b> |         | <b>127.00</b> |         | <b>17.00</b> | <b>929.50</b>           |

## 1) Strengthening of Thirumurthy, Amaravathy and Aliyar Government Fish seed rearing Centres

### Abstract

The TNFDC has fish seed rearing farms at Thirumurthy, Amaravathy and Aliyar. Out of the total area of 3.2 ha. 1.6 ha are under usable condition and the remaining 1.6 ha are under repair.

**Budget : Rs. 295.00 lakhs**

### Background / Problem Focus

The fish seed farms in need to be renovated. About only 50% of the total rearing area of the 3 farms are used presently.

| S. No.       | Seed Farm   | Total Rearing Area | Non-usable     | Usable         |
|--------------|-------------|--------------------|----------------|----------------|
| 1.           | Aliyar      | 2.00 ha            | 1.20 ha        | 0.80 ha.       |
| 2.           | Amaravathy  | 0.50 ha            | 0.20 ha        | 0.30 ha        |
| 3.           | Thirumurthy | 0.70 ha            | 0.20 ha        | 0.50 ha        |
| <b>Total</b> |             | <b>3.20 ha</b>     | <b>1.60 ha</b> | <b>1.60 ha</b> |

### Project Rationale

Strengthening fish production by producing more quantity of fish seeds.

### Project Strategy

Strengthening of Thirumurthy, Amaravathy and Aliyar.

**Project Goals**

To increase the fish seed production in the 3 fish seed farms.

**Project Components**

To strengthen the fish seed farms by under taking the repair works.

**Project Cost and Financing**

|                                  |   |
|----------------------------------|---|
| Unit cost                        | 185 lakhs *<br>(For excavation of ponds, Stone pitching & plastering, Grass turfing, Desilting & deepening) |
| No. of units                     | 1.60ha  |
| Total cost ( 1.60ha x 185 lakhs) | 295 lakhs   |

**Implementation Chart of the Project**

| Sl.No. | Particulars        | 2008-09 | 2009-10 | 2010-11 | I2011-12 |
|--------|--------------------|---------|---------|---------|----------|
| 1.     | Tender             |         | √       |         |          |
| 2.     | Repair, renovation |         |         | √       | √        |
| 3.     | Stocking           |         |         | √       | √        |

**Reporting**

The project will be implemented and maintained by TNFDC.

**2. Development of Post harvest infrastructure in selected landing centres****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.

**Budget : Rs. 20.00 lakhs**

### **Background / Problem Focus**

The proposed landing centre will have fish landing area, net drying place, modern retail outlet. The total cost would be Rs.10 lakhs per landing centre. It is proposed to established 6 units in the 3 reservoirs.

### **Project Rationale**

To provide post harvest infrastructure facilities in the selected fish landing centres that facilitate the supply of good quality fish.

### **Project Strategy**

Providing post harvest infrastructure facilities such as the training place keeping the fish landing area neat and clean an provision of modern retail fish outlets.

### **Project Goals**

The facility will be utilized for hygienic handling of harvested fish from the reservoir.

### **Project Components**

Creation of post harvest infrastructure facilities in the fish landing centres.

### **Project Cost and Financing**

|                          |  |
|--------------------------|--|
| Unit cost                | 20 lakhs * 750sq.ft.market shed, fish storage cabin, glass display cabinet, weighing balance, deep freezer |
| No. of units             | 2.00   |
| Total cost ( 2x10 lakhs) | 20 lakhs   |

**Implementation Chart of the Project**

| Sl.No. | Particulars                                     | 2008-09 | 2009-10 | 2010-11 | 2011-12 |
|--------|---|---------|---------|---------|---------|
| 1.     | Selection of centres                            | √       |         |         |         |
| 2.     | Creation of facilities for fish landing centers |         | √       | √       | √       |

**Reporting**

The project will be implemented by the Dept. of Fisheries and TNFDC.

**3. Supply of Fishing Implements (50% Subsidy)****Abstract**

Fishermen will be provided with gill nets for effective fishing.

**Budget : Rs 2.50 lakhs**

**Background / Problem Focus**

To provide gillnets to the fishermen at 50% subsidy

**Project Rationale**

To enhance fish production through capture fisheries.

**Project Strategy**

To provide 200 nos. of gillnets to the inland fishermen.

**Project Goals**

To intervene fishing in natural water bodies.

**Project Components**

Supply of gillnets at 50% subsidy

**Project Cost and Financing : Rs. 2.50 lakhs**

|                              |   |
|------------------------------|---|
| Unit cost                    | 0.10 lakhs * FRP coracle & fishing nets |
| No. of units                 | 25.00                                   |
| Total cost ( 25x 0.10 lakhs) | 2.5 lakhs                               |

**Implementation Chart of the Project**

| Sl.No. | Particulars                           | 2008-09 | 2009-10 | 2010-11 | 2011-12 |
|--------|---------------------------------------|---------|---------|---------|---------|
| 1.     | Purchase of FRP coracle & fishing net | √       | √       | √       | √       |

**Reporting**

The progress of the project will be reported periodically.

**4. Expansion of Fish Culture by providing Subsidy 50% Assistance to Fish****Farmers for Stocking Fingerlings****Abstract**

It is proposed to cover 2000 ha of water bodies additionally to bring under fish culture by extending subsidy assistance for stocking fingerlings. Hitherto unutilised water bodies will be stocked @ 5000 fingerlings per ha.

**Budget : Rs. 12.50 lakhs**

**Background / Problem Focus**

2000 ha water body not brought with stocking of fingerlings. Subsidy not given to farms.

**Project Rationale**

To bring 2000 ha of water spread area for stocking fish seeds at 50% subsidy.

### Project Strategy

Stocking will be commenced by August 2008 and 500 ha will be covered before November 2008.

### Project Goals

- To stock fish fingerlings.
- To extend subsidy to fish farmers.

### Project Components

To provide fingerlings to fish farmers at 50% subsidy.

### Project Cost and Financing

|                                  |   |
|----------------------------------|---|
| Unit cost                        | 0.01 lakhs * supply of fish fingerlings |
| No. of units                     | 1000ha                                  |
| Total cost ( 1000hax 0.01 lakhs) | 12.50 lakhs                             |

### Implementation Chart of the Project

| S.No. | Particulars                    | 2008-09 | 2009-10 | 2010-11 | 2011-12 |
|-------|--------------------------------|---------|---------|---------|---------|
| 1.    | Selection of water spread area | √       |         |         |         |
| 2.    | Stocking fish seed             | √       | √       | √       | √       |

### Reporting

The project will be implemented by the Dept. of fisheries.

## **5. Establishment of Endemic Ornamental Fish Culture and Breeding Units**

### **Abstract**

The Western Ghat region has rich bio-diversity of both ornamental and food fishes. 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 Aliyar 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. 35.00 lakhs**

### **Background / Problem Focus**

Loss of native fish species posing threat to native stock.

### **Project Rationale**

5 lakhs of different varieties of endemic ornamental fish species

### **Project Strategy**

The success of breeding of endemic ornamental fish will pave way for the development of native species.

### **Project Goals**

Construction of breeding and rearing facilities – 1<sup>st</sup> year; Breeding and rearing – 2<sup>nd</sup> years.

### **Project Components**

Different varieties of endemic ornamental fish species

**Project Cost and Financing**

|              |   |
|--------------|---|
| Unit cost    | 35 lakhs * construction of hatchery shed, cement tanks, Water & air supply, filter units, borewell, pumps, brood stock, feeds |
| No. of units | 1.0   |
| Total cost   | Rs.35.00 lakhs  |

**Implementation Chart of the Project**

The TNFDC will identify the species, develop infrastructure facilities for breeding, and propagate endemic ornamental fish trade both in domestic and export market at Aliyar dam.

| S. No. | Particulars   | 2008-09 |
|--------|---|---------|
| 1.     | Tender, construction of hatchery units, collection of breeders & fish seed production | √       |

**Reporting**

The project will be implemented by the TNFDC.

**6. Establishment of Wholesale Fish Market at Coimbatore****Abstract**

Coimbatore is the 3<sup>rd</sup> largest city in Tamilnadu. There is only one whole sale fish market at Ukkadam which lacks modern infrastructure facilities. It is necessary to have modern whole sale fish market with facilities of retail shops, Flake ice unit, Cold storage facilities, ETP facilities, etc.,

**Budget : Rs. 300.00 lakhs**

**Background / Problem Focus**

- No infrastructure facilities in fish market
- Needs creation of facilities for retail shops, Flake ice unit, Cold storage facilities, ETP facilities.

**Project Rationale**

To develop modern infrastructure facilities in the fish sale market.

**Project Strategy**

The modern facility will be utilized by the fish merchants, traders and consumers.

**Project Goals**

Whole sale fish market with modern hygienic facilities will be created to reduce loss.

**Project Components**

Whole sale fish market with modern hygienic facilities.

**Project Cost and Financing**

| <b>S. No</b> | <b>Details</b>  | <b>Cost<br/>(in lakhs)</b> |
|--------------|---|----------------------------|
| 1            | Land Development  | 1.50                       |
| 2            | Construction cost of Buildings for whole sale market/ Retail shops etc. 10000 SQFT @ Rs.1500/Sq.ft. | 150.00                     |
| 3            | Flake ice Generation unit (1 unit) ( 5 ton Capacity @ Rs.400000/ unit)                              | 40.00                      |

| <b>S. No</b> | <b>Details</b>   | <b>Cost<br/>(in lakhs)</b> |
|--------------|--|----------------------------|
| 4            | Cold storage facilities (25ton capacity @ Rs.100000 / ton          | 25.00                      |
| 5            | Water supply and drainage facilities ( Including ETP)              | 15.00                      |
| 6            | Electrical & Standby power supply arrangements(Genset)             | 25.00                      |
| 7            | Development Roads , pavements, vehicle parking facilities etc      | 15.00                      |
| 8            | Dormitory, Rest room facilities& public sanitary arrangements etc. | 15.00                      |
| 9            | Construction of compound wall, grill gates etc.                    | 10.50                      |
| 10           | Unforeseen expenses  | 3.00                       |
| <b>Total</b> |  | <b>300.00</b>              |

### **Implementation Chart of the Project**

The TNFDC will identify suitable location prepare architect design, plan and estimate and maintain – 2 years for completion.

| <b>S.No.</b> | <b>Particulars</b>   | <b>I Qtr<br/>2008-09</b> | <b>IIQtr<br/>2009-10</b> |
|--------------|--|--------------------------|--------------------------|
| 1.           | Tender floating, construction, installation of deep freezers & flake ice units | √                        | √                        |

### **Reporting**

The project will be implemented by the TNFDC.

## 7. Retail Outlet

### Abstract

It is proposed to setup modern retail outlet in places such as Coimbatore, Tirupur Mettupalayam, Udumalpet & Pollachi.

**Budget : Rs. 50.00 lakhs**

### Background / Problem Focus

No modern retail outlet in Coimbatore district. So consumers attraction is poor for fish intake.

### Project Rationale

To market more fish with consumer attraction.

### Project Strategy

The modern facility will benefit the consumers in Coimbatore.

### Project Goals

Tender floating June 2008, Finalization of tender July 2008 Completion of construction September 2008.

### Project Components

5 Units / Rs. 50.00 lakhs / 4 years / TAFCOFED / NADP.

### Project Cost and Financing

|              |   |
|--------------|---|
| Unit cost    | 10 lakhs * 750sq.ft.market area with fish stalls & storage cabins with glass display unit |
| No. of units | 5.0   |
| Total cost   | Rs.50.00 lakhs  |

**Implementation Chart of the Project**

| S.No. | Particulars                  | 2008-09 | 2009-10 | 2010-11 | 2011-12 |
|-------|------------------------------|---------|---------|---------|---------|
| 1.    | Establishment of market area | √       | √       | √       | √       |

**Reporting**

The progress report will be reported periodically.

**8. Subsidy for Quick Transportation (Moped with Ice Box)****Abstract**

Fish is a perishable commodity. The fish sale price is fluctuates depending upon the time taken from harvest to reach at consumer end. 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. Hence it is proposed to provide 50 units of Mopeds with Insulated Ice Box to the fishermen / fish vendors.

**Budget : Rs. 7.50 lakhs**

**Background / Problem Focus**

For quick transportation of fresh fishes which is at present lacking

**Project Rationale**

Quick transportation of fish to get fair price.

**Project Strategy**

The farmer / fishermen will get fair price for the year catches due to quick transportation of fishes to the market.

**Project Goals**

To maintain fish quality & reduce loss to fishermen.

**Project Components**

|              |  |
|--------------|--|
| Unit cost    | 0.15 lakhs * purchase of moped & insulated ice box |
| No. of units | 50   |
| Total cost   | Rs.7.5 lakhs                                       |

**Implementation Chart of the Project**

| S.No. | Particulars                          | 2008-09 | 2009-10 | 2010-11 | 2011-12 |
|-------|--------------------------------------|---------|---------|---------|---------|
| 1.    | Purchase & supply of moped & ice box | √       | √       | √       | √       |

**Reporting**

The project will be implemented by the Department of Fisheries and TAFCOFED.

**9. Farmers Training****Abstract**

Coimbatore district has vast potential for inland fish culture. The technological advancement need to be percolated at grass root level for which a regular farmers training is required. The facilities available in Aliyar will be utilised for importing training. The proposed training will be sandwiched programme with both theory and practical on different technologies such as scientific fish culture practices ornamental, fish breeding, hygienic handling and marketing, cage culture fin fishes will be undertaken. The farmers will be taken to other states like Andhra Pradesh, Orissa, West Bengal etc., to have field exposures. A total number of 400 persons will be trained at an estimated cost of Rs.4 lakhs @ of Rs.10,000 per trainee.

**Budget : Rs. 4.00 lakhs**

### **Background / Problem Focus**

The proposed training will be sandwiched programme with both theory and practical on different technologies such as scientific fish culture practices ornamental, fish breeding, hygienic handling and marketing, cage culture fin fishes will be undertaken. The farmers will be taken to other states like Andhra Pradesh, Orissa, West Bengal etc., to have field exposures.

### **Project Rationale**

Fish culture practices ornamental, fish breeding, hygienic handling and marketing, cage culture fin fishes will be undertaken. The farmers will be taken to other states like Andhra Pradesh, Orissa, West Bengal etc., to have field exposures.

### **Project Strategy**

The farmers will be taken to other states like Andhra Pradesh, Orissa, West Bengal etc., to have field exposures.

### **Project Goals**

Training will be imparted to 100 persons every year in different inland fish culture activities and marketing.

### **Project Components**

- Identification of farmers June 2008
- 1<sup>st</sup> batch (25 persons) – July 2008
- 2<sup>nd</sup> batch (25 persons) – August 2008
- 3<sup>rd</sup> batch (25 persons) – September 2008
- 4<sup>th</sup> batch (25 persons) – January 2009

**Project Cost and Financing : Rs. 4.00 lakhs**

|                         |  |
|-------------------------|--|
| Unit cost               | 0.01 lakhs * hands on training on fish culture techniques & study tour |
| No. of units            | 400  |
| Total cost ( 0.01x 400) | Rs.4.0 lakhs   |

**Implementation Chart of the Project**

| S.No. | Particulars               | 2008-09 | 2009-10 | 2010-11 | 2011-12 |
|-------|---------------------------|---------|---------|---------|---------|
| 1.    | Identification of farmers | √       |         |         |         |
| 2.    | Extend training           |         | √       | √       | √       |

**Reporting**

The project will be implemented by Department of Fisheries.

