NATIONAL AGRICULTURE DEVELOPMENT PROGRAMME (NADP)

DISTRICT AGRICULTURE PLAN

TIRUPPUR

CENTRE FOR AGRICULTURAL AND RURAL DEVELOPMENT STUDIES
TAMIL NADU AGRICULTURAL UNIVERSITY
COIMBATORE -641 003

NATIONAL AGRICULTURE DEVELOPMENT PROGRAMME (NADP / RKVY)

NADP

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COIMBATORE - 641 003

2017

CONTENTS

List of Tables

List of Figures

EXECUTIVE SUMMARY

Tiruppur district, formed in the year 2009 from Coimbatore and Erode districts comprises of thirteen blocks. The total geographical area is about 5186.34 sq.km. The district is located in the western part of Tamil Nadu surrounded by Coimbatore district in the west, Erode district in the north and north east, Karur district in the east, Dindigul district in the south east and Kerala State in the south.

The mean maximum and minimum temperatures for Tiruppur district during summer and winter vary between 18°C and 35°C. The normal annual rainfall of the district is 618.2 mm with the North East and the South West monsoons contributing to 47 and 28 per cent respectively to the total rainfall. The major rivers flowing through the district are Noyyal and Amaravathi. The Amaravati River is the main source of irrigation in the district. Amaravathi Dam, which created Amaravathi Reservoir, is located at Amaravathinagar. Thirumurthy dam which is created by the PAP project is situated in this district. Both Amaravathi dam and Thirumurthy dam are the prime source of irrigation in the district.

In 2011, Tiruppur had a population of 24.79 lakhs (Census, 2011), of which male and female were 12.46 lakhs and 12.33 lakhs respectively. The urban population accounted for 61 per cent of the population, while the rural population constituted 39 per cent. The total workers in the district were 12.66 lakhs, of which 11.68 lakhs (92.30 per cent) were main workers and 0.97 lakhs (7.30 per cent) were marginal workers. The cultivators and the agricultural labourers accounted for 10.73 per cent and 19.46 per cent of the worker population respectively. Predominant share of workers (66.58 per cent) were employed in non – agricultural sector, especially textile sector.

The major soil types prevailing in Tiruppur district are red calcareous soils, alluvial calcareous soils, mixed soils with black soil overlying the red calcareous soils, red non calcareous soils, red colluvial soils (non-calcareous) and black soils (calcareous). The average net sown area for the triennium ending 2014 – 15 accounted for 38.66 per cent of the total geographical area of the district. The current fallow and other fallow accounted for 19.44 and 26.44 per cent of the geographical area. The average cropping intensity during the triennium 2014 – 15 was 100.80 per cent and the share of irrigated area to total cultivated area was only 64.80 per cent. The total number of farm holdings in the district is 1.81 lakhs, of which marginal and small farmers accounted for 40 per cent and 28 per cent respectively.

Open wells were the major source of irrigation (76644 ha) followed by canals (25449 ha) during 2014 -15. Coconut accounted for about 30 per cent of the total cropped area. The average area under coconut in the district (Triennium average ending 2014 – 15) was 55645 ha. The other major agricultural crops are maize, cholam and fodder crops. Pulses accounted for 9.95 per cent of the total cropped area. Groundnut and sugarcane accounted for 3.19 and 2.69 per cent of the area in the district. Onion, tomato, mango, glory lily, banana and Drumstick was cultivated in about 2670, 1865, 1717, 1649, 1496 and 1074 hectares during 2014 – 15. The cattle population was 2.78 lakhs. The population of sheep and goat was 4.02 lakhs and 2.03 lakhs respectively. There were 176 lakhs poultry birds in the district. There are 291 bank branches in the district, of which 51 per cent arecommercial banks and 42 per cent are cooperatives (PACS).

The area under paddy and sorghum had declined during 2001 to 2011, while that of pulses, cotton, sugarcane and onion had increased. The compound growth rate for blackgram was 19 per cent, greengram about 7.0 per cent, cotton and sugarcane by 5.0 per cent and onion by 7.0 per cent. The overall yield gap in paddy was 2650 kg per hectare, while that of maize was 2000 kg per ha.

The overall strategy recommended for the district is to increase the area under irrigation by improving water harvesting in public and private resources, improving water use efficiency at farm level, increasing adoption of improved technologies for targeted crops and improving post harvest operations and value addition in the district. Efforts has to be strengthen to improve the population and productivity of livestock through improved breeding programmes, better nutrition through fodder availability and animal health care. The scope for fisheries and sericulture in the district also has to be tapped by area expansion and adoption of improved package of practices.

The budget abstract for different sectors in Tiruppur district is given below.

Budget Abstract for Tiruppur District

(₹. in lakhs)

Sl. No	Sectors	2017-18	2018-19	2019-20	2020-21	2021-22	Total
1	Agriculture	2580.45	4757.06	2742.75	3262.39	2875.11	16217.76
2	Horticulture	4592.48	4581.93	4855.61	5188.01	5369.24	24587.27
3	Agricultural Engineering	1135.61	1014.11	904.76	1152.06	830.26	5036.80
4	Seed Certification & Organic Certification	13.36	0.00	0.00	0.00	0.00	13.36
5	Animal Husbandry	963.79	1075.04	665.04	726.79	515.04	3945.70
6	Dairy Development	1549.00	1549.00	4449.00	1549.00	8574.00	17670.00
7	Fisheries	39.00	69.00	60.00	60.00	64.00	292.00
8	Fisheries Research (TNFU)	64.76	63.16	13.16	0.26	0.26	141.60
9	Water Resource Organization (PWD)	142465.77	54828.57	19351.32	735.95	14.41	217396.02
10	Civil Supplies & Co-operation	2420.90	360.32	164.41	294.96	103.00	3343.59
	Total	**155825.12**	**68298.19**	**33206.05**	**12969.42**	**18345.32**	**288644.10**

The total budget requirement for the implementation of various interventions by different departments is **Rs. 288644.10 lakhs.**

CHAPTER I

INTRODUCTION

Rashtriya Krishi Vikas Yojana (RKVY) vis-à-vis National Agricultural Development Program (NADP) was initiated in 2007 as an umbrella scheme for ensuring holistic development of agriculture and allied sectors by allowing states to choose their own agriculture and allied sector development activities. The scheme has come a long way since its inception and has been implemented across two plan periods i.e. during 11th and 12th plan periods. Based on feedback received from States, experiences garnered and inputs provided by various stakeholders, schemes eligible for funding under RKVY have undergone modifications to enhance efficiency, efficacy and inclusiveness of the program.

The overall objectives of RKVY (NADP) are as follows:

Objectives of RKVY

a. To strengthen the farmers' efforts through creation of required pre and post-harvest agri-infrastructure that increases access to quality inputs, storage, market facilities etc. and enables farmers to make informed choices.

b. To provide autonomy, flexibility to States to plan and execute schemes as per local/ farmers' needs.

c. To promote value chain addition linked production models that will help farmers increase their income as well as encourage production/productivity

d. To mitigate risk of farmers with focus on additional income generation activities - like integrated farming, mushroom cultivation, bee keeping, aromatic plant cultivation, floriculture etc.

e. To attend national priorities through several sub-schemes.

f. To empower youth through skill development, innovation and agri-entrepreneurship based agribusiness models that attract them to agriculture.

District and State Agriculture Plans

As per the recent guidelines issued by the Government of India under Remunerative Approaches for Agriculture and Allied sector Rejuvenation (RAFTAAR), the new projects proposed and are to be implemented under NADP/RKVY must be in consonant with District Agricultural Plans (DAP), State Agriculture Plans

(SAP) and State Agriculture Infrastructure Development Program (SAIDP) prepared by the individual States. Thus, such action-oriented plan documents will remain as a cornerstone of planning and implementation of the NADP/RKVY and other schemes.

The overall guidelines suggested by the Government of India to be followed for preparation of District Agriculture Plans (DAP) and State Agricultural under NADP/RKVY are as follows:

- The several states have already prepared Comprehensive District and State Agriculture plans for 12th Plan period. These plans have to be revised and updated appropriately for implementing RKVY-RAFTAAR during 14th Finance Commission keeping in view modification proposed for the plan period and emerging needs of the State.
- The District Agriculture Plan (DAP) shall not be however the usual aggregation of existing schemes but would aim at moving towards projecting the requirements for development of Agriculture and allied sectors of the district and for the State a whole.
- These plans would also present the vision for Agriculture and allied sectors within the overall development perspective of the district and further State as a whole.
- The District Agriculture Plans and the State level plan would also present their financial requirements in addition to sources of financing the agriculture development plans in a comprehensive way.
- The District Agriculture Plan will include animal husbandry and fishery development, minor irrigation projects, rural development works, agricultural marketing schemes and etc. keeping in view the natural resources and technological possibilities in each district.
- District level potential linked credit plans (PLP) already prepared by the National Bank for Agriculture and Rural Development (NABARD) and Strategic Research and Extension Plans (SREP) developed under the Agricultural Technology Management Agency (ATMA) etc. may be referred for revision of DAPs.
- It should also be ensured that the strategies for convergences with other programs as well as the role assigned to the Panchayati Raj Institutions (PRIs) are appropriately incorporated in DAPs.

Therefore, each State will also have a comprehensive State Agricultural Plan (SAP) for the remaining period of the Fourteenth Finance Commission by

integrating the District Plans. SAPs will invariably have to indicate resources that can flow from the State to the districts.

The Process

Revision and updating of SAPs could be a two-way process. Firstly, State Nodal Department (or Agriculture Department) could get DAPs revised in the first instance to ensure that priorities of the State are properly covered in the district plans. States should, at this stage of scrutiny, ensure that requirements of districts and priorities of the State are appropriately captured and aligned in DAPs. Alternately, State Nodal Agency could communicate to the districts in the first instance, the State's priorities that ought to be reflected in the respective district plans and the districts may incorporate these in their updated district plans. Preparation/revision of the DAPs need to be an elaborate, exhaustive and iterative process and care has to be taken by the State Nodal department and District Agriculture Department in ensuring that these plans cover the entire gamut of agriculture and allied sectors.

Revision and Updation of DAP and SAP in Tamil Nadu

Tamil Nadu State continued to receive Central Assistance under NADP/RKVY. The Government of Tamil Nadu also prepared District and State Agriculture Plans covering 11th and 12th Plan periods. Tamil Nadu State has 32 districts including Chennai. The District Agriculture Plan was prepared for 31 districts excluding Chennai during 12th plan period. Thus, the current exercise is the continuation of the 12th plan period: which also covered two years of the 14th Finance Commission period (2015-16 and 2016-17) and also keeping in view of the changing scenario in the development and emerging needs of the State and to be eligible for fresh grants from Government of India. These plan were further revised and updated appropriately for implementing RKVY during the periods from 2017-18 to 2021-22.