**10. Establishment of GIF Tilapia breeding unit at Aliyar****Abstract**

Tamilnadu has vast potential for fish culture both horizontally and vertically. The perennial water sources available will be utilized for development of cage culture. The average fish production in the reservoir is about 36 kg per ha. Which can be increased to many folds in other South east Asian countries the record production of 60-100 kg / m<sup>2</sup> has been achieved in cage culture. The genetically improved farmed tilapia is one of the ideal candidate species for cage culture and intensive fish culture system. So the technology of breeding of GIF tilapia is available in other countries which have to be imported. The technologies thus developed in pave way for intensive aquaculture system in Tamilnadu and make the fish culture operation truly a commercial venture. To implement the programme consultancy will be obtained from abroad through MPEDA (Marine Products Export Development Authority). A total sum of Rs.2 crore is required. The TNFDC will implement the programme jointly with Department of Fisheries and MPEDA.

**Budget: Rs.200 .00 lakhs**

**Background / Problem Focus**

Coimbatore district has more freshwater fish consumers. The district has entry and exit point to neighboring states like Kerala and Karnataka. Total inland production of 364 tonnes is insufficient to meet the requirement. IF Tilapia is a promising fish species to support sustained fish production in the district.

**Project Rationale**

- To support the fish needs of the district
- To raise GIF tilapia through R&D practices
- To breed and stock the fish in confined water bodies for regular supply

**Project Strategy**

To produce GIF tilapia for enhancing the fish needs

**Project Goals**

- To identify standard techniques for breeding GIF tilapia
- To undertake aquaculture practices for proliferating the fish for internal Consumption and export

**Project Components**

Technology for breeding GIF tilapia, culture, mass production

**Project Cost and Financing**

A sum of Rs.200 .00 lakhs through NADP funding

**Implementation Chart of the Project**

| S.No. | Particulars   | 2008-09 |         | 2010-11  |         |
|-------|---|---------|---------|----------|---------|
|       |   | I Qtrs  | II Qtrs | III Qtrs | IV Qtrs |
| 1.    | To establish tanks and ponds for rearing the brood stock            | √       | √       | √        | √       |
| 2.    | To breed GIF tilapia Mass culture of the fish for regular marketing | √       | √       | √        | √       |

**Reporting**

The project will be implemented by Departing of Fisheries. And progress of work will be assessed by experts from State fisheries department and TANUVAS.

**11. Development of Marketing Strategy for Fishes****Abstract**

Fish marketing system includes all those activities involved from the point of production / landing to the point of final consumption. More than 90% of marine fish landings of Tamilnadu is supplied to internal markets. Marine fishermen are known to suffer because of greater uncertainties in fish catch, high perishability, assembling from too many coastal landing centres, wide seasonal and spatial variation in price, disequilibrium of demand and supply and lack of marketing infrastructure.

**Budget : Rs. 3.00 lakhs**

**Background /Problem Focus**

Even though urban consumers are conservative in their fish eating habits, their consumption pattern may be influence to a larger extent by several factors. The determinants may arise as a result of internal factors, such as varying income, educational standards, social status, size of family and age. The external factors include supply of fish, price and substitute commodities.

**Project Rationale**

The development of fisheries marketing will require an understanding of the spatial distribution of fish consuming population and infrastructure facilities at various levels of marketing systems starting from the fishermen to the final consumers. It is believed that the consumption pattern of fish might reveal some seasonal fluctuations depending on the production pattern.

**Project Strategy**

A total of 1,000 consumer respondents distributed in the selected city would be randomly selected. Consumer segmentation would be made depending on income, age, education, family size and life cycle. Data would be collected using a protested survey schedule. The factors influencing fish consumption would be estimated using suitable econometric models. Based on the results of the study marketing strategies would be suggested for each city to improve fish marketing of fish based on consumer needs.

**Project Goals**

- ❖ To analyze the fish consumption pattern in the major fish consumption centres.
- ❖ To estimate the demand for the supply of fish in the study area.
- ❖ To conduct test marketing of commercially available fishes among different sections of the consumers.
- ❖ To assess the market infrastructure and development needs.
- ❖ To formulate appropriate marketing strategies for the development of marketing activities.

**Project Components**

1. Conduct of survey among the respondents in the study area.
2. Data entry and processing
3. Analysis of data with statistical tools.
4. Preparation and submission of final report.

**Project Cost and Financing**

| Sl.No.       | Item                                   | Rs. in lakhs |
|--------------|--|--------------|
| 1.           | Pay to enumerators @ Rs. 8,000/- month | 1.92         |
| 2.           | Travelling allowance                   | 0.48         |
| 3.           | Contingencies                          | 0.60         |
| <b>Total</b> |  | <b>3.00</b>  |

**Implementation Chart of the Project**

| Sl. No. | Activities                  | I Qr. | II Qr. | III Qr. | IV Qr. |
|---------|-----------------------------|-------|--------|---------|--------|
| 1.      | Conduct of survey           | √     | -      | -       | -      |
| 2.      | Data entry                  | -     | √      | -       | -      |
| 3.      | Analysis of data            | -     | -      | √       | -      |
| 4.      | Preparation of final report | -     | -      | -       | √      |

**Reporting**

The scheme will be reviewed by the Director of Research and Extension (Fisheries), TANUVAS periodically.

**6.3 Agricultural Engineering****Establishment of Centre for Testing Farm Implements and Machines****Abstract**

The farm implements and machines in general are manufactured by firms other than conventional manufacturing establishments. They are manufactured in an unorganized manner. There are a few small scale manufacturers in Tamil Nadu and nearby states undertaking the production of the farm implements and machines suitable to specific operations in crop cultivation. The demand for most of the farm implements and machines are seasonal and quantity of the machines manufactured is less.

Farmers often purchase such implements from small firms who do not follow strict quality manufacturing standards. In order to ensure quality farm machines, it is necessary to test them on the aspects of proper manufacturing, material composition and functional field performance. For testing the farm implements and machines including tractors and power tillers, four centres with different kinds of testing facility are available in the country, viz., CFMTTI at Budni, Madhya Pradesh, FMTTIs at Hissar, Haryana, Gardinne, Andhra Pradesh and Biswanath Charili, Assam. These centres are always fully loaded with the schedule round the year. The farm machinery manufacturers find it difficult to submit the machines for testing in time. Otherwise they have to wait for a long time to get the machines tested and this affects the timely introduction of newly developed farm machines. Because of this, the needs of the farmers could not be addressed in time.

In order to facilitate faster testing and for promoting the new farm implements manufactured by the local firms, a **Centre for Testing Farm Implements and Machinery** is proposed to be created under AED with an estimated budget of Rs. 380 lakhss. The proposed centre, apart from testing the farm implements and machines, will impart training to the manufacturers, new entrepreneurs, user departments and farmers on the quality product development. Revenue will be generated while testing the farm machines by fixing the fees as stipulated by the government. The centre will have the following components:

- i.. Instrumentation and equipment for measuring : the pull, power, material composition, metrology, soil and moisture properties, etc for testing the farm implements, manually operated machines, engine / motor powered, self propelled, power tiller drawn and tractor drawn implements at a cost of Rs. 170 lakhs.
- ii. Labs and infrastructural facilities for housing the above instrumentation at a cost of Rs 150 lakhs

iii. A set of limited permanent manpower is needed to be deployed in the initial phase for maintaining the- continuity and confidentiality of testing mechanism with a set of contractual technical man power and other contingencies at a cost of Rs. 60 lakhs per annum.

### Establishment of Centre for Testing Farm Implements and Machines

**Table 6.21 Budget Abstract for establishment of Centre for Testing Farm Implement and Machinery 2007 - 2008**

(Rs. in Lakhs)

| Sl.No | Activities/Interventions  | Amount     | Implementing agency |
|-------|---|------------|---------------------|
| 1     | Instrumentation equipments  | 170        | AED                 |
| 2     | Testing Laboratories and Infrastructural Facilities                       | 150        | AED                 |
| 3     | Contingencies for deployed manpower including contractual help and others | 60         | AED                 |
|       | <b>Total</b>  | <b>380</b> |                     |

**Table 6.22 Budget breakup for establishment of Centre for Testing Farm Implement and Machinery 2007 - 2008**

(Rs. in Lakhs)

| Project     | Activities/ interventions  | Total budget | Breakup among departments |          |            |          |          |
|-------------|--|--------------|---------------------------|----------|------------|----------|----------|
|             |  |              | DOA                       | DOH      | AED        | TNAU     | Others   |
| Test Centre | Establishment of Centre for Testing Farm Implements and Machines | 380          | -                         | -        | 380        | -        | -        |
|             | <b>Total</b>   | <b>380</b>   | <b>-</b>                  | <b>-</b> | <b>380</b> | <b>-</b> | <b>-</b> |

### **6.3.1 Establishment of Farm Machinery Testing Facility**

#### **i) Problem Focus**

Farm Mechanization provides the technology to facilitate agricultural growth through efficient utilization of inputs. Adoption of mechanization ensures timeliness of agricultural operations, reduces cost of production as well as reduces drudgery in carrying out various agricultural operations. Equipment for various operations like tillage, sowing, irrigation, plant protection and threshing etc. are generally being used by farming community. It is generally believed that the benefits of modern farm technology have been availed only by large farmers. The fact, however, is that even small farmer utilize selected farm equipment for efficient farm operations through custom hiring.

The farm implements and machines in general are manufactured by firms other than conventional manufacturing establishments. They are manufactured in an unorganized manner. There are a few small scale manufacturers in Tamil Nadu and near by states undertaking the production of the farm implements and machines suitable to specific operations in crop cultivation. The demand for most of the farm implements and machines are seasonal and quantities of the machines manufactured are less.

Realizing the importance of supporting the small and medium farmers by making agricultural machinery affordable, Tamil Nadu government has introduced a programme of subsidized machinery for agriculture. However many of the small tools and equipments needed by the farmers are not commercially available. Also many of the machinery developed in Tamil Nadu and elsewhere are not readily available off shelf. Hence, an action programme is required to encourage entrepreneurs to take up manufacture of agricultural machinery.

#### **ii) Project Rationale**

Farmers often purchase the farm implements from small firms who do not follow strict quality manufacturing standards. In order to ensure quality farm machines, it is necessary to test them on the aspects of proper manufacturing, material composition and

functional field performance. For testing the farm implements and machines including tractors and power tillers, four centres with different kinds of testing facility are available in the country, viz., CFMTTI at Budni, Madhya Pradesh, FMTTIs at Hissar, Haryana, Garldinne, Andhra Pradesh and Biswanath Charili, Assam. These centres are always fully loaded with the schedule round the year. The farm machinery manufacturers find it difficult to submit the machines for testing in time. Otherwise they have to wait for a long time to get the machines tested and this affects the timely introduction of newly developed farm machines. Because of this, the needs of the farmers could not be addressed in time.

### **iii). Project Strategy**

There is urgent and immediate need for creating awareness among the extension functionaries, manufacturers, rural artisans and farmers on the advancements in the agricultural machinery, manufacturing technologies, operation, repair and maintenance of farm equipments. In this context, the manufacturers are to be trained to upgrade their knowledge on the manufacture and supply of quality farm machines to the farmers to ensure functional and reliable performance. The agricultural machinery manufacturers, rural artisans and craftsmen are to be oriented towards the requirement of machines for agricultural operations and their manufacturing technology so that the quality manufacture of standard agricultural machinery is ensured throughout the state.

In order to facilitate faster testing and for promoting the new farm implements manufactured by the local firms, a **Centre for Testing Farm Implements and Machinery** is proposed to be created under AED. The proposed centre, apart from testing the farm implements and machines, will impart training to the manufacturers, new entrepreneurs, researchers, user departments and farmers on the quality product development. This will not only reduce the problem of concentration of manufacturers in cities but also make the availability of service networks in the rural areas.

**iv) Project Goals**

- To facilitate the agricultural machinery manufacturers for the manufacture of quality farm implements and machines
- Testing the implements and machines produced by them on cost basis
- Conduct random quality checks
- Conduct functional and performance tests on the products
- Monitor the programme for mechanization in the state

**v) Project Components**

**a) The centre will have the following components:**

- i. Instrumentation and equipment for measuring the pull, power, material composition, metrology, soil and moisture properties, etc for testing the farm implements manually operated machines, engine / motor powered, self propelled, power tiller drawn and tractor drawn implements.
- ii. Testing laboratories and infrastructural facilities for housing the above instrumentation.
- iii. A set of limited permanent man power is needed to be deployed in the initial phase from the line department for maintaining the continuity and confidentiality of testing mechanism with a set of contractual technical man power and other contingencies.

**b) Objectives**

- To establish the testing centre for farm implements and machines

**c) Outputs**

Availability and supply of tested and quality implements and machines for better field performance in the farmers fields.

**d) Performance Targets (milestones)**

- Selection and procurement of instruments for testing
- Creation of laboratory and infrastructural facilities for testing

**e) Activities**

- Establishment of infrastructure ( Buildings, fields)
- Procurement of measuring instruments
- Procurement of testing instruments
- Procurement of quality control instruments
- Establishment of testing facility
- Conduct tests on the implements supplied by the manufacturers as per government standards

**Table 6.23 Inputs for establishment of Centre for Testing Farm  
Implement and Machinery 2007 - 2008**

| <b>S1.No.</b> | <b>Items</b>                        | <b>Number</b> | <b>Approximate cost<br/>(Rs. In lakhs)</b> |
|---------------|-------------------------------------|---------------|--|
| 1.            | Instruments and equipments          |               | 170.00                                     |
| 2.            | Testing laboratories and facilities |               | 150.00                                     |
|               | <b>Total</b>                        |               | <b>320.00</b>                              |

**Table 6.24 Budget Requirement for establishment of Centre for Testing Farm  
Implement and Machinery 2007 - 2008**

**(Rs. in Lakhs)**

| <b>Details</b>  | <b>2007-08</b> |
|---|----------------|
| Equipments and infrastructural facilities                   | 320.00         |
| Contingencies ( deployment of manpower, hire & contractual, | 60.00          |
| <b>Total</b>  | <b>380.00</b>  |

**g) Implementation Arrangements**

| <b>Scientist with Designation</b> | <b>Department</b>                      | <b>Responsibilities</b>  |
|-----------------------------------|--|--|
| Dean, AEC&RI                      | TNAU                                   | Assisting in the preparation of test codes, procedures and providing technical guidance Monitoring |
| Chief Engineer (Agrl. Engg)       | Department of Agricultural Engineering | Testing and Training   |

**h) Data Sources and Monitoring and Evaluation****Data to be recorded**

- Creation of database about the manufacturers
- Development of database on the farm' implements and machines manufactured
- Creating awareness to the manufacturers for testing their products
- Testing data
- Issuing certificates
- Monitoring and evaluation will be done by the Chief Engineer (Agricultural Engineering)

**vi) Project Costs and Financing**

| <b>Sub-Project component</b>                    | <b>Budget Amount, Rs. In lakhs</b> |                        |               |
|---|------------------------------------|------------------------|---------------|
|   | <b>Recurring*</b>                  | <b>Non-Recurring**</b> | <b>Total</b>  |
| Centre for testing farm implements and Machines | 60.00                              | 320.00                 | 380.00        |
| <b>Total</b>                                    | <b>60.00</b>                       | <b>320.00</b>          | <b>380.00</b> |

\* Recurring cost includes the cost of deployment of manpower, contractual help, hiring charges, etc.