Methodology followed

The revision of the District Agricultural Plan of Tiruppur district, was done by gathering the secondary data about district and block with respect to rainfall, land use pattern, demography, livestock, machinery, infrastructure so far created etc. In addition, the constraints in production and marketing of agricultural and livestock produce, crop/animal production and gaps between expected and actual yield and the reasons for such gaps were also discussed among the various stakeholders and incorporated in this

plan document. Besides, in consultation with the line department officials and based on the data received from respective districts, a detailed year-wise action plan i.e. from 2017-18 to 2021-22 with physical and financial implications were presented.

CHAPTER II

PROFILE OF THE DISTRICT

In this chapter, the following details are discussed elaborately at block and district level:

2.1 Tiruppur district at glance

2.2 Area, Location and Geographical features

2.3 Administrative Structure of Tiruppur district

2.4 Demographic profile

2.5 Topography

2.6 Climatic Condition and Rainfall

2.7 Land Use Pattern

2.8 Sources of Irrigation

2.9 Cropping pattern

2.10 Animal Husbandry and Dairy Development

2.15.1. Livestock population

2.15.2 Veterinary hospital, Clinics

2.11 Banking

2.1 Tiruppur District at Glance

Tiruppur district, formed in the year 2009 from Coimbatore and Erode districts comprises of nine taluks*viz.,* Tiruppur North, Tiruppur South, Avinashi, Palladam, Dharapuram, Kangeyam, Madathukulam, Uthukuli and Udumalpet. It has an area of about 5,186.34 sq.km. It is located in the western part of Tamil Nadu surrounded by Coimbatore district in the west, Erode district in the north, north east, Karur district in the east, Dindugal district in the south east and Kerala district in the south (Fig. 1). It lies between 11°11' north and 77°15' east latitude.

Fig.1. Map of Tiruppur District

2.2 Area, Location and Geographical Features

Tiruppur lies on the western part of Tamil Nadu bordering the Western Ghats and hence enjoys a moderate climate. The district is surrounded by Coimbatore district in the west, Erode District to the North and northeast and Karur district in the East and Dindigul district to the south east. To south, the district is surrounded by Idukki district of Kerala state.

The southern and south western parts of the district enjoy maximum rainfall due to the surrounding Western Ghats. The rest of the district lies in the rain shadow region of Western Ghats and experiences salubrious climate during most parts of the year, except the extreme east part of the district. The mean maximum and minimum temperatures for Tiruppur city during summer and winter vary between 18°C and 35°C. The average annual rainfall in the plains is around 700 mm with the North East and the South West monsoons contributing to 47 per cent and 28 per cent respectively to the total rainfall. The major rivers flowing through the district are Noyyal and Amaravathi. The Amaravati River is the main source of irrigation in the district. Amaravathi Dam, which created Amaravathi Reservoir, is located at Amaravathinagar. Thirumurthy dam which is created by the PAP project is situated in this district. Both Amaravathi dam and

Thirumurthy dam are the prime source of irrigation in the district, whereas, Uppaar dam is another dam which receives water from seasonal rains.

2.3 Administrative Structure of Tiruppur district

As per G.O. Ms. No. 617, 618 Revenue dated 24.10.2008, Government of Tamil Nadu, the four taluks from Coimbatore District (*i.e.,*Tiruppur, Udumalpet, Palladam and Avinashi (Part)) and three taluks from Erode districts (*i.e.,*Dharapuram, Kangeyam and Perundurai (Part)) were segregated and combined together to form another new district, Tiruppur.

The district has three revenue divisions, nine taluks (Table 2.1), 13 blocks (Fig. 2), 350 revenue villages, 265 village panchayats, five municipalities and one corporation for administrative purposes. There are 25 Census towns in the district.

Table. 2.1. Administrative Division of Tiruppur District

Sl. No.	Name of Taluk	Sl. No.	Name of Blocks
1	Kangeyam	1	Uthukuli
2	Dharapuram	2	Gudimangalam
3	Avinashi	3	Vellakoil
4	Tiruppur North	4	Madathukulam
5	Tiruppur South	5	Kundadam
6	Palladam	6	Mulanur
7	Udumalaipettai	7	Udumalpet
8	Madathukulam	8	Avinashi
9	Uthukuli	9	Palladam
		10	Pongalur
		11	Tiruppur
		12	Kangeyam
		13	Dharapuram