\*\* Non-Recurring cost includes the cost of equipments, infrastructure for-laboratory facilities, etc.

### vii) Implementation Chart of the Project

| Activity  | 2008-2009 |    |     |    |
|---|-----------|----|-----|----|
|   |           | II | III | IV |
| <b>Testing farm implements and machines for quality assurance and performance</b> |           |    |     |    |
| <b>Testing</b>  |           |    |     |    |
| Feedback and impact analysis  |           |    |     |    |
| Report preparation and impact Analysis  |           |    |     |    |

### viii) Reporting

| Particulars  | Refinement                             | Mid term evaluation         | Final report                           |
|--|--|-----------------------------|--|
| Testing the farm implements and machines including certification | Department of Agricultural Engineering | Chief Engineer (Agrl. Engg) | Department of Agricultural Engineering |

**Table 6.25 List of Equipments for establishment of Centre for Testing Farm Implement and Machinery 2007 - 2008**

| S.No | Name  | Qty    | Lakhs Rs. |
|------|---|--------|-----------|
| 1.   | Digital cone penetrometer with data logger (Delta UK)                         | 2 Nos  | 2.00      |
| 2.   | Soil Moisture probe   | 2 Nos  | 2.00      |
| 3.   | Pull type dynamometers (load cell type with data logger)                      | 10 Nos | 5.00      |
| 4.   | Data logger (Portable)  | 2 Nos  | 4.00      |
| 5.   | Data logger (PC based)  | 3 Nos  | 4.50      |
| 6.   | Torque transducer ( Different ranges)   | 4 Nos  | 4.00      |
| 7.   | Tillage dynamometer system  | 1 Set  | 10.00     |
| 8.   | Instrumented PTO torque sensor  | 1 Set  | 5.00      |
| 9.   | Fuel Measuring system.  | 3 Nos. | 1.50      |
| 10.  | Measuring instruments for pressure, temperature, speed, length, velocity, etc | 1 Set  | 10.00     |
| 11.  | Sound measurement instrument  | 2 Nos  | 1.00      |
| 12.  | 'Weighing scales  | 5 Nos  | 2.00      |
| 13.  | Axle weighing scale   | 6 Nos  | 12.00     |
| 14.  | PTO Dynamometer   | 1 No   | 20.00     |
| 15.  | Ergonomic evaluation bit  | 1 Set  | 20.00     |
| 16.  | PC, Printer, plotter, software for drawing & drafting word processing         | 1 Set  | 10.00     |
| 17.  | Xerox, ERABX, Phone, Internet   | 1 Set  | 10.00     |
| 18.  | Field mobile vehicle  | 1 No   | 6.00      |
| 19.  | Tractor.- Higher HP with creeper  | 2 No   | 16.00     |
| 20.  | Furniture for data storage, library & office                                  | 1 Set  | 10.00     |
| 21.  | Miscellaneous instruments and equipments                                      | 1 set  | 15.00     |
|      | Total   |        | 170.00    |

Laboratory infrastructural facilities for testing and training Rs. 150 lakhs.

| <b>Chief Testing Engineer SE, (AED)</b> |                         |                       |  |
|---|-------------------------|-----------------------|--|
| <b>Administration</b>                   | <b>Engineering</b>      |                       |  |
|   | <b>Testing Engineer</b> | <b>Reporting</b>      | <b>Test equipment maintenance &amp; operations</b> |
| AAO                                     | AEE (Ag.Engg) -1        | D'man - 1             | JE (Ag.Engg) -1                                    |
| Jr. Asst. -1                            | AE (Ag.Engg) -1         | Computer operator - 1 |  |
| Storekeeper -1                          | JE (Ag. Engg) -1        | JE(Ag. Engg) - 1      |  |
| Typist - 1                              | Mechanics - 3           |                       |  |
|   | Field Artisans - 2      |                       |  |
|   | Tractor driver -2       |                       |  |
|   | Vehicle driver - 1      |                       |  |

### 6.3.2 Engineering Interventions

**Table 6.26 Detailed Budget Split up for Agricultural Engineering 2008-09**

| <b>S.No</b> | <b>Particulars</b>  | <b>Rupees in Lakhs<br/>2008-09</b> |
|-------------|---|------------------------------------|
| 1.          | Introduction of Newly Developed Agrl. Machinery / Implements*                                       | 42.25                              |
| 2.          | Innovative water harvesting structures  | 47.00                              |
| 3.          | Promoting the concept of Mechanised villages  | 14.93                              |
| 4.          | Popularisation of Agricultural mechanisation through conventional machinery/equipments <sup>a</sup> | 16.025                             |
| 5.          | Water harvesting structures <sup>b</sup>  | 62.30                              |
| 6.          | Soil conservation works**   | 29.70                              |
| 7.          | Water management works  | 172.08                             |
| 8.          | 'Centre for testing farm implements and machines under AED, Tamil Nadu'                             | 380.00                             |
|             |   | <b>764.29</b>                      |

**Table 6.27 Agricultural Engineering Department – Component wise budget  
2008- 09**

| S.No      | Project Component  | Unit Cost<br>Rs. in lakhs | 2008-09 |              |
|-----------|--|---------------------------|---------|--------------|
|           |  |                           | Nos.    | Cost lakhs   |
|           | <b>Stream : I</b>  |                           |         |              |
| <b>I</b>  | <b>Introduction of Newly Developed Agrl. Machinery / Implements*</b> |                           |         |              |
| 1         | Mini combined Harvester TNAU model                                   | 2.5                       | 1.0     | 1.250        |
| 2         | Multi crop Thrasher (High capacity)                                  | 2.1                       | 1.0     | 1.050        |
| 4         | Power Thrasher   | 1.0                       | 2.0     | 1.000        |
| 5         | Post hole digger   | 0.9                       | 10.0    | 4.250        |
| 6         | Shredder (Heavy)   | 1.0                       | 2.0     | 1.000        |
| 7         | Shredder (Medium)  | 0.4                       | 20.0    | 4.000        |
| 8         | Maize Husker Sheller   | 0.9                       | 10.0    | 4.500        |
| 9         | Coconut De- husker   | 0.6                       | 20.0    | 6.000        |
| 10        | Ground nut decordicator  | 0.4                       | 5.0     | 0.875        |
| 11        | Chisel plough  | 0.1                       | 20.0    | 1.200        |
| 12        | Power Weeder - Oleo mac  | 0.7                       | 5.0     | 1.625        |
| 13        | Knapsac Power operated Hydraulic Sprayer                             | 0.2                       | 5.0     | 5.000        |
| 14        | Power Operated Chaff Cutter  | 0.30                      | 50      | 7.500        |
| 15        | Gender friendly equipments**   | 0.08                      | 50      | 3.000        |
|           | <b>Sub total</b>   |                           |         | <b>42.25</b> |
| <b>II</b> | <b>Innovative water harvesting structures</b>                        |                           |         |              |
|           | Lined farm pond with mobile sprinkler                                | 3.00                      | 10      | 27.00        |
|           | Rejuvenation of percolation ponds with 2 recharge shafts             | 1.00                      | 20      | 20.00        |
|           | <b>Sub total</b>   |                           |         | <b>47.00</b> |

Table 6.27 Contd.....

| S.No      | Project Component  | Unit Cost<br>Rs. in lakhs | 2008-09 |               |
|-----------|--|---------------------------|---------|---------------|
|           |  |                           | Nos.    | Cost lakhs    |
| <b>IV</b> | <b>Promoting the concept of Mechanised villages</b>  |                           |         |               |
|           | Distribution of crop based package of Agrl. Machinery on cluster basis in the adopted villages** | varied                    |         |               |
| 1         | 1. Paddy   |                           |         |               |
|           | 2. Groundnut   |                           |         |               |
|           | 3. Maize** (75 % subsidy)  | 19.93                     | 1       | 14.93         |
|           | <b>TOTAL FOR STREAM I</b>  |                           |         | <b>104.18</b> |

\* 50 % subsidy \*\* 75 % subsidy

**Table 6.28 Agricultural Engineering Department- Budget for Stream II Project - 2008-09**

| Sl. No   | Details   | Subsidy | Unit cost (Rs.in lakhs) | No.of units | Total cost (Rs. in Lakhs) |
|----------|---|---------|-------------------------|-------------|---------------------------|
|          | <b>Stream : II</b>  |         |                         |             |                           |
| i)       | <b>Popularisation of Agricultural mechanisation through conventional machinery/equipments<sup>a</sup></b> |         |                         |             |                           |
| <b>A</b> | Power Tiller  | 25%     | 1.16                    | 20          | 5.80                      |
| <b>B</b> | Rotavator   | 25%     | 0.90                    | 40          | 9.00                      |
| <b>C</b> | Cultivator  | 25%     | 0.16                    | 5           | 0.20                      |
| <b>D</b> | Offset Disc harrow  | 25%     | 0.47                    | 5           | 0.5875                    |
| <b>E</b> | Disc Plough   | 25%     | 0.35                    | 5           | 0.4375                    |
|          | <b>Sub total</b>  |         |                         |             | <b>16.025</b>             |

Table 6.28 Contd....

| Sl. No | Details  | Subsidy | Unit cost (Rs. In lakhs) | No.of units | Total cost (Rs. in Lakhs) |
|--------|--|---------|--------------------------|-------------|---------------------------|
| 2)     | <b>Water harvesting structures<sup>b</sup></b> |         |                          |             |                           |
| A      | Farm Ponds unlined**                           | 90%     | 0.5                      | 5           | 2.25                      |
| B      | Check dam Minor                                | 100%    | 0.3                      | 10          | 3.00                      |
| C      | Check dam Medium                               | 100%    | 0.75                     | 20          | 15.00                     |
| D      | Check dam Major                                | 100%    | 1                        | 15          | 15.00                     |
| E      | Percolation pond                               | 100%    | 3.25                     | 5           | 16.25                     |
| F      | Recharge shaft                                 | 100%    | 0.3                      | 5           | 1.50                      |
| G      | New village tanks                              | 100%    | 1.5                      | 5           | 7.50                      |
| H      | Collection well**                              | 90%     | 0.4                      | 5           | 1.80                      |
|        | <b>Sub total</b>                               |         |                          |             | <b>62.3</b>               |
| 3.     | <b>Soil conservation works**</b>               |         |                          |             |                           |
| A      | Compartmental bunding                          | 90%     | 0.3                      | 100         | 2.70                      |
| B      | land shaping                                   | 90%     | 0.1                      | 75          | 6.75                      |
| C      | Terrace support wall                           | 90%     | 0.3                      | 75          | 20.25                     |
|        | <b>Sub total</b>                               |         |                          |             | <b>29.7</b>               |
|        | <b>Water management works</b>                  |         |                          |             |                           |
| A      | PVC pipe laying**                              | 90%     | 0.15                     | 200         | 27.00                     |
| B      | Ground level reservoir**                       | 90%     | 0.8                      | 200         | 144.00                    |
| C      | Fertigation assembly @ 50 % subsidy            | 50%     | 0.12                     | 10          | 1.08                      |
|        | <b>Sub total</b>                               |         |                          |             | <b>172.08</b>             |
|        | <b>Total for Stream II</b>                     |         |                          |             | <b>280.105</b>            |
|        | <b>Total for agricultural engineering</b>      |         |                          |             | <b>384.285</b>            |

a- 25 per cent subsidy, b- 100 per cent subsidy

\*\* 90 per cent subsidy

'Centre for testing farm implements and machines under AED, Tamil Nadu' with budget of Rs. 380 lakhs.

**Table 6.29 Stream I - Project Proposal for Agricultural Engineering - 2008-2012**

| Sl. No   | Project Component   | Unit Cost Rs. in lakhs | Subsidy % | 2008-09 |                   | 2009-10 |                   | 2010-11 |                   | 2011-12 |                   | Total |                   |
|----------|---|------------------------|-----------|---------|-------------------|---------|-------------------|---------|-------------------|---------|-------------------|-------|-------------------|
|          |   |                        |           | Nos.    | Cost Rs. in lakhs | Nos.  | Cost Rs. in lakhs |
|          | <b>Stream : I</b>   |                        |           |         |                   |         |                   |         |                   |         |                   |       |                   |
| <b>I</b> | <b>Introduction of Newly Developed Agricultural Machinery/ Implements</b> |                        |           |         |                   |         |                   |         |                   |         |                   |       |                   |
| 1        | Mini combined Harvester TNAU Model  | 2.50                   | 50%       | 1       | 1.25              | 2       | 2.50              | 2       | 2.50              | 1       | 1.25              | 6     | 7.50              |
| 2        | Multi crop Thrasher) High capacity )                                      | 2.10                   | 50%       | 1       | 1.05              | 2       | 2.10              | 2       | 2.10              | 1       | 1.05              | 6     | 6.30              |
| 3        | Power weeder with attachment (all models)                                 | 1.00                   | 50%       | 0       | 0.00              | 4       | 2.00              | 4       | 2.00              | 4       | 2.00              | 12    | 6.00              |
| 4        | Power Thrasher  | 1.00                   | 50%       | 2       | 1.00              | 3       | 1.50              | 3       | 1.50              | 2       | 1.00              | 10    | 5.00              |
| 5        | Paddy Transplanter  | 1.40                   | 50%       | 0       | 0.00              | 2       | 1.40              | 1       | 0.70              | 0       | 0.00              | 3     | 2.10              |
| 6        | Post hole digger  | 0.85                   | 50%       | 10      | 4.25              | 10      | 4.25              | 10      | 4.25              | 10      | 4.25              | 40    | 17.00             |
| 7.       | Shredder( Heavy)  | 1.00                   | 50%       | 2       | 1.00              | 3       | 1.50              | 2       | 1.00              | 5       | 2.50              | 12    | 6.00              |
| 8        | Shredder( Medium)   | 0.40                   | 50%       | 20      | 4.00              | 20      | 4.00              | 20      | 4.00              | 20      | 4.00              | 80    | 16.00             |
| 9        | Maize Husker Shelter  | 0.90                   | 50%       | 10      | 4.50              | 15      | 6.75              | 15      | 6.75              | 10      | 4.50              | 50    | 22.50             |
| 10       | Coconut De-husker   | 0.60                   | 50%       | 20      | 6.00              | 25      | 7.50              | 25      | 7.50              | 20      | 6.00              | 90    | 27.00             |
| 11       | G. nut decordicator   | 0.35                   | 50%       | 5       | 0.875             | 6       | 1.05              | 6       | 1.05              | 5       | 0.875             | 22    | 3.85              |



Table 6.29 Contd....

| Sl. No    | Project Component  | Unit Cost Rs. in lakhs | Subsidy % | 2008-09 |                   | 2009-10 |                   | 2010-11 |                   | 2011-12 |                   | Total |                   |
|-----------|--|------------------------|-----------|---------|-------------------|---------|-------------------|---------|-------------------|---------|-------------------|-------|-------------------|
|           |  |                        |           | Nos.    | Cost Rs. in lakhs | Nos.  | Cost Rs. in lakhs |
| 20        | Japanese Yanmar 8-row transplanter with nursery raising system | 10.50                  | 50%       | -       | -                 | -       | -                 | -       | -                 | -       | -                 | -     | -                 |
| 21        | Korean 4 - row walk behindtransplanter                         | 2.00                   | 50%       | -       | -                 | -       | -                 | -       | -                 | -       | -                 | -     | -                 |
| 22        | Combine harvester – Tractor operated                           | 12.00                  | 50%       | -       | -                 | -       | -                 | -       | -                 | -       | -                 | -     | -                 |
| 23        | Combine harvester – Self propelled                             | 16.00                  | 50%       | -       | -                 | -       | -                 | -       | -                 | -       | -                 | -     | -                 |
| 24        | Maize combine harvester  | 16.00                  | 50%       | -       | -                 | -       | -                 | -       | -                 | -       | -                 | -     | -                 |
| 25        | Gender friendly equipments                                     | 0.08                   | 75%       | 50      | 3.00              | 50      | 3                 | 60      | 3.6               | 60      | 3.6               | 220   | 13.20             |
|           | <b>Sub total</b>   |                        |           |         | <b>42.250</b>     |         | <b>56.825</b>     |         | <b>54.275</b>     |         | <b>45.65</b>      |       | <b>199.00</b>     |
| <b>II</b> | <b>Innovative Water Harvesting Structures</b>                  |                        |           |         |                   |         |                   |         |                   |         |                   |       |                   |
| 1         | Lined farm pond with mobile sprinkler                          | 3.00                   | 90%       | 10      | 27.00             | 10      | 27.00             | 10      | 27.00             | 1       | 27.00             | 40    | 108.00            |
| 2         | Rejuvenation of percolation ponds with 2 recharge shafts       | 1.00                   | 100%      | 20      | 20.00             | 20      | 20                | 20      | 20                | 20      | 20                | 80    | 80.00             |

\ Table 6.29 Contd....

| Sl. No     | Project Component  | Unit Cost Rs. in lakhs | Subsidy % | 2008-09 |                   | 2009-10 |                   | 2010-11 |                   | 2011-12 |                   | Total |                   |
|------------|--|------------------------|-----------|---------|-------------------|---------|-------------------|---------|-------------------|---------|-------------------|-------|-------------------|
|            |  |                        |           | Nos.    | Cost Rs. in lakhs | Nos.  | Cost Rs. in lakhs |
| <b>III</b> | <b>Control of Sea Water Intrusion</b>  |                        |           |         |                   |         |                   |         |                   |         |                   |       |                   |
| 1          | Recharge shafts to prevent sea water intrusion in coastal areas                                | -                      | -         | -       | -                 | -       | -                 | -       | -                 | -       | -                 | -     | -                 |
| <b>IV</b>  | <b>Promoting the concept of mechanised villages</b>  |                        |           |         |                   |         |                   |         |                   |         |                   |       |                   |
|            | Distribution of crop based package of Agrl. Machinery on cluster basis in the adopted villages | Varied                 | 75%       | -       | -                 | -       | -                 | -       | -                 | -       | -                 | -     | -                 |
|            | Maize  | 19.93                  | 75%       | 1       | 14.93             | 1       | 14.93             | 1       | 14.93             | 1       | 14.93             | 4     | 59.74             |
| <b>V</b>   | <b>State Government Institution that Promotes Agriculture</b>                                  |                        |           |         |                   |         |                   |         |                   |         |                   |       |                   |
|            | Grand Support to the State Government Institution that Promotes Agriculture                    | 380                    | 100%      | 1       | 380               |         |                   |         |                   |         |                   |       | 380.00            |
|            | <b>GRAND TOTAL</b>   |                        |           |         | <b>484.18</b>     |         | <b>118.76</b>     |         | <b>116.21</b>     |         | <b>107.58</b>     |       | <b>826.73</b>     |

**Table 6.30 Stream II – Project Proposal for Agricultural Engineering - 2008-12**

| Sl. No   | Project Component   | Unit Cost Rs. in lakhs | Subsidy % | 2008-09 |                   | 2009-10 |                   | 2010-11 |                   | 2011-12 |                   | Total |                   |
|----------|---|------------------------|-----------|---------|-------------------|---------|-------------------|---------|-------------------|---------|-------------------|-------|-------------------|
|          |   |                        |           | Nos.    | Cost Rs. in lakhs | Nos.  | Cost Rs. in lakhs |
|          | <b>Stream : II</b>  |                        |           |         |                   |         |                   |         |                   |         |                   |       |                   |
| <b>1</b> | <b>Popularisation of Agricultural mechanisation through conventional machinery/equipments</b> |                        |           |         |                   |         |                   |         |                   |         |                   |       |                   |
| a        | Power Tiller  | 1.16                   | 25%       | 20      | 5.80              | 35      | 10.15             | 50      | 14.50             | 45      | 13.05             | 150   | 43.50             |
| b        | Rotavator   | 0.90                   | 25%       | 40      | 9.00              | 50      | 11.25             | 50      | 11.25             | 60      | 13.5              | 200   | 45.00             |
| c        | Cultivator  | 0.16                   | 25%       | 5       | 0.20              | 10      | 0.40              | 10      | 0.40              | 15      | 0.6               | 40    | 1.60              |
| d        | Off-set Disc Harrow   | 0.47                   | 25%       | 5       | 0.5875            | 10      | 1.175             | 10      | 1.175             | 15      | 1.7625            | 40    | 4.70              |
| e        | Disc. Plough  | 0.35                   | 25%       | 5       | 0.4375            | 10      | 0.875             | 5       | 0.4375            | 10      | 0.875             | 30    | 2.63              |
| <b>2</b> | <b>Water Harvesting Structures</b>  |                        |           |         |                   |         |                   |         |                   |         |                   |       |                   |
| a        | Farm Pond - Unlined   | 0.50                   | 90%       | 5       | 2.25              | 10      | 4.50              | 10      | 4.50              | 15      | 6.75              | 40    | 18.00             |
| b        | Checkdam-Minor  | 0.30                   | 100%      | 10      | 3.00              | 15      | 4.50              | 15      | 4.50              | 10      | 3.00              | 50    | 15.00             |
| c        | Checkdam-Medium   | 0.75                   | 100%      | 20      | 15.00             | 25      | 18.75             | 25      | 18.75             | 30      | 22.50             | 100   | 75.00             |
| d        | Checkdam-Major  | 1.00                   | 100%      | 15      | 15.00             | 20      | 20.00             | 20      | 20.00             | 20      | 20.00             | 75    | 75.00             |
| e        | Percolation Pond  | 3.25                   | 100%      | 5       | 16.25             | 10      | 32.50             | 10      | 32.50             | 15      | 48.75             | 40    | 130.00            |
| f        | Recharge Shaft  | 0.30                   | 100%      | 5       | 1.50              | 5       | 1.50              | 5       | 1.50              | 5       | 1.50              | 20    | 6.00              |

**Table 6.30 Stream II – Project Proposal for Agricultural Engineering - 2008-12**

| Sl. No    | Project Component              | Unit Cost Rs. in lakhs | Subsidy % | 2008-09 |                   | 2009-10 |                   | 2010-11 |                   | 2011-12 |                   | Total |                   |
|-----------|--------------------------------|------------------------|-----------|---------|-------------------|---------|-------------------|---------|-------------------|---------|-------------------|-------|-------------------|
|           |                                |                        |           | Nos.    | Cost Rs. in lakhs | Nos.  | Cost Rs. in lakhs |
| g         | New Village Tank               | 1.50                   | 100%      | 5       | 7.50              | 10      | 15.00             | 5       | 7.50              | 5       | 7.50              | 25    | 37.50             |
| h         | Collection Well                | 0.40                   | 90%       |         | 1.80              | 10      | 3.60              | 10      | 3.60              | 15      | 5.40              | 40    | 14.40             |
| <b>3.</b> | <b>Soil Conservation Works</b> |                        |           |         |                   |         |                   |         |                   |         |                   |       |                   |
| a         | Compartmental bunding          | 0.03                   | 90%       | 100     | 2.7               | 150     | 4.05              | 150     | 4.05              | 100     | 2.7               | 500   | 13.50             |
| b         | Land Shaping                   | 0.10                   | 90%       | 75      | 6.75              | 100     | 9.00              | 100     | 9.00              | 125     | 11.25             | 400   | 36.00             |
| c         | Terrace Support Wall           | 0.30                   | 90%       | 75      | 20.25             | 100     | 27.00             | 100     | 27.00             | 125     | 33.75             | 400   | 108.00            |
| <b>4.</b> | <b>Water Management Works</b>  |                        |           |         |                   |         |                   |         |                   |         |                   |       |                   |
| a         | PVC Pipe laying                | 0.15                   | 90%       | 200     | 27                | 250     | 33.75             | 250     | 33.75             | 300     | 40.2              | 1000  | 135.00            |
| b         | Ground level Reservoir         | 0.80                   | 90%       | 200     | 144               | 250     | 180.00            | 250     | 180.00            | 300     | 216               | 1000  | 720.00            |
| c         | Fertigation Assembly           | 0.12                   | 90%       | 10      | 1.08              | 15      | 1.62              | 15      | 1.62              | 10      | 1.08              | 50    | 5.40              |
|           | <b>Total for stream II</b>     |                        |           |         | 280.11            |         | 379.62            |         | 376.033           |         | 450.467           |       | 1486.23           |
|           | <b>GRAND TOTAL</b>             |                        |           |         | <b>764.29</b>     |         | <b>498.38</b>     |         | <b>492.24</b>     |         | <b>557.75</b>     |       | <b>2312.66</b>    |

#### **6.4 Agricultural Marketing and Agri. Business**

In Coimbatore district, there are about Eighteen Regulated Markets. The major commercial crops grown are Maize, Coconut, Cotton, Paddy, Sugarcane, Onion, Sorghum, Turmeric, Cumbu, Vegetables (Tomato & Pandal Vegetables), Banana, Groundnut, Chillies, Ragi, Arecanut, Bengalgram, Gingelly, Cowpea and Tobacco. The arrival of commodities in percent to marketable surplus is less in the regulated market. In addition to all these, marketing system in the regulated market is not a compulsory one. In future, in order to improve the agricultural marketing (attain maximum net prices per unit quantity sold by farmers, minimize price risk and to attain maximum net profitability per unit area of cultivation), various strategies need to be implemented in the National Agricultural Development Programme and the budget proposal for the various interventions to be implemented in the Coimbatore District are discussed hereunder.

##### **i) Problem Focussed**

In Coimbatore District, there are about eighteen Regulated Markets. The major commercial crops grown are Maize, Coconut, Cotton, Paddy, Sugarcane, Onion, Sorghum, Turmeric, Cumbu, Vegetables (Pandal & Tomato), Banana, Groundnut, Chillies, Ragi, Arecanut, Gingelly, Bengalgram, Cowpea and Tobacco. Most of the farmers are small and marginal farmers. Due to the lack of sufficient institutional crop credit and crop insurance access, unawareness about regulated market, its infrastructure cum various available facilities and market intelligence, the farmers depend on commission agents / village merchants at field level for sale of their produce. So, ultimately the arrival of commodities in percent to marketable surplus is less in regulated market. In addition to all these, marketing system in the regulated market is not a compulsory one, there is no wide variation of prices at field level and regulated market and lack of resource rich traders to meet the immediate cash settlement. Therefore, the participation level of traders is not good.

**In future, in order to improve the Agricultural Marketing,**

- Crop specific commodity groups are to be formed,
- Market intelligence need to be disseminated,
- Interface workshop between farmers and agricultural entrepreneurs to be arranged and signing of memorandum of understanding (contract farming) between them need to be facilitated,
- Training on warehousing, storage, market intelligence, future trading, post harvest, value addition, export promotion and commodity markets to be done,
- Exposure visit within and outside the state to be arranged and
- Market extension centres-price information, market finance and market price surveillance, market infrastructure facilities need to be strengthened.

**ii) Project Goals / Objectives**

1. Attaining maximum net prices per unit quantity sold by farmers,
2. Minimization of price risk and
3. Maximization of net profitability per unit area of cultivation.

**iii) Project Strategies**

- Market led production,
- Planting/sowing and storing/selling based on market intelligence,
- Selling in high priced markets,
- Producing and marketing in high price seasons,
- Following good marketing practices (GMP) like grading, proper packing etc,
- Maximum direct sale to large scale buyers/traders/processors,

- Opting to contract farming wherever needed,
- Increasing sale through regulated markets and using market finance and warehousing facilities,
- Identifying export promotion opportunities and producing and marketing accordingly and .
- Identifying possibilities of value addition.

#### **iv) Project Components**

- Sowing/planting and storing or selling based on market intelligence provided by DEMIC before sowing season and during harvest season,
- Sowing/planting as per the product requirement of high priced markets and high price seasons,
- Avoiding sowing during glut seasons,
- Grading and sorting the produce, transport of vegetables/perishables in plastic crates and use of proper packing materials etc,
- Organising contract farming with large scale buyers for major commercial crops like Cotton, sunflower, maize, groundnut and vegetables etc,
- Increasing awareness on regulated markets and their benefits, warehouses and their benefits to Farmers and traders,
- Visiting high priced markets to understand the requirements,
- Identification of export promotion opportunities of the commodities grown in the region and possibilities of value addition,
- Imparting training on the above to all stake holders in the supply chain and organizing buyers, sellers meeting for different commodities and for contract farming purposes.