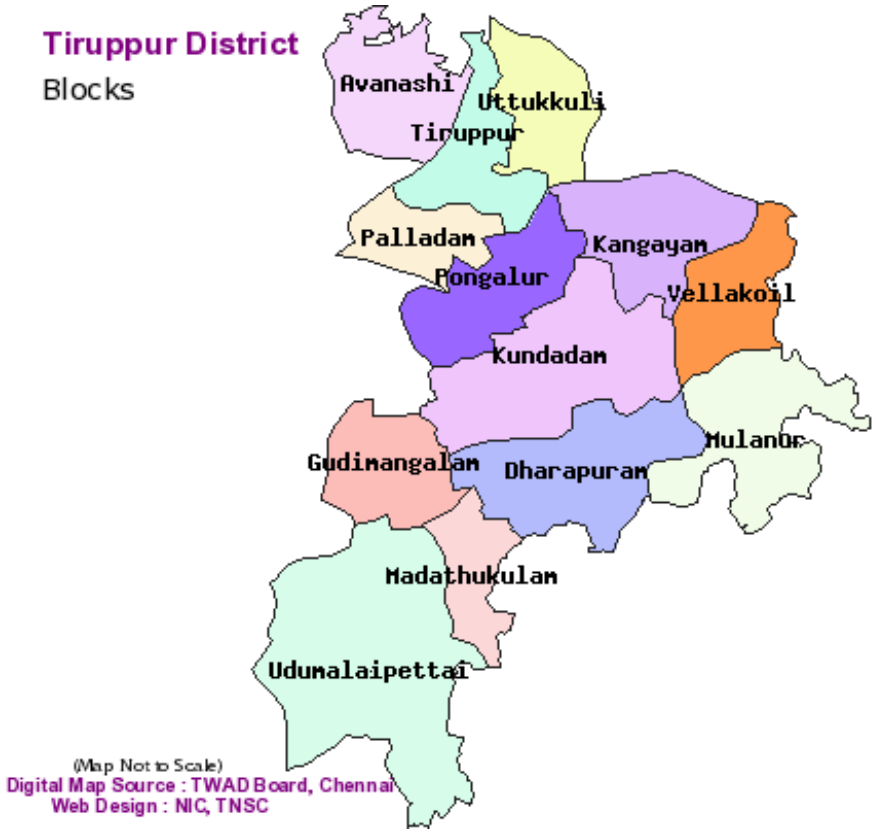


Fig. 2. Block Details of Tiruppur District

2.4 Demographic profile

2.4.1 Population

In 2011, Tiruppur had a population of 2479052 (Census 2011) of which male and female were 12,46,159 and 12,32,893 respectively. The demographic details of Tiruppur district are presented in Table 2.2.

Udumalpet block had the highest population of 1,67,781 numbers of which 83,739 were males while 84,042 were females as per report released by Census India 2011. Avinashi block had the second largest population (1,43,604). The least populous block in the district is Mulanur (45,937). Out of the total population, 1246159 were male and 1232893 were female. The total child population (0-6 years) were 2,41,351 as per 2011 census.

Table.2.2. Demographic Profile of Tiruppur District

Description	2011
Actual Population	2479052
Male	1246159
Female	1232893
Population Growth	29.11 %
Area Sq. Km	5187
Density/km^2	478
Proportion to Tamil Nadu Population	3.44 %

Description	2011
Sex Ratio (Per 1000)	989
Child Sex Ratio (0-6 Age)	952
Total Child Population (0-6 Age)	241351
Male Population (0-6 Age)	123612
Female Population (0-6 Age)	117739
Child Proportion (0-6 Age)	9.74 %
Boys Proportion (0-6 Age)	9.92 %
Girls Proportion (0-6 Age)	9.55 %

Source: Census of India (2011), Block wise Primary Abstract Data (PCA) – Tiruppur.

2.4.2 Literacy level

The district level literacy rate is given in Table 2.3.

Table. 2.3. Literacy Level in Tiruppur District

Sl. No	Description	Number of persons	Literacy rate (%)
1	Total literates	1760566	71.02
2	Male literates	959623	54.51
3	Female literates	800943	45.49

Source: Census of India (2011), Block wise Primary Abstract Data (PCA) – Tiruppur.

2.4.3 Working population

The total workers in the district were 12,66,137 numbers. Of which 11,68,596 (92.30 per cent) were main workers and 97,541 (7.70 per cent) were marginal workers. The main workers are inclusive of cultivators (10.73 per cent), agricultural labourers (19.46 per cent), households, servicing and processing workers (3.24 per cent) and other workers (66.58 per cent). Predominant share of workers were employed in non – agricultural sector, especially textile sector. The details of the different working population are presented in the Table 2.4.

Table 2.4 Workers Details in Tiruppur District

Sl. No	Description	Number	Percentage
1	Total workers	1266137	100.00
2	Total main workers	1168596	92.30
3	Marginal workers	97541	7.70
4	Cultivators	135817	10.73
5	Agricultural labourers	246333	19.46
6	Household industries	40988	3.24
7	Other workers	842999	66.58

Source: Tamil Nadu – An Economic Appraisal 2011-12 to 2013-14. Report from Evaluation and App. Res. Dept., Govt. of Tamil Nadu, Chennai – 600108.

2.5 Topography

The southern and south western parts of the district enjoy maximum rainfall due to the surrounding Western Ghats. The rest of the district lies in the rain shadow region of Western Ghats and experiences salubrious climate most parts of the year, except the extreme east part of the district.

2.6. Soil type

The major soil types prevailing in Tiruppur district are red calcareous soils, alluvial calcareous soils, mixed soils with black soil overlying the red calcareous soils, red non calcareous soils, red colluvial soils (non-calcareous) and black soils (calcareous). The spread of soils in the district is given in Fig 3 and the location is given in Table 2.5.