**Table 6.31 Componentwise Budget of Marketing Activities - 2008-09**

| S.No         | Components   | 2008-2009        |            |                                |
|--------------|--|------------------|------------|--------------------------------|
|              |  | Unit cost        | Physical   | Financial<br>(Rs. in<br>Lakhs) |
| 1            | Commodity group formation*   | 20000            | 30         | 6.00                           |
| 2            | Market Intelligence dissemination  |                  |            | 3.70                           |
| 3            | Facilitation of contract farming   | 15000            | 4          | 0.60                           |
| 4            | Trainings  |                  |            | 3.90                           |
| 5            | Exposure visit to markets  |                  |            | 20.10                          |
| 6            | Arrangement of buyer seller meetings   | 20000            | 18         | 3.60                           |
| 7            | Streng. Of market extension centre   | 250000           | 1          | 2.50                           |
| 8            | Streng. Of village shandies  | 0                | 0          | 0.00                           |
| 9            | Market price surveillance  | 10000            | 1          | 0.10                           |
| 10           | Publicity - regulated market   | 500000           | 1          | 5.00                           |
| 11           | Market infrastructure activities   |                  |            | 19.25                          |
| <b>Total</b> |  | <b>13,68,000</b> | <b>945</b> | <b>64.75</b>                   |
|              | * Maize, Coconut, Groundnut, Paddy, Pandal vegetables, Cocoa, Bengal gram, Tomato, Onion |                  |            |                                |
|              | ** Tomato  |                  |            |                                |

**Table 6.32 Sub-Component wise Budget of Marketing Activities - 2008-09**

| S.No | Components                           | 2008-2009 |          |                             |
|------|--------------------------------------|-----------|----------|-----------------------------|
|      |                                      | Unit cost | Physical | Financial<br>(Rs. in Lakhs) |
| 1    | Commodity group formation*           | 20000     | 30       | 6.00                        |
| 2    | Market Intelligence dissemination    |           |          | 0.00                        |
|      | MI Dis Others                        | 10000     | 36       | 3.60                        |
|      | Purchse Mar Materials                | 10000     | 1        | 0.10                        |
| 3    | Facilitation of contract farming     | 15000     | 4        | 0.60                        |
| 4    | Trainings                            |           |          | 0.00                        |
|      | Warehousing and Storage              | 10000     | 5        | 0.50                        |
|      | Market Intelligence                  | 10000     | 5        | 0.50                        |
|      | Grading                              | 10000     | 5        | 0.50                        |
|      | Post Harvest                         | 10000     | 5        | 0.50                        |
|      | Commodity Markets                    | 10000     | 5        | 0.50                        |
|      | Export Banana                        | 10000     | 4        | 0.40                        |
|      | Min PH Loss Trainings                | 10000     | 5        | 0.50                        |
|      | Trainings- Tomato                    | 10000     | 5        | 0.50                        |
| 5    | Exposure visit to markets            |           |          |                             |
|      | Within State                         | 20000     | 18       | 3.60                        |
|      | Outside state                        | 75000     | 18       | 13.50                       |
|      | Visit to National Markets            | 150000    | 2        | 3.00                        |
| 6    | Arrangement of buyer seller meetings | 20000     | 18       | 3.60                        |
| 7    | Streng. Of market extension centre   | 250000    | 1        | 2.50                        |
| 8    | Streng. Of village shandies          | 0         | 0        | 0.00                        |
| 9    | Market price surveillance            | 10000     | 1        | 0.10                        |
| 10   | Publicity - regulated market         | 500000    | 1        | 5.00                        |
| 11   | Market infrastructure activities     |           |          |                             |
|      | Plastic crates                       | 500       | 200      | 1.00                        |

| S.No         | Components   | 2008-2009        |            |                             |
|--------------|--|------------------|------------|-----------------------------|
|              |  | Unit cost        | Physical   | Financial<br>(Rs. in Lakhs) |
|              | Tarpaulin  | 5000             | 75         | 3.75                        |
|              | Dunnage  | 2500             | 500        | 12.50                       |
|              | Price display Board  | 200000           | 1          | 2.00                        |
| <b>Total</b> |  | <b>13,68,000</b> | <b>945</b> | <b>64.75</b>                |
|              | * Maize, Coconut, Groundnut, Paddy,<br>Pandal vegetables, Cocoa, Bengal<br>gram, Tomato, Onion |                  |            |                             |
|              | ** Tomato  |                  |            |                             |

**Table 6.33 Project proposal for Marketing Activities in Coimbatore District - 2008-12****(Rs. in Lakhs)**

| S.No | Components                        | 2009      |      |      | 2010      |      |      | 2011      |      |      | 2012         |      |      | Total<br>(Val<br>in Rs) |
|------|-----------------------------------|-----------|------|------|-----------|------|------|-----------|------|------|--------------|------|------|-------------------------|
|      |                                   | Unit cost | Phy. | Fin. | Unit cost | Phy. | Fin. | Unit cost | Phy. | Fin. | Unit cost    | Phy. | Fin. |                         |
| 1    | Commodity group formation*        | 20000     | 30   | 6.00 | 22000     | 25   | 5.50 | 24000     | 5    | 1.20 | <b>26000</b> | 5    | 1.30 | <b>14.00</b>            |
| 2    | Market Intelligence dissemination |           |      |      |           |      |      |           |      |      |              |      |      |                         |
|      | MI Dis Others                     | 10000     | 36   | 3.60 | 11000     | 36   | 3.96 | 12000     | 36   | 4.32 | 13000        | 36   | 4.68 | <b>16.56</b>            |
|      | Purchashe Mar Materials           | 10000     | 1    | 0.10 | 11000     | 1    | 0.11 | 12000     | 1    | 0.12 | 13000        | 1    | 0.13 | <b>0.46</b>             |
| 3    | Facilitation of contract farming  | 15000     | 4    | 0.60 | 16500     | 4    | 0.66 | 18000     | 4    | 0.72 | 19500        | 4    | 0.78 | <b>2.76</b>             |
| 4    | Trainings                         |           |      |      |           |      |      |           |      |      |              |      |      |                         |
|      | Warehousing and Storage           | 10000     | 5    | 0.50 | 11000     | 5    | 0.55 | 12000     | 5    | 0.60 | 13000        | 5    | 0.65 | <b>2.30</b>             |
|      | Market Intelligence               | 10000     | 5    | 0.50 | 11000     | 5    | 0.55 | 12000     | 5    | 0.60 | 13000        | 5    | 0.65 | <b>2.30</b>             |
|      | Grading                           | 10000     | 5    | 0.50 | 11000     | 5    | 0.55 | 12000     | 5    | 0.60 | 13000        | 5    | 0.65 | <b>2.30</b>             |
|      | Post Harvest                      | 10000     | 5    | 0.50 | 11000     | 5    | 0.55 | 12000     | 5    | 0.60 | 13000        | 5    | 0.65 | <b>2.30</b>             |
|      | Commodity Markets                 | 10000     | 5    | 0.50 | 11000     | 5    | 0.55 | 12000     | 5    | 0.60 | 13000        | 5    | 0.65 | <b>2.30</b>             |
|      | Export Banana                     | 10000     | 4    | 0.40 | 11000     | 2    | 0.22 | 12000     | 2    | 0.24 | 13000        | 2    | 0.26 | <b>1.12</b>             |
|      | Min PH Loss Trainings             | 10000     | 5    | 0.50 | 11000     | 5    | 0.55 | 12000     | 5    | 0.60 | 13000        | 5    | 0.65 | <b>2.30</b>             |
|      | Trainings- Tomato                 | 10000     | 5    | 0.50 | 11000     | 5    | 0.55 | 12000     | 5    | 0.60 | 13000        | 5    | 0.65 | <b>2.30</b>             |

Table 6.33 Contd...

| S.No | Components   | 2009           |      |              | 2010           |      |        | 2011           |      |              | 2012           |      |               | Total<br>(Val<br>in Rs) |
|------|--|----------------|------|--------------|----------------|------|--------|----------------|------|--------------|----------------|------|---------------|-------------------------|
|      |  | Unit cost      | Phy. | Fin.         | Unit cost      | Phy. | Fin.   | Unit cost      | Phy. | Fin.         | Unit cost      | Phy. | Fin.          |                         |
| 5    | Exposure visit to markets  |                |      |              |                |      |        |                |      |              |                |      |               |                         |
|      | Within State   | 20000          | 18   | 3.60         | 22000          | 18   | 3.96   | 24000          | 18   | 4.32         | 26000          | 18   | 4.68          | <b>16.56</b>            |
|      | Outside state  | 75000          | 18   | 13.50        | 82500          | 18   | 14.85  | 90000          | 18   | 16.20        | 97500          | 18   | 17.55         | <b>62.10</b>            |
|      | Visit to National Markets  | 150000         | 2    | 3.00         | 165000         | 0    | 0.00   | 181500         | 0    | 0.00         | 199650         | 0    | 0.00          | <b>3.00</b>             |
| 6    | Arrangement of buyer seller meetings   | 20000          | 18   | 3.60         | 22000          | 18   | 3.96   | 24000          | 18   | 4.32         | 26000          | 18   | 4.68          | <b>16.56</b>            |
| 7    | Streng. Of market extension centre   | 250000         | 1    | 2.50         | 275000         |      | 0.00   | 300000         |      | 0.00         | 325000         |      | 0.00          | <b>2.50</b>             |
| 8    | Streng. Of village shandies  | -              | -    | -            | -              | -    | -      | -              | -    | -            | -              | -    | -             | -                       |
| 9    | Market price surveillance  | 10000          | 1    | 0.10         | 11000          | 1    | 0.11   | 12000          | 2    | 0.24         | 13000          | 2    | 0.26          | <b>0.71</b>             |
| 10   | Publicity - regulated market   | 500000         | 1    | 5.00         | 550000         | 1    | 5.50   | 600000         | 1    | 6.00         | 650000         | 1    | 6.50          | <b>23.00</b>            |
| 11   | Market infrastructure activities   |                |      |              |                |      |        |                |      |              |                |      |               |                         |
|      | Plastic crates   | 500            | 200  | 1.00         | 550            | 200  | 1.10   | 600            | 200  | 1.20         | 650            | 200  | 1.30          | <b>4.60</b>             |
|      | Tarpaulin  | 5000           | 75   | 3.75         | 5500           | 25   | 1.38   | 6000           | 25   | 1.50         | 6500           | 25   | 1.63          | <b>8.25</b>             |
|      | Dunnage  | 2500           | 500  | 12.50        | 2750           | 500  | 13.75  | 3000           | 300  | 9.00         | 3250           | 300  | 9.75          | <b>45.00</b>            |
|      | Price display Board  | 200000         | 1    | 2.00         | 220000         | 1    | 2.20   | 240000         |      | 0.00         | 260000         |      | 0.00          | <b>4.20</b>             |
|      | <b>Total</b>   | <b>1368000</b> |      | <b>64.75</b> | <b>1504800</b> |      | 61.105 | <b>1643100</b> |      | <b>53.58</b> | <b>1783050</b> |      | <b>58.045</b> | <b>237.48</b>           |
|      | * Maize, Coconut, Groundnut, Paddy, Pandal vegetables, Cocoa, Bengal gram, Tomato, Onion |                |      |              |                |      |        |                |      |              |                |      |               |                         |

## **6.5 Public Works Department**

### **6.5.1 Stabilising Increasing the Ayacut Area under Amaravathi System by Modern and Rehabilitation of Amaravathi Old and New System in Coimbatore District**

The Amaravathi System is one of the oldest system in Tamil Nadu and irrigates Coimbatore, Erode and Karur Districts having perennial supply of water from Western Ghats near Munnar at Kerala State and Anamalai's range of hills. This system comprises of three District in two Command area namely Old Command and New Command. Old command comprises of 29,38'1 acres and New Command comprises of 25,250 acres.

At present the old ayacut is irrigated by Amaravathi River through 16 anicuts and 18 Channels with a duty of 30. The new ayacut irrigated through Amaravathi main canal which take off from Left Flank of Amaravathi Dam has a duty of 60. By Modernization. Rehabilitation and effective water management of Amaravathi System, the duty of old ayacut system is expected to increased from 30 to 50 and new ayacut system from 60 to 75. For the improved duty , a water budget statement is prepared with 15 years inflows adopting 75 % dependability and is analysed. The present proposal is viable and achievable. (Statement enclosed ) Even though entire Amaravathi old system comes under Double crop only 7500 Acres in Coimbatore District is irrigated as double crop and 21887 Acres irrigated as single crop .

After rehabilitation of Amaravathi system whole 29,387 acres in Old systems will come under double crop system and an extent of 25,250 acres will come under new system under single crop will be benefited by bridging a gap of 2500 acres, thereby benefiting about 500 new small farmers family with per capita income Rs . 30,000/- per year. Food production will increase by 66,000 MT and thereby with an Economic Growth of Rs. 33 crores per year and also it will create new employments for farm labourers.

#### **i) Present Status**

All the old anicut constructed across river in 18<sup>th</sup> century are in dilapidated condition and the leading channels, supply channels, masonry structures such as retaining

walls, cross masonry works, sluices and its shutters, lining, bunds are not in good condition and not upto the standards which leads to water loss and thereby water management is a very difficult task, and even distribution from head to tail is failed and thereby crop failure is unavoidable. It makes Economic loss to the nation.

## **ii) Proposals**

To avoid crop failure and economic loss to the nation, to improve water management without any water loss, it is proposed for improving the irrigation water use efficiency better and equitable distribution of water to all the farmers in the command area through strengthening the existing irrigation infrastructure of Amaravathi Old and New Canal system in Canal irrigation in Coimbatore District at an estimate outlay of Rs..29 Crores.

The proposal envisages project components such as.

- Improving the water retention capacity of anicuts,
- To achieve proportionate distribution of water to all the fields in the command area through repairing of the sluices and shutters in the system.
- To avoid seepage losses and percolation losses of water in the channel, it is proposed to the up selective cement lining and strengthening of the canal.
- Improving the social capital formation to run the irrigation infrastructure efficiently in sustainable manner by way of forming WUA and Farmers irrigation system turn over were included.
- The benefit cost ratio for this project is 1:1.43 with F.R.R. 21.38 %.

**Table 6.34 Monthly Inflow Details in Descending Order from 1992 to 2007 of Amaravathi Dam in MCFT**

| Sl. No | Year    | June | July | Aug. | Sept. | Oct. | Nov.        | Dec.        | Jan.       | Feb.       | March      | April     | May        |
|--------|---------|------|------|------|-------|------|-------------|-------------|------------|------------|------------|-----------|------------|
| 1      | 2005-06 | 381  | 4318 | 1973 | 2028  | 1587 | 6780        | 5294        | 817        | 156        | 143        | 163       | 686        |
| 2      | 1993-94 | 442  | 2029 | 1720 | 758   | 2234 | 9384        | 3405        | 1266       | 419        | 106        | 539       | 345        |
| 3      | 1997-98 | 341  | 1812 | 2132 | 958   | 2290 | <b>6126</b> | 4452        | 579        | 350        | 239        | 106       | 142        |
| 4      | 1998-99 | 1722 | 3049 | 2175 | 1100  | 1465 | 4341        | 3804        | 671        | 291        | 63         | 129       | 600        |
| 5      | 1992-93 | 3337 | 3814 | 1949 | 1230  | 1204 | 4622        | 1341        | 411        | 153        | 77         | 135       | 421        |
| 6      | 1999-00 | 854  | 2520 | 1399 | 551   | 3118 | 3561        | 2649        | 1198       | 753        | 213        | 144       | 236        |
| 7      | 1994-95 | 1909 | 3818 | 1496 | 1352  | 2269 | 4234        | 770         | 459        | 122        | 63         | 159       | 473        |
| 8      | 2000-00 | 1549 | 1622 | 4700 | 3058  | 1114 | 1274        | 1135        | 630        | 273        | 101        | 731       | 384        |
| 9      | 2004-05 | 2940 | 1011 | 2680 | 1392  | 2486 | 3620        | 862         | 213        | 124        | 49         | 349       | 240        |
| 10     | 1996-97 | 2547 | 3734 | 1568 | 813   | 1584 | 1250        | 3268        | 408        | 62         | 110        | 116       | 17         |
| 11     | 2001-02 | 1254 | 2754 | 1386 | 951   | 1217 | 1849        | <b>1386</b> | <b>516</b> | <b>423</b> | <b>124</b> | <b>78</b> | <b>198</b> |
| 12     | 2006-07 | 921  | 2410 | 1423 | 1149  | 1117 | 3043        | 478         | 240        | 107        | 71         | 122       | 548        |
| 13     | 1995-96 | 728  | 2012 | 1624 | 2631  | 817  | 1379        | 234         | 239        | 72         | 72         | 70        | 381        |
| 14     | 2002-03 | 896  | 466  | 2139 | 517   | 1307 | 1718        | 714         | 122        | 34         | 113        | 191       | 289        |
| 15     | 2003-04 | 443  | 1025 | 703  | 244   | 1715 | 1352        | 631         | 126        | 84         | 28         | 33        | 432        |

Total No.of Study Period = 15 Years

75% Dependable years = 11.25 years (or) 11 years

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**Table 6.35 Water Budget Statement**

Therefore the Quantity of inflow on 11<sup>th</sup> year has been taken as 75% dependable yield.

| S.No | Period / Date | Total No of Days | Old Irrigation   |                   | New Irrigation   |                   | Total Discharge  |                   | Dam Capacity at the Time of Irrigation | Anticipated Inflow in MCFT | Balance Storage in MCFT |
|------|---------------|------------------|------------------|-------------------|------------------|-------------------|------------------|-------------------|--|----------------------------|-------------------------|
|      |               |                  | Discharge in C/S | Discharge in MCFT | Discharge in C/S | Discharge in MCFT | Discharge in C/S | Discharge in MCFT |  |                            |                         |
| 1.   | 15/6 to 5/7   | 20               | 645              | 1115              | -                | -                 | 12900            | 1115              | 903                                    | 1071                       | 859                     |
| 2.   | 5/7 to 15/7   | 10               | -                | -                 | -                | -                 | -                | -                 | X359                                   | 444                        | 1303                    |
| 3.   | 15/7 to 25/7  | 10               | 645              | 557               | -                | -                 | 6450             | 557               | 1303                                   | 888                        | 1634                    |
| 4.   | 25/7 to 30/7  | 5                | -                | -                 | -                | -                 | -                | -                 | 1634                                   | 444                        | 2078                    |
| 5.   | 30/7 to 9/8   | 10               | 645              | 557               | -                | -                 | 6450             | 557               | 2078                                   | 756                        | 2277                    |
| 6.   | 9/8 to 14/8   | 5                | -                | -                 | -                | -                 | -                | -                 | 2277                                   | 224                        | 2501                    |
| 7.   | 14/8 to 24/8  | 10               | 645              | 557               | -                | -                 | 6450             | 557               | 2501                                   | 447                        | 2391                    |
| 8.   | 24/8 to 29/8  | 5                | -                | -                 | -                | -                 | -                | -                 | 2391                                   | 224                        | 2615                    |
| 9.   | 29/8 to 8/9   | 10               | 645              | 557               | 7 x 370          | 224               | 9040             | 781               | 2615                                   | 356                        | 2190                    |
| 10.  | 8/9 to 13/9   | 5                | -                | -                 | 3 x 370          | 96                | 1110             | 96                | 2190                                   | 159                        | 2253                    |

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**WATER BUDGET STATEMENT**

| S.No | Period / Date  | Total No.of Days | Old Irrigation   |                   | New Irrigation   |                   | Total Discharge  |                   | Dam Capacity at the Time of Irrigation | Anticipated Inflow in MCFT | Balance Storage in MCFT |
|------|----------------|------------------|------------------|-------------------|------------------|-------------------|------------------|-------------------|--|----------------------------|-------------------------|
|      |                |                  | Discharge in C/S | Discharge in MCFT | Discharge in C/S | Discharge in MCFT | Discharge in C/S | Discharge in MCFT |  |                            |                         |
| 11.  | 13/9 to 23/9   | 10               | 645              | 557               | 7 x 370          | 224               | 9040             | 781               | 2253                                   | 317                        | 1789                    |
| 12.  | 23/9 to 28/9   | 5                | -                | -                 | -                | -                 | -                | -                 | 1789                                   | 159                        | 1948                    |
| 13.  | 28/9 to 8/10   | 10               | 645              | 557               | 7 x 370          | 224               | 9040             | 781               | 1948                                   | 370                        | 1537                    |
| 14.  | 8/10 to 23/10  | 15               | -                | -                 | 8 x 370          | 256               | 2960             | 256               | 1537                                   | 589                        | 1870                    |
| 15.  | 23/10 to 28/10 | 5                | 645              | 279               | 5 x 370          | 160               | 5075             | 439               | 1870                                   | 196                        | 1627                    |
|      |                | 135              |                  | 4736              |                  | 1184              |                  | 5920              |  | 6644                       |                         |
| 16.  | 28/10 to 7/11  | 10               | Crop             | Gap               | 5 x 370          | 160               | 1850             | 160               | 1627                                   | 515                        | 1982                    |
| 17.  | 7/11 to 12/11  | 5                | Crop             | Gap               | 3 x 370          | 96                | 1110             | 96                | 1982                                   | 298                        | 2184                    |
| 18.  | 12/11 to 22/11 | 10               | 645              | 557               | 7 x 370          | 224               | 9040             | 781               | 2184                                   | 596                        | 1999                    |
| 19.  | 22/11 to 27/11 | 5                |                  | -                 | -                | -                 | -                | -                 | 1999                                   | 298                        | 2297                    |
| 20.  | 27/11 to 7/12  | 10               | 645              | 557               | 7 x 370          | 224               | 9040             | 781               | 2297                                   | 507                        | 2023                    |
| 21.  | 7/12 to 12/12  | 5                | -                | -                 | 3 x 370          | 96                | 1110             | 96                | 2023                                   | 224                        | 2151                    |

| S.No | Period / Date  | Total No.of Days | Old Irrigation   |                   | New Irrigation   |                   | Total Discharge  |                   | Dam Capacity at the Time of Irrigation | Anticipated Inflow in MCFT | Balance Storage in MCFT |
|------|----------------|------------------|------------------|-------------------|------------------|-------------------|------------------|-------------------|--|----------------------------|-------------------------|
|      |                |                  | Discharge in C/S | Discharge in MCFT | Discharge in C/S | Discharge in MCFT | Discharge in C/S | Discharge in MCFT |  |                            |                         |
| 22   | 12/12 to 22/12 | 10               | 645              | 557               | 5 x 370          | 160               | 8300             | 717               | 2151                                   | 447                        | 1881                    |
| 23.  | 22/12 to 27/12 | 5                | -                | -                 | 5 x 370          | 160               | 1850             | 160               | 1881                                   | 224                        | 1945                    |
| 24.  | 27/12 to 6/1   | 10               | 645              | 557               | 5 x 370          | 160               | 8300             | 717               | 1945                                   | 314                        | 1542                    |
| 25.  | 6/1 to 11/1    | 5                | -                | -                 | 3 x 370          | 96                | 1110             | 96                | 1542                                   | 90                         | 1536                    |
| 26.  | 11/1 to 21/1   | 10               | 645              | 557               | -                | -                 | 6450             | 557               | 1536                                   | 181                        | 1160                    |
| 27.. | 21/1 to 26/1   | 5                | -                | -                 | -                | -                 | -                | -                 | 1160                                   | 90                         | 1250                    |
| 28.  | 26/1 to 5/2    | 10               | 645              | 557               | -                | -                 | 6450             | 557               | 1250                                   | 169                        | 862                     |
| 29.  | 5/2 to 10/2    | 5                | -                | -                 | -                | -                 | -                | -                 | 862                                    | 76                         | 938                     |
| 30.  | 10/2 to 20/2   | 10               | 645              | 557               | -                | -                 | 6450             | 557               | 938                                    | 151                        | 532                     |
| 31.  | 20/2 to 25/2   | 5                | -                | -                 | -                | -                 | -                | -                 | 532                                    | 76                         | 608                     |
|      |                | <b>105</b>       |                  | <b>8635</b>       |                  | <b>2560</b>       |                  | <b>11195</b>      |  | <b>10900</b>               |                         |
| 32.  | 25/2 to 7/3    | 10               | -                | -                 | -                | -                 | -                | -                 | 608                                    | 84                         | 692                     |
| 33.  | 7/3 to 12/3    | 5                | 64:5             | 279               | -                | -                 | 3225             | 279               | 692                                    | 20                         | 433                     |
| 34.  | 12/3 to 22/3   | 10               | -                | -                 | -                | -                 | -                | -                 | 433                                    | 40                         | 473                     |
| 35.  | 22/3 to 27/3   | 5                | 645              | 279               | -                | -                 | 3225             | 279               | 473                                    | 20                         | 214                     |
|      |                |                  |                  | <b>9193</b>       |                  | <b>2560</b>       |                  | <b>11753</b>      |  | <b>11064</b>               |                         |

**Table 6.36 Abstract of Amaravathi Basin Water Storage Position**

|                |                                      | <b>Total Days</b>                      | <b>Irrigation</b>        | <b>Required Water</b> |
|----------------|--------------------------------------|--|--------------------------|-----------------------|
| OLD IRRIGATION | 1 <sup>ST</sup> CROP - 15/6 TO 28/10 | 135 Days                               | 85                       | 4736 Mcft             |
|                | 2 <sup>nd</sup> CROP 12/11 TO 27/3   | 135 Days                               | 80                       | 4427 Mcft             |
| NEW IRRIGATION | 1/9 To 13/1                          | 135 Days                               | 80                       | 2560 Mcft             |
|                |                                      |  | <b>Total Requirement</b> | <b>11753 Mcft</b>     |
|                |                                      | Dam-Capacity at the time of irrigation |                          | 903 Mcft              |
|                |                                      | Anticipated storage                    |                          | <b>11064 Mcft</b>     |
|                |                                      | Total Available of Water               |                          | <b>11967 Mcft</b>     |
|                |                                      | Total Requirement of Water             |                          | <b>11753 Mcft</b>     |
|                |                                      | <b>Balance Qty of Water</b>            |                          | <b>214 Mcft</b>       |

**Table 6.37 Budget for Public Works Department -2008-12**

| Sl. No.                       | Name of Work   | Estimate in Crores | Year               | 2008- 2009 | 2009- 2010 | 2010-2011 | 2011-2012 |
|-------------------------------|--|--------------------|--------------------|------------|------------|-----------|-----------|
|                               |  |                    | Escalation Charges | 10%        | 15%        | 20%       | 25%       |
| <b>I. COIMBATORE DISTRICT</b> |  |                    |                    |            |            |           |           |
| <b>1</b>                      | Rehabilitation and Modernisation of Amaravathi Main Canal from mile O/0 to 2817 in Ameravathi New system of Amasavathi Basin in Coimbatore District. |                    |                    |            |            |           |           |
| A                             | Rehabilitation of aniaut   |                    | 4.25               | 4.25       |            |           |           |
| B                             | Replacing shutter and repairing sluice   | 0.11               |                    |            |            |           |           |
| C                             | Strengthening the canal  | 0.68               |                    |            |            |           |           |
| D                             | Selective lining   | 3.46               |                    |            |            |           |           |
| <b>2.</b>                     | Rehabilitation and modernisation of Kallapumm Old Channel in Amaravathi Old system Amaravathi Basin in Coimbatore District                           |                    |                    |            |            |           |           |
| A                             | Rehabilitation of anicut,  |                    | 4.55               | 4.55       |            |           |           |
| B                             | Replacing shutter and repairing sluice   | 0.78               |                    |            |            |           |           |
| C                             | Strengthening the canal  | 1.22               |                    |            |            |           |           |
| D                             | Selective lining   | 2.55               |                    |            |            |           |           |

Table 6.37 Contd....

| Sl. No. | Name of Work  | Estimate in Crores | Year               | 2008- 2009 | 2009- 2010 | 2010-2011 | 2011-2012 |
|---------|---|--------------------|--------------------|------------|------------|-----------|-----------|
|         |   |                    | Escalation Charges | 10%        | 15%        | 20%       | 25%       |
| 3.      | Rehabilitation and Modernisation of Komaralingam Old Channel in Amaravati Old system of Amaravathi Basin in Coimbatore District       |                    |                    |            |            |           |           |
| A       | Rehabilitation of anicut,   | 0.41               |                    |            | 3.95       |           |           |
| B       | Replacing shutter and repairing sluice  | 0.38               |                    |            |            |           |           |
| C       | Strengthening the canal   | 2.45               |                    |            |            |           |           |
| D       | Selective lining  | 0.71               |                    |            |            |           |           |
| 4.      | Rehabilitation and Moderation of Sarkar Kannadiputtur Old Channel in Amaravathi Old system of Amaravathi Basin in Coimbatore District |                    |                    |            |            |           |           |
| A       | Rehabilitation of anicut,   | 0.09               |                    |            |            | 3.30      |           |
| B       | Replacing shutter and repairing sluice  | 0.41               |                    |            |            |           |           |
| C       | Strengthening the canal   | 1.79               |                    |            |            |           |           |
| D       | Selective lining  | 1.01               |                    |            |            |           |           |

Table 6.37 Contd....

| Sl. No. | Name of Work  |      | Estimate in Crores | Year               | 2008- 2009 | 2009- 2010 | 2010-2011 | 2011-2012 |
|---------|---|------|--------------------|--------------------|------------|------------|-----------|-----------|
|         |   |      |                    | Escalation Charges | 10%        | 15%        | 20%       | 25%       |
| 5.      | Rehabilitation and Modernisation of Sholamadevi Chamesl in Amaravathi Old system of Amaravathi Basin in Coimbatore District |      |                    |                    |            |            |           |           |
| A       | Rehabilitation of anicut,   | 0.40 | 3.05               |                    |            |            | 3.05      |           |
| B       | Replacing shutter and repairing sluice  | 0.38 |                    |                    |            |            |           |           |
| C       | Strengthening the canal   | 1.43 |                    |                    |            |            |           |           |
| D       | Selective lining  | 0.84 |                    |                    |            |            |           |           |
| 6.      | Rehabilitation and Modemisation of Kaniyur Channel in Amaravahti Old system of Amaravathi Basin in Caimbatore District      |      |                    |                    |            |            |           |           |
| A       | Rehabilitation of anicut,   | 0.21 | 3.05               |                    |            |            | 3.05      |           |
| B       | Replacing shutter and repairing sluice  | 1.27 |                    |                    |            |            |           |           |
| C       | Strengthening the canal   | 0.89 |                    |                    |            |            |           |           |
| D       | Selective lining  | 0.68 |                    |                    |            |            |           |           |

Table 6.37 Contd....

| Sl. No. | Name of Work   | Estimate in Crores | Year               | 2008- 2009 | 2009- 2010  | 2010-2011   | 2011-2012   |             |
|---------|--|--------------------|--------------------|------------|-------------|-------------|-------------|-------------|
|         |  |                    | Escalation Charges | 10%        | 15%         | 20%         | 25%         |             |
| 7.      | Rehabilitation and Modernisation of Kadathur Old Channel in Amaravathi i Old system of Amaravathi Basin in Coimbatore District.    |                    |                    |            |             |             |             |             |
| A       | Rehabilitation of anicut,  | 0.30               | 3.60               |            | 3.60        |             |             |             |
| B       | Replacing shutter and repairing sluice   | 0.36               |                    |            |             |             |             |             |
| C       | Strengthening the canal  | 2.22               |                    |            |             |             |             |             |
| D       | Selective lining   | 0.72               |                    |            |             |             |             |             |
| 8.      | Rehabilitation and Modernisation of Karatholuvu Old Channel in Amaravathi i Old system of Amaravathi Basin in Coimbatore District. |                    |                    |            |             |             |             |             |
| A       | Rehabilitation of anicut,  |                    | 3.25               |            |             |             | 3.25        |             |
| B       | Replacing shutter and repairing sluice   | 0.47               |                    |            |             |             |             |             |
| C       | Strengthening the canal  | 1.91               |                    |            |             |             |             |             |
| D       | Selective lining   | 0.87               |                    |            |             |             |             |             |
|         | <b>Total</b>   |                    | <b>29.00</b>       |            | <b>8.80</b> | <b>7.55</b> | <b>6.35</b> | <b>6.30</b> |