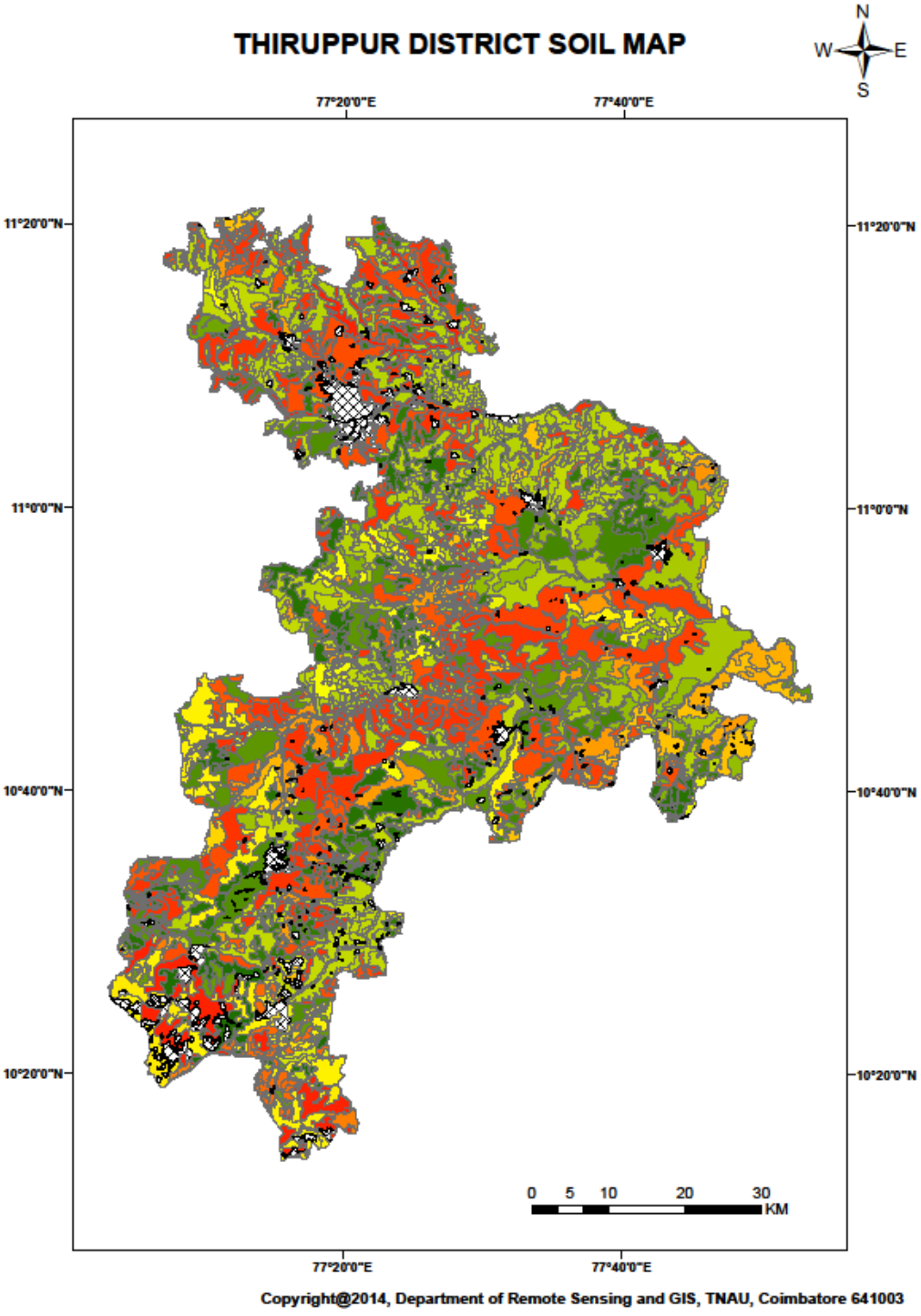


Fig 3. Soil Map of Tiruppur District

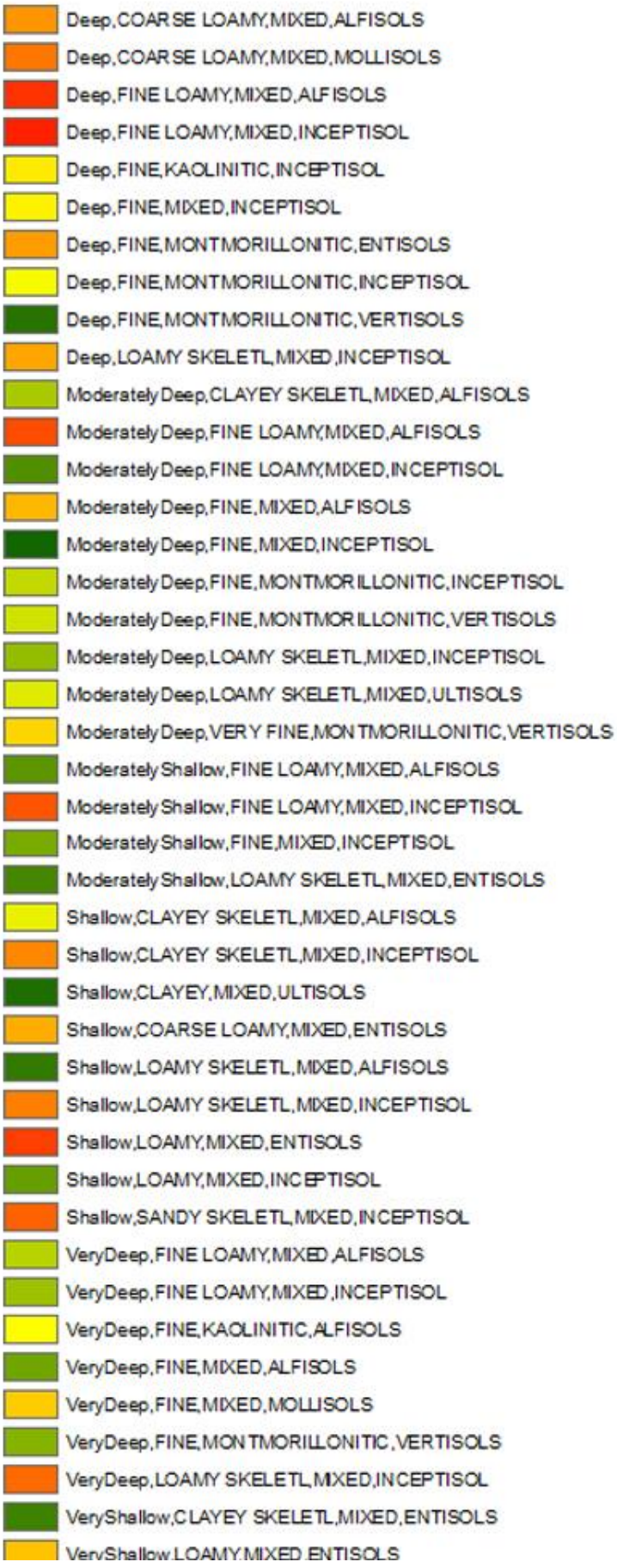

Deep,COARSE LOAMY,MIXED,ALFISOLS
Deep,COARSE LOAMY,MIXED,MOLLISOLS
Deep,FINE LOAMY,MIXED,ALFISOLS
Deep,FINE LOAMY,MIXED,INCEPTISOL
Deep,FINE,KAOLINITIC,INCEPTISOL
Deep,FINE,MIXED,INCEPTISOL
Deep,FINE,MONTMORILLONITIC,ENTISOLS
Deep,FINE,MONTMORILLONITIC,INCEPTISOL
Deep,FINE,MONTMORILLONITIC,VERTISOLS
Deep,LOAMY SKELETL,MIXED,INCEPTISOL
Moderately Deep,CLAYEY SKELETL,MIXED,ALFISOLS
Moderately Deep,FINE LOAMY,MIXED,ALFISOLS
Moderately Deep,FINE LOAMY,MIXED,INCEPTISOL
Moderately Deep,FINE,MIXED,ALFISOLS
Moderately Deep,FINE,MIXED,INCEPTISOL
Moderately Deep,FINE,MONTMORILLONITIC,INCEPTISOL
Moderately Deep,FINE,MONTMORILLONITIC,VERTISOLS
Moderately Deep,LOAMY SKELETL,MIXED,INCEPTISOL
Moderately Deep,LOAMY SKELETL,MIXED,ULTISOLS
Moderately Deep,VERY FINE,MONTMORILLONITIC,VERTISOLS
Moderately Shallow,FINE LOAMY,MIXED,ALFISOLS
Moderately Shallow,FINE LOAMY,MIXED,INCEPTISOL
Moderately Shallow,FINE,MIXED,INCEPTISOL
Moderately Shallow,LOAMY SKELETL,MIXED,ENTISOLS
Shallow,CLAYEY SKELETL,MIXED,ALFISOLS
Shallow,CLAYEY SKELETL,MIXED,INCEPTISOL
Shallow,CLAYEY,MIXED,ULTISOLS
Shallow,COARSE LOAMY,MIXED,ENTISOLS
Shallow,LOAMY SKELETL,MIXED,ALFISOLS
Shallow,LOAMY SKELETL,MIXED,INCEPTISOL
Shallow,LOAMY,MIXED,ENTISOLS
Shallow,LOAMY,MIXED,INCEPTISOL