**Table 6.38 Departmentwise Budget for District Plan****(Rs. in lakhs)**

| <b>S. No</b> | <b>Particulars</b>   | <b>2008-09</b> | <b>2009-10</b> | <b>2010-11</b> | <b>2011-12</b> | <b>Total</b>    |
|--------------|--|----------------|----------------|----------------|----------------|-----------------|
| <b>I</b>     | <b>AGRICULTURE</b>   |                |                |                |                |                 |
|              | Paddy  | 15.275         | 13.675         | 13.175         | 14.175         | 56.300          |
|              | Maize  | 81.625         | 110.500        | 130.625        | 146.875        | 469.625         |
|              | Cotton   | 25.325         | 32.325         | 38.575         | 43.075         | 139.300         |
|              | Ground nut   | 17.700         | 19.350         | 21.200         | 21.200         | 79.450          |
|              | Coconut  | 26.050         | 26.725         | 27.475         | 29.250         | 109.500         |
|              | Pulses   | 2.000          | --             | --             | --             | 2.000           |
|              | <b>Total</b>   | <b>167.975</b> | <b>202.575</b> | <b>231.050</b> | <b>254.575</b> | <b>856.175</b>  |
| <b>II</b>    | <b>HORTICULTURE</b>  |                |                |                |                |                 |
|              | Banana   | 325.84         | 333.275        | 333.275        | 333.275        | 1325.665        |
|              | Vegetables   | 58.725         | 59.525         | 59.525         | 59.525         | 237.305         |
|              | Training   | 31.25          | 28.65          | 28.65          | 28.65          | 117.200         |
|              |  | <b>415.82</b>  | <b>421.45</b>  | <b>421.45</b>  | <b>421.45</b>  | <b>1680.165</b> |
| <b>III</b>   | <b>AGRICULTURAL ENGINEERING</b>  |                |                |                |                |                 |
|              | Introduction of Newly Developed Agri. Machinery / Implements*  | 42.25          | 56.83          | 54.28          | 45.65          | 199.00          |
|              | Innovative water harvesting structures   | 47.00          | 47.00          | 47.00          | 47.00          | 188.00          |
|              | Promoting the concept of Mechanised villages   | 14.93          | 14.93          | 14.93          | 14.93          | 59.72           |
|              | Popularisation of Agricultural mechanisation through conventional machinery/ equipments <sup>a</sup> | 16.03          | 23.85          | 27.76          | 29.79          | 97.43           |
|              | Water harvesting structures <sup>b</sup>   | 62.30          | 100.35         | 92.85          | 115.40         | 370.90          |
|              | Soil conservation works**  | 29.70          | 40.05          | 40.05          | 47.70          | 157.50          |
|              | Water management works   | 172.08         | 215.37         | 215.37         | 257.28         | 860.10          |
|              | ‘Centre for testing farm implements and machines under AED, Tamil Nadu’                              | 380.00         |                |                |                | 380.00          |
|              |  | <b>764.29</b>  | <b>498.38</b>  | <b>492.24</b>  | <b>558.05</b>  | <b>2312.95</b>  |

Table 6.38 Contd.....

(Rs. in lakhs)

| S. No.    | Particulars                          | 2008-09       | 2009-10       | 2010-11       | 2011-12       | Total          |
|-----------|--------------------------------------|---------------|---------------|---------------|---------------|----------------|
| <b>IV</b> | <b>MARKETING ACTIVITIES</b>          |               |               |               |               |                |
| 1         | Commodity group formation*           | 6.00          | 5.50          | 1.20          | 1.30          | <b>14.00</b>   |
| 2         | Market Intelligence dissemination    | 3.70          | 4.07          | 4.44          | 4.81          | <b>17.02</b>   |
| 3         | Facilitation of contract farming     | 0.60          | 0.66          | 0.72          | 0.78          | <b>2.76</b>    |
| 4         | Trainings                            | 3.90          | 4.07          | 4.44          | 4.81          | <b>17.22</b>   |
| 5         | Exposure visit to markets            | 20.10         | 18.81         | 20.52         | 22.23         | <b>81.66</b>   |
| 6         | Arrangement of buyer seller meetings | 3.60          | 3.96          | 4.32          | 4.68          | <b>16.56</b>   |
| 7         | Streng. Of market extension centre   | 2.50          | 0             | 0             | 0             | <b>2.50</b>    |
| 8         | Streng. Of village shandies          | 0             | 0             | 0             | 0             | <b>0.00</b>    |
| 9         | Market price surveillance            | 0.10          | 0.11          | 0.24          | 0.26          | <b>0.71</b>    |
| 10        | Publicity - regulated market         | 5.00          | 5.50          | 6.00          | 6.50          | <b>23.00</b>   |
| 11        | Market infrastructure activities     | 19.25         | 18.425        | 11.70         | 12.675        | <b>62.05</b>   |
|           | <b>Total</b>                         | <b>64.75</b>  | <b>61.105</b> | <b>53.58</b>  | <b>58.045</b> | <b>237.48</b>  |
| <b>V</b>  | <b>PUBLIC WORKS DEPARTMENT</b>       |               |               |               |               |                |
| 1         | Amaravathi Main Canal                | 425.00        | 0.00          | 0.00          | 0.00          | 425.00         |
| 2         | Kallapumm Old Channel                | 455.00        | 0.00          | 0.00          | 0.00          | 455.00         |
| 3         | Komaralingam Old Channel             | 0.00          | 395.00        | 0.00          | 0.00          | 395.00         |
| 4         | Sarkar Kannadiputur Old Channel      | 0.00          | 0.00          | 330.00        | 0.00          | 330.00         |
| 5         | Sholamadevi Chamesl                  | 0.00          | 0.00          | 305.00        | 0.00          | 305.00         |
| 6         | Kaniyur Channel                      | 0.00          | 0.00          | 0.00          | 305.00        | 305.00         |
| 7         | Kadathur Old Channel                 | 0.00          | 360.00        | 0.00          | 0.00          | 360.00         |
| 8         | Karatholuvu Old Channel              | 0.00          | 0.00          | 0.00          | 325.00        | 325.00         |
|           |                                      | <b>880.00</b> | <b>755.00</b> | <b>635.00</b> | <b>630.00</b> | <b>2900.00</b> |

**Table 6.39 Budget Abstract for District as a Whole****(Rs. in Lakhs)**

| <b>S. No.</b> | <b>Department</b>        | <b>2008-09</b>  | <b>2009-10</b> | <b>2010-11</b> | <b>2011-12</b> | <b>Total</b>    |
|---------------|--------------------------|-----------------|----------------|----------------|----------------|-----------------|
| 1             | Agriculture              | 167.975         | 202.580        | 231.060        | 254.580        | 856.195         |
| 2             | Horticulture             | 415.820         | 421.450        | 421.450        | 421.450        | 1680.170        |
| 3             | Animal Husbandry         | 885.720         | 296.700        | 257.680        | 252.790        | 1692.890        |
| 4             | Fisheries                | 466.000         | 319.500        | 127.000        | 17.000         | 929.500         |
| 5             | Agricultural Engineering | 764.290         | 498.375        | 492.235        | 543.125        | 2298.025        |
| 6             | Agricultural Marketing   | 64.750          | 61.105         | 53.580         | 58.045         | 237.480         |
| 7             | Public Works Department  | 880.000         | 755.000        | 635.000        | 630.000        | 2900.000        |
|               | <b>Grand Total</b>       | <b>3644.555</b> | <b>2554.71</b> | <b>2218.00</b> | <b>2176.99</b> | <b>10594.26</b> |

**Proceedings of the meeting held at Collectorate for National Agriculture Development Programme (NADP) Rashtriya Krishi Vikas Yojana (RKVY)- District Agricultural Plan - 2008-09, Coimbatore**

Discussion meeting was held on 20.05.2008 at 11. am. at District Development Centre hall Collectorate Coimbatore. This meeting was inaugurated by District collector Mr.V.Palanikumar IAS. Mr.P.Subramaian, PA to Collector (Agri.), Deputy Director welcomed the gathering. Dr. K.Uma, Ph.D co-ordinator for DAP gave introduction, appraisal and presented the detailed plan for discussion. After presentation interaction with Panchayats Union Chairmen and line departments heads, namely Joint Director of Agriculture, Deputy Director of Horticulture, Assistant Director of Animal Husbandry, Superintendent Engineer (Agricultural Engineering), District Forest Officer, Coimbatore, Chief Engineer, Public Works Department were involved in meeting and helped in appraising the plan.

The major thrust areas identified under NADP in agriculture was seed production subsidy, agricultural mechanisation and training to farmers and AOs. Major crops that need attentions are paddy, maize, groundnut, cotton and coconut.

Horticulture project includes the components related to increase in vegetable production, Banana and training and exposure visit for farmers. There are eighteen interventions out of which support system for Banana (300 lakhs), Pandal for Vegetable Production (10 lakhs), 10 hectare mega demo plot for the districts (25 lakhs), Enterprising Farmers Association (25 lakhs) were given much importance in this district.

New proposal has been submitted for establishment of 'Centre for testing farm implements and machines under AED, Tamil Nadu' with budget of Rs. 380 lakhs. It was proposed under three major areas 1. Introduction 2. Popularisation and 3. Establishing testing lab for farm machineries. Components of Agricultural Engineering includes

Introduction of Newly Developed Agri. Machinery / Implements, Innovative water harvesting structures, Promoting the concept of Mechanised villages, Popularisation of Agricultural mechanisation through conventional machinery/equipments, Water harvesting structures, Soil conservation works, Water management works.

Under marketing, main focus was on market and price information, contract farming, market extension, Market infrastructure activities, Exposure visit to markets and Publicity - regulated market. Final draft was prepared by including all suggestions given by participants of the meeting.

**NADP Sensitization Workshop and Discussion on District Agriculture Plan -  
Coimbatore District held on 20.05.2008**



**District Collector addresses the gathering**



**TNAU Scientist explains about the District Agriculture Plan**



**Participants of the meeting**



**Participants of the meeting**



**Participants interaction**



**Interaction with the line department officials**

கோவை மாவட்டத்தில் 2008-09 நிதியாண்டில்

# ரூ. 34 ¼ கோடியில் வேளாண் வளர்ச்சி திட்டங்கள் கலெக்டர் பழனிக்குமார் தலைமையில் விவசாய அதிகாரிகள் ஆலோசனை

கோவை,மே.21-

கோவை மாவட்டத்தில் 2008-09-ம் நிதியாண்டில் ரூ.34¼ கோடியில் வேளாண் வளர்ச்சி திட்டங்கள் செயல்படுத்தவது தொடர்பாக கலெக்டர் பழனிக்குமார் தலைமையில் நேற்று அதிகாரிகள் ஆலோசனை கூட்டம் நடைபெற்றது.

## வேளாண் வளர்ச்சி திட்டம்

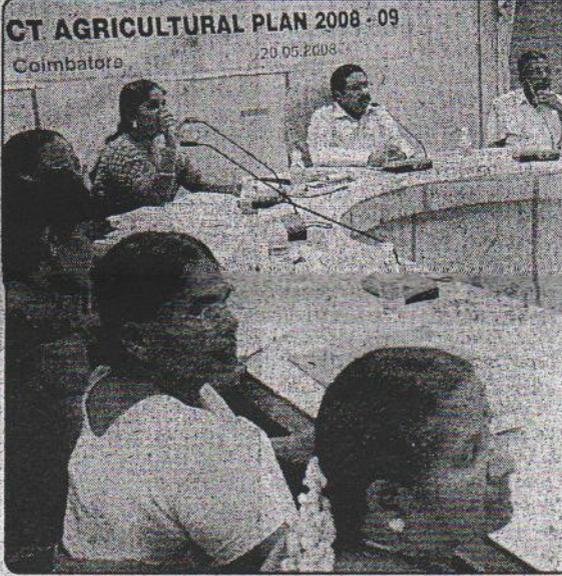
11-வது ஐந்தாண்டு திட்டத்தில் வேளாண் துறையில் ஆண்டுக்கு 4 சதவீத வளர்ச்சியை ஏற்படுத்துவதை குறிக்கோளாக கொண்டு, தேசிய வேளாண் வளர்ச்சி திட்டம் செயல்படுத்தப்பட்டு வருகிறது. வேளாண்மை மற்றும் அதோடு தொடர்புடைய துறைகளில் மாநிலங்கள் அரசு முதலீட்டினை அதிகப்படுத்த உதவுவதே இதன் முக்கிய நோக்கமாகும்.

இதன் அடிப்படையில் ஒவ்வொரு மாவட்டத்திலும் ஆண்டுதோறும் வேளாண் வளர்ச்சி திட்டங்கள் செயல்படுத்தப்படுகின்றன. கோவை மாவட்டத்தில் 2008-09-ம் ஆண்டிற்கான வேளாண் வளர்ச்சி திட்டங்கள் செயல்படுத்துவது தொடர்பான ஆலோசனை கூட்டம் கலெக்டர் அலுவலகத்தில் நேற்று காலை நடைபெற்றது. கூட்டத்துக்கு கலெக்டர் பழனிக்குமார் தலைமை தாங்கினார்.

கூட்டத்தில் மாவட்ட வேளாண் வளர்ச்சி திட்ட ஒருங்கணப்பாளர் உமா பேசும்போது கூறியதாவது:-

## ரூ.34¼ கோடிக்கு வரையறை

நெல், பருத்தி, நிலக்கடலை, மக்காச்சோளம், தென்னை ஆகிய பயிர்களின் உற்பத்தியை அதிகரித்தல், மாவட்ட தகவல் மையத்தை பலப்படுத்துதல், வேளாண் பயிற்சி மையத்தை பலப்படுத்துதல், தோட்டக்கலைத்துறை சார்பில் காய்கறி, வாழை, தோட்டக்கலை பயிர்களின் மக



கோவை மாவட்ட வேளாண் வளர்ச்சி திட்ட ஆலோசனை கூட்டத்தில் நேற்று கலெக்டர் பழனிக்குமார் பேசியபோது எடுத்த படம். அருகில் வேளாண் அதிகாரிகள், ஊராட்சி ஒன்றிய தலைவர்கள் உள்ளனர்.

சூலை அதிகரித்தல், வேளாண் இயந்திரங்கள், கருவிகள் அறிமுகப்படுத்துதல், தரமான விவசாய இயந்திர உற்பத்திக்கு உதவுதல், தர நிர்ணயத்தை ஆய்வு செய்தல், விவசாயிகளுக்கு மத்தியில் பண்ணைக்கருவிகள் பற்றிய விழிப்புணர்வு ஏற்படுத்துதல், விவசாயிகளின் நிகர லாபத்தை அதிகரித்தல் போன்ற நடவடிக்கைகள் வேளாண் வளர்ச்சி திட்டங்களில் செயல்படுத்தப்படுகின்றன.

அந்த வகையில் கோவை மாவட்டத்திற்காக 2008-09ம் ஆண்டிற்கு வேளாண்மை துறைக்கு ரூ.1 கோடியே 75 லட்சமும், தோட்டக்கலைத்துறைக்கு ரூ.4 கோடியே 22 லட்சமும், வேளாண் பொறியியல் துறைக்கு ரூ.7 கோடியே 64 லட்சமும், வேளாண் விற்பனைத்துறைக்கு ரூ.64 லட்சமும், பொதுப்பணித்துறை நடவடிக்கைகளுக்கு ரூ.20 கோடியும் ஆக மொத்தம் ரூ.34

கோடியே 26 லட்சத்து 48 ஆயிரத்தில் திட்டவரையறை தயாரிக்கப்பட்டு உள்ளது. இந்த வரையறை மாநில அரசுக்கு அனுப்பப்பட்டு அங்கிருந்து மத்திய அரசுக்கு அனுப்பி நிதி ஒதுக்கீடு பெறப்படும். இன்னும் ஒரு மாத காலத்தில் நிதி ஒதுக்கீடு பெறப்படும் பணிகள் தொடங்கப்பட இருக்கிறது.