Shallow,SANDY SKELETL,MIXED,INCEPTISOL
VeryDeep,FINE LOAMY,MIXED,ALFISOLS
VeryDeep,FINE LOAMY,MIXED,INCEPTISOL
VeryDeep,FINE,KAOLINITIC,ALFISOLS
VeryDeep,FINE,MIXED,ALFISOLS
VeryDeep,FINE,MIXED,MOLLISOLS
VeryDeep,FINE,MONTMORILLONITIC,VERTISOLS
VeryDeep,LOAMY SKELETL,MIXED,INCEPTISOL
VeryShallow,CLAYEY SKELETL,MIXED,ENTISOLS
VeryShallow,LOAMY,MIXED,ENTISOLS

Table. 2.5. Soil Series of Tiruppur district

Sl. No	Type of soil	Soil Series	Location
1.	Red Soils (Calcareous)	Palladam series	Avinashi, , Palladam,
2.	Alluvial Calcareous	Kallivalasu	Dharapuram, Moolanur, Kundadam
		Noyyal series	Palladam, Pongalur
		Alluvium series	Amaravathi of Udumalpet
3.	Mixed soils (Black soil overlying the red calcareous soil.)	Tulukkanur series	Dharapuram, Kundadam, Moolanur, Kangeyam, vellakoil
		Palathurai series	Avinasi
4.	Red soils (non-calcareous)	Vellalur series	Avinasi, Palladam and Pongalur
		Vannapatti series	Dharapuram
		Pichanur series	Avinasi
		Irugur series	Avinasi, Udumalpet
		Somayyanur series	Avinasitaluk
5.	Red colluvial soils (Non-calcareous)	Syamalagounden-pudur series	Udumalpet, Madathukulam, Gudimangalam
		Soorianallur series	Dharapuram, Moolanur,Kundadam
6.	Black soils (Calcareous)	Peelamedu series	Avinasi, Palladam, Pongalur, Gudimangalam, Madathukulam, Udumalpet.
		Dhasarapatti series	Palladam, Pongalur, Dharapuram, Kunddam, Moolanur.

Source: Commodity Potential Report, TNAU, 2013.

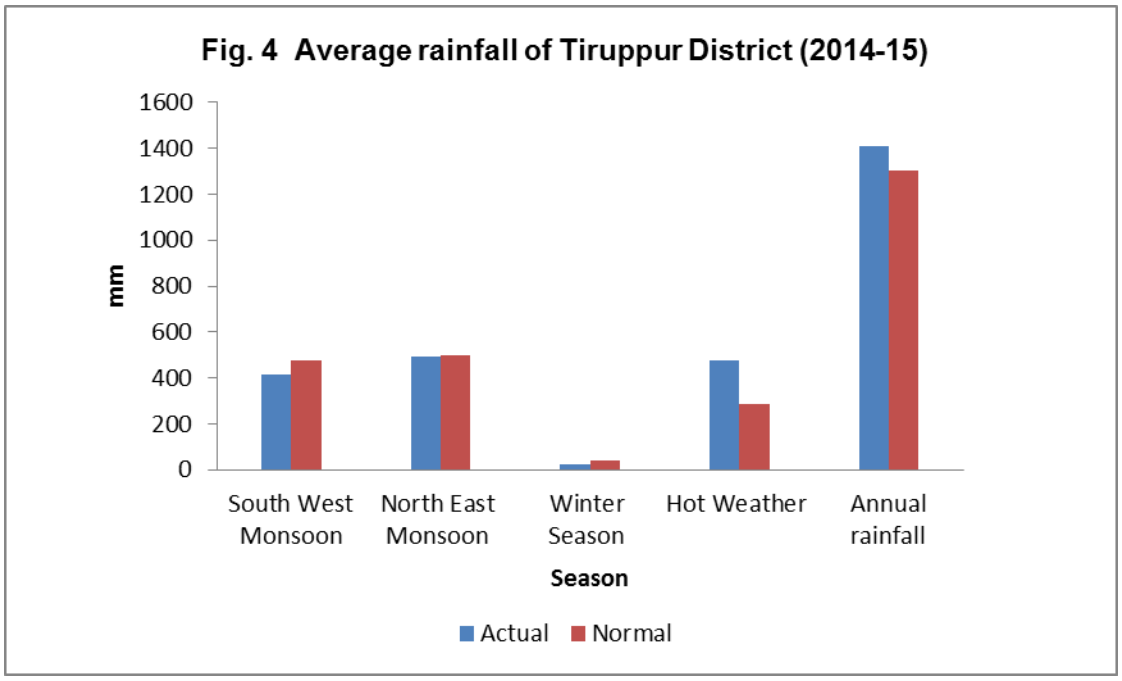
2.7 Climatic Condition and Rainfall

The mean maximum and minimum temperatures for Tiruppur city during summer and winter vary between 35°C to 18°C. The receipt of actual rainfall (957.9 mm) is higher than normal rainfall (618.2). In the year 2015 Tiruppur received the highest rainfall of 957.9mm (Table 2.6). It receives maximum amount of rainfall during October and November months.

Table. 2.6. Month-wise / Season-wise rainfall distribution in Tiruppur District (Actual and Normal)

Season / Month	2014-15	
	Actual (mm)	Normal (mm)
South West Monsoon		
June	4.5	22
July	2.5	27.1
August	112.9	31.7
September	122.3	74
Total	**242.2(25.28)**	**154.8**
North East Monsoon		
October	284.4	147.7
November	26.9	120
December	32.3	46.6
Total	**343.6(35.87)**	**314.3**
Winter Season		
January	9.2	7.1
February	0	6.9
Total	**9.2(0.96)**	**14**
Hot Weather		
March	28	13.4
April	158.4	48
May	176.5	73.7
Total	**362.9 (37.89)**	**135.1**
Annual rainfall	**957.9 (100)**	**618.2**

(Source: Season and Crop Report (2014-15),
Figures in parenthesis denote percentage to total annual rainfall



2.8 Land Use Classification

The geographical area of the district is 5,18,634 ha. During 2014-15, the total cropped area was 1,99,918 ha, which accounted for 38.48 per cent of the total geographical area. However, increasing area under current fallow, other fallow lands and land put to non-agricultural uses affect the net sown area and gross cropped area in the district. At the same time, it is important to note that area sown more than once is slowly declining during the recent years. The triennium average of land use pattern of Tiruppur District is furnished in Table 2.7.

The block wise land holding pattern prevalent in Tiruppur district is given in Table 2.8 and the share of the operational land holding at block level are presented in Table 2.9.

Table 2.7 Block wise Triennium Land Use Pattern of Tiruppur District (2012-2015) **Unit: Hectare**