கூடந்த ஆண்டும் இதே போல் 9 முக்கியமான பகுதிகள் அடையாளம் காணப்பட்டு பணிகள் மேற்கொள்ளப்பட்டன. தேசிய வேளாண் வளர்ச்சி திட்டத்தின்படி விவசாய வளர்ச்சி விகிதம் 4 சதவீதம் உயர வேண்டும், அதே போல் பெறப்படும் நிதி 100 சதவீதம் இருக்க வேண்டும் எனபதே நோக்கம்.

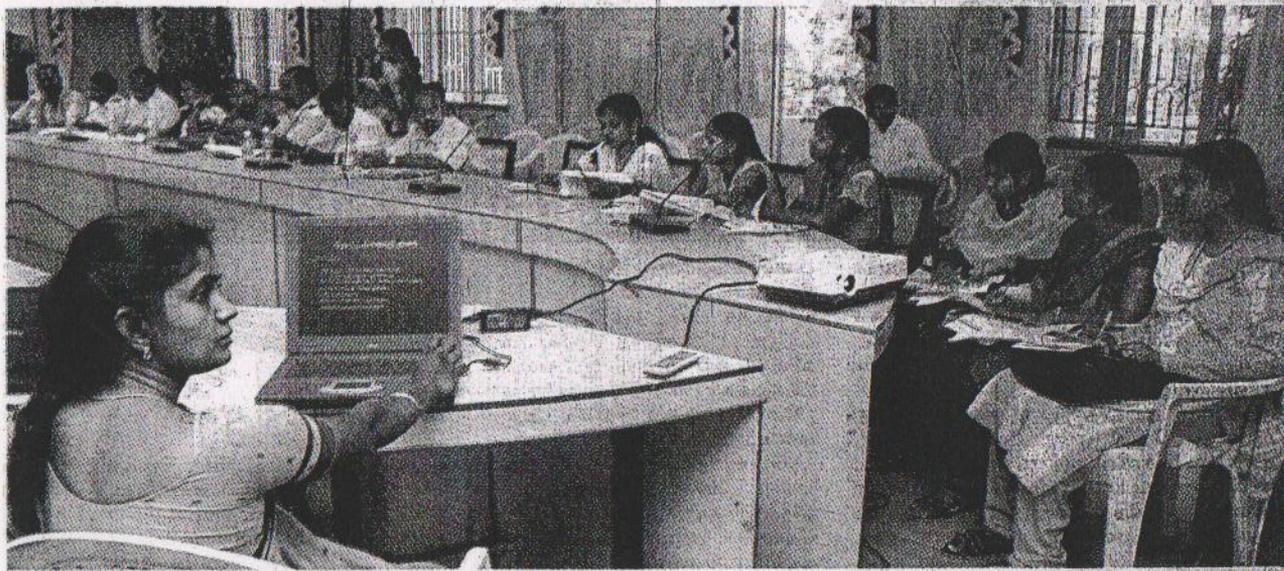
இவ்வாறு அவர் கூறினார். **உள்ளாட்சி பிரதிநிகர்கள் கருத்து**

அதன்பிறகு கூட்டத்தில்

கலந்துகொண்ட உள்ளாட்சி பிரதிநிகர்களிடம் கருத்து கேட்கப்பட்டது. இதில் தொண்டாமுத்தூர் ஊராட்சி ஒன்றிய தலைவர் மதுமதி, பொள்ளாச்சி தெற்கு தனலட்சுமி, ஆனைமலை பாப்பாத்தி, சுல்தான் பேட்டை கவிதா ஆகியோர் கருத்து தெரிவித்து பேசினார்கள். அவர்கள் தரப்பில் கூறப்படும்போது, விவசாயிகளுக்கு உற்பத்தி பொருளுக்கான உரிய விலை கிடைக்க நடவடிக்கை எடுக்கவேண்டும், பண்ணை கருவிகள் தரமானதாக இருக்க வேண்டும், அதிக அளவில் பண்ணை கருவிகள் உற்பத்தி செய்யப்பட வேண்டும் என்று தெரிவிக்கப்பட்டது.

இறுதியில் கலெக்டர் பழனிக்குமார் பேசும்போது கூறியதாவது:- விவசாய பண்ணை கருவிகள் நல்ல தரமானதாக இருக்க வேண்டும். கருவிகள், இயந்திரங்கள் பற்றாக்குறை இல்லாத அளவுக்கு வேளாண் அதிகாரிகள் பார்த்துக்கொள்ள வேண்டும். விவசாய கூலி தொழிலாளர்கள் பற்றாக்குறை இருப்பதால் தான் விவசாயிகள் கருவிகள், இயந்திரங்களை பயன்படுத்துகிறார்கள். ஆனால் அந்த இயந்திரங்கள் பற்றாக்குறையாக இருப்பின் அவர்களால் அறுவடை செய்ய முடியாது. விவசாயிகளின் உற்பத்தி பொருட்களுக்கு சரியான விலை கிடைக்கிறதா என்பதை கண்டறிய மார்க்கெட்டிங் பற்றிய தகவல்களை அறிந்து கொள்ள, ஏற்பாடு செய்யப்பட வேண்டும். பல்வேறு இடங்களில் விவசாய பொருட்களின் விலை விபரங்களை, விவசாயிகள் அறிந்துகொள்ளும் வகையில் நடவடிக்கை எடுக்கப்படும், இவ்வாறு கலெக்டர் பழனிக்கு

கலந்துகொண்ட உள்ளாட்சி பிரதிநிகர்களிடம் கருத்து கேட்கப்பட்டது. இதில் தொண்டாமுத்தூர் ஊராட்சி ஒன்றிய தலைவர் மதுமதி, பொள்ளாச்சி தெற்கு தனலட்சுமி, ஆனைமலை பாப்பாத்தி, சுல்தான்



கோவை கலெக்டர் அலுவலகத்தில், மாவட்ட வேளாண் திட்ட கலந்தாய்வு கூட்டம் நேற்று நடந்தது.

## தேசிய வேளாண்மை வளர்ச்சித் திட்டத்தில் ரூ. 34.26 கோடி கேட்டு மத்திய அரசுக்கு கருத்துரு

கோவை, மே 21-

“தேசிய வேளாண்மை வளர்ச்சித் திட்டத்தில்” பல் வேறு திட்டங்களை செயல்படுத்த, கோவை மாவட்டத்துக்கு ரூ. 34.26 கோடி ஒதுக்கீடு செய்ய வேண்டுமென மத்திய அரசுக்கு கருத்துரு அனுப்பப்பட்டுள்ளது,” என்று வேளாண் பல்கலை இணைப்பேராசிரியர் உமா பேசினார்.

விவசாய துறையில் ஆண்டுக்கு நான்கு சதவீத வளர்ச்சி ஏற்படுத்துவதை குறிக்கோளாகக் கொண்டு செயல்படுத்தப்பட்டு வருகிறது தேசிய வேளாண்மை வளர்ச்சி திட்டம். இந்த திட்டம், பயன்பாட்டாளர்களைக் கொண்டு வகுக்கப்பட்டுள்ளது.

மாவட்ட அளவில் கலெக்டர் தலைமையில், அனைத்து வளர்ச்சித்துறை தலைவர்கள், பஞ்சாயத்து தலைவர்கள், ஒன்றிய தலைவர்களின் கருத்துக்களை அறிந்து திட்டம் வகுக்கப்பட்டுள்ளது. இந்த திட்டத்தை, தமிழ்நாடு வேளாண்மை பல்கலை உருவாக்கியுள்ளது.

தேசிய வேளாண்மை வளர்ச்சித்திட்டம் கோவை மாவட்டத்திலும் செயல்படுத்தப்பட்டுள்ளது. இதற்கான கலந்தாய்வு கூட்டம், கோவை கலெக்டர் அலுவலகத்தில் உள்ள மாவட்ட வளர்ச்சி மன்ற கூட்ட அரங்கில், கலெக்டர் பழனிக்குமார் தலைமையில் நேற்று நடந்தது.

### வேளாண் பல்கலை இணைப்பேராசிரியர் தகவல்

இதில், தமிழ்நாடு வேளாண்மை பல்கலை இணைப்பேராசிரியர் உமா பேசியதாவது:

தேசிய வேளாண்மை வளர்ச்சித்திட்டத்தின் கீழ் நெல், பருத்தி, நிலக்கடலை, மக்காச்சோளம், தென்னை உற்பத்தியை அதிகரிக்கவும், மாவட்ட தகவல் மையம், வேளாண் பயிற்சி மையத்தை யும் பலப்படுத்த முடிவு செய்யப்பட்டுள்ளது. தோட்டக்கலைத்துறையில் காய்கறி உற்பத்தி செலவை பெருக்க ரூ.42.75 லட்சம், வாழை உற்பத்தியை பெருக்க ரூ. 3.25

கோடி கேட்டு மத்திய அரசுக்கு கருத்துரு அனுப்பப்பட்டுள்ளது.

வேளாண் பொறியியல் துறையில் புதிதாக வடிவமைக்கப்பட்ட வேளாண் இயந்திரம், கருவிகள் அறிமுகப்படுத்தி, பிரபலப்படுத்த முடிவெடுக்கப்பட்டுள்ளது. இந்த கருவிகளை பரிசோதிக்க வேளாண் பொறியியல் துறையில் ஒரு பரிசோதனை மையம் அமைக்கப்படும். இந்த மையத்தில் வேளாண் இயந்திரங்களின் தன்மை ஆய்வு செய்யப்படும். இந்த மையம் தரமான விவசாய

இயந்திர உற்பத்திக்கு உதவுவதுடன், விலையை ஆய்வு செய்து கட்டுப்படுத்தும்.

தேசிய வேளாண்மை இணைப்பேராசிரியர் உமா பேசினார். தேசிய வேளாண்மை துறைக்கு ஒரு கோடியே 75 லட்சத்து 30 ஆயிரம், தோட்டக்கலைத்துறைக்கு ரூ. நான்கு கோடியே 22 லட்சத்து 14 ஆயிரம், வேளாண் பொறியியல் துறைக்கு ரூ. ஏழு கோடியே 64 லட்சத்து 29 ஆயிரம், வேளாண் விற்பனைத்துறைக்கு ரூ. 64.75 லட்சம், விவசாயம் சார்ந்த பொதுப்பணித்துறை வேலைகளுக்கு ரூ.20 கோடி என மொத்தம் கோவை மாவட்டத்துக்கு ரூ. 34 கோடியே 26 லட்சத்து 48 ஆயிரம் ஒதுக்கீடு செய்ய

வேண்டுமென, மத்திய அரசுக்கு கருத்துரு அனுப்பப்பட்டுள்ளது.

இவ்வாறு இணைப்பேராசிரியர் உமா பேசினார். கலெக்டர் பழனிக்குமார் பேசுகையில், “களையெடுக்கும் இயந்திரத்தை தரமானதாக உருவாக்க, வேளாண் பொறியியல் துறை நடவடிக்கை எடுக்க வேண்டும். விவசாயத்துக்கு பயன்படும் இயந்திரங்களை அதிகளவில் உற்பத்தி செய்ய வேண்டும். விவசாயத்தில் ஈடுபடுவோரின் எண்ணிக்கை குறைவாக இருப்பதால், இயந்திரத்தை பலர் நாடுகின்றனர். இந்த நேரத்தில் இயந்திரத்தின் செயல்பாடு நன்றாக இருக்க வேண்டும்,” என்றார்.

## வேளாண் வளர்ச்சிக்கு ரூ.342 கோடியில் வரைவுத் திட்டம்

கோவை, மே 20: கோவை மாவட்டத்தின் வேளாண் வளர்ச்சிக்கு ரூ.342.6 கோடியில் வரைவுத் திட்டம் தயாரிக்கப்பட்டுள்ளது.

மத்திய அரசின் தேசிய வேளாண் வளர்ச்சித் திட்டத்தில் நிதியுதவி பெறுவதற்காக இத் திட்டம் பரிந்துரைக்கப்படும்.

வேளாண் துறை வளர்ச்சியை ஆண்டுக்கு 4 சதமாக உயர்த்துவது என்ற இலக்கில் தேசிய வேளாண் வளர்ச்சித் திட்டம் செயல்படுத்தப்படுகிறது. இதற்காக ஒவ்வொரு மாவட்டத்துக்கும் வேளாண் வளர்ச்சித் திட்டம் உருவாக்கப்பட்டு, அதற்கான நிதியை மத்திய அரசு வழங்கும். கோவை மாவட்டத்துக்கான வேளாண் திட்டம் உருவாக்குவதற்கான கலந்தாய்வுக் கூட்டம் மாவட்ட ஆட்சியர் அலுவலகத்தில் செவ்வாய்க்கிழமை நடைபெற்றது.

ஆட்சியர் வெ.பழனிக்குமார் கூட்டத்துக்கு தலைமை வகித்தார். வேளாண் துறை அதிகாரிகள், உள்ளாட்சிப் பிரதிநிதிகள், விவசாயிகள் உள்ளிட்டோர் பங்கேற்றனர். வேளாண் திட்டம் உருவாக்குவதற்காக மாவட்ட ஆட்சியர் தலைமையில், வளர்ச்சித் துறை அதிகாரிகள், ஊராட்சித் தலைவர்கள், ஊராட்சி ஒன்றியத் தலைவர்கள் அடங்கிய குழு அமைக்கப்பட்டது.

மாவட்டத்தின் வேளாண் வளர்ச்சிக்காக ரூ.342.6 கோடியில் தயாரிக்கப்பட்டு உள்ள வரைவுத் திட்டம் சமர்ப்பிக்கப்பட்டது. இதில் வேளாண்மைக்கு ரூ.17.5 கோடி, தோட்டக்கலைக்கு ரூ.42.2 கோடி, வேளாண் பொறியியல் துறைக்கு ரூ.76.4 கோடி, வேளாண் விற்பனைத் துறைக்கு ரூ.6.4 கோடி, பொதுப்பணித் துறைக்கு ரூ.200 கோடியில் திட்டங்கள் செயல்படுத்தலாம் என பரிந்துரைக்கப்பட்டு உள்ளது. இந்த வரைவுத் திட்டம், தலைமைச் செயலர் தலைமையிலான மாநில ஒதுக்கீட்டுக் குழுவின் பரிசீலனைக்கு அனுப்பப்படும்.

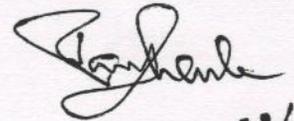
கூட்டத்தில் கலந்து கொண்ட விவசாயப் பிரதிநிதிகள், விவசாயக் கூலி வேலைக்கு ஆள்கள் கிடைப்பதில் சிரமம் நிலவுவதாகத் தெரிவித்தனர்.

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2. Uma

Assoc. Professor

ARM



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Pro