Sl. No.	Classification	Avinashi	Dharapuram	Gudimangalam	Kangayam	Kundadam	Madathukulam	Moolanur
1	Forest	0.00	131.00	0.00	21.00	354.00	0.00	649.00
2	Barren and Uncultivable uses	0.01	59.00	152.00	190.00	110.00	131.00	223.00
3	Land put to Non-Agricultural uses	6555.02	5498.00	3997.00	5086.00	7399.00	3594.00	4821.00
4	Cultivable Waste	142.01	0.00	901.00	6.90	0.00	697.00	10.00
5	Permanent pastures and other Grazing Land	0.00	0.00	5.60	0.00	0.00	0.00	101.00
6	Land Under Miscellaneous Tree Crops and Gross not included in Net Area Sown	1417.67	16.00	8.00	111.00	35.00	13.00	44.62
7	Current Fallow	9874.67	11981.33	4736.67	6761.33	9025.00	3648.33	9104.33
8	Other Fallow Land	4973.33	13571.33	967.67	12264.67	26157.33	2357.33	20701.67
9	Net Area Sown	14465.00	16142.33	20198.00	10473.00	14436.00	12253.00	10539.00
10	Total Geographical Area according to village papers	37430.00	47401.00	30970.00	34917.00	57519.00	22695.00	46197.00
11	Area Sown More Than Once	77.67	0.37	171.00	25.67	7.23	471.67	0.73
12	Total Cropped Area	14542.67	16142.70	20369.00	10498.67	14443.23	12725.00	10539.67
13	Total Irrigated Area	4680.67	13954.33	17346.00	5321.33	9639.33	12412.50	5111.67
	Cropping Intensity (%)	100.58	100.00	100.86	100.24	100.05	104.07	100.01
	Share of Area irrigated to GCA (%)	32.17	89.86	85.36	50.82	66.76	58.94	50.32

(Contd…..Table 2.7)

Sl. No.	Classification	Palladam	Pongalur	Tiruppur	Udumalpet	Uthukuli	Vellakovil	District
1	Forest	0.00	0.00	0.00	0.00	82.00	27.33	1264.33
2	Barren and Uncultivable uses	12.60	25.13	16.80	1499.60	76.00	530.80	3025.94
3	Land put to Non-Agricultural uses	4549.00	4046.00	7271.67	7790.67	3390.00	6150.78	70148.14
4	Cultivable Waste	732.00	317.00	722.00	384.00	0.00	368.67	4280.58
5	Permanent pastures and other Grazing Land	2.00	0.00	0.00	0.00	6.00	2.00	116.6
6	Land Under Miscellaneous Tree Crops and Gross not included in Net Area Sown	29.00	15.97	13.00	158.33	26.00	65.78	1953.37
7	Current Fallow	8227.33	11633.00	4268.00	1450.33	6310.00	4009.44	91029.76
8	Other Fallow Land	7725.67	6507.67	9708.33	4754.00	688.00	5050.11	115427.1
9	Net Area Sown	8478.00	12475.33	6862.67	27042.00	12310.67	15405.11	181080.1
10	Total Geographical Area according to village papers	29759.00	35022.00	28865.00	43083.00	22891.00	31613.00	468362
11	Area Sown More Than Once	0.0	57.33	15.00	1063.67	0.00	359.56	2250.07
12	Total Cropped Area	8478.00	12532.67	6877.67	28106.00	12310.67	15608.33	182542.8
13	Total Irrigated Area	4973.67	8991.00	1814.33	24045.00	1028.50	8962.61	118280.9
	Cropping Intensity (%)	100.00	100.42	100.22	103.94	100.00	100.20	100.80
	Share of Area irrigated to GCA (%)	59.55	72.45	26.46	85.60	8.69	40.25	64.80

Table.2.8. Block wise Land Holding Pattern of Tiruppur District

Sl. No.	Size class (ha)	Avinashi	Dharapuram	Gudimangalam	Kangayam	Kundadam	Madathukulam	Moolanur	Palladam	Pongalur	Tiruppur	Udumalpet	Uthukuli	Vellakovil	Tiruppur district
1	Up to 0.5	5087	1852	1478	0	98	3293	1932	266	342	1799	3143	610	1254	21154 (12.91)
2	0.5 - 1. 0	5720	2657	2728	4530	145	2524	2460	2998	3082	2700	3800	730	1482	35556 (21.69)
3	> 1. 0 - 2. 0	3565	3656	4035	2284	1245	2406	2193	1936	10278	3081	4808	858	3264	43609 (26.61)
4	> 2. 0-3. 0	523	3541	1877	0	1568	1182	850	550	435	1300	2309	1102	2160	17397 (10.61)
5	> 3. 0-4. 0	362	2022	1020	1142	1857	616	900	420	220	1329	1176	2038	982	14084 (8.59)
6	> 4. 0-5. 0	216	22	572	0	3156	324	460	350	101	816	559	1119	1560	9255 (5.65)
7	> 5. 0-7.5	274	18	578	0	1892	395	440	270	77	105	719	920	2495	8183 (4.99)
8	> 7.5-1 0. 0	123	16	181	114	2250	150	38	250	20	155	232	1103	1365	5997 (3.66)
9	> 1 0 - 2 0. 0	0	35	128	0	2350	78	50	24	10	81	176	650	1974	5556 (3.39)
10	Above 2 0	0	18	22	58	1850	14	65	26	8	7	31	452	568	3119 (1.90)
	Total	**15870**	**13837**	**12619**	**8128**	**16411**	**10982**	**9388**	**7090**	**14573**	**11373**	**16953**	**9582**	**17104**	**163910 (100.00)**

Source: Office of the Joint Director of Agriculture, Tiruppur. 2015.
Figures in the parenthesis indicate percentage to Total

Table. 2.9. Share of Farmers and Area in Tiruppur District

Sl. No.	Block	Share of Farmers (%)				Share of Area (%)			
		Marginal	Small	Medium	Large	Marginal	Small	Medium	Large
1	Avinashi	45.5	51.21	0	3.27	45.18	51.51	0	3.29
2	Dharapuram	18.2	13.2	68.5	0.1	6.5	13.6	64.9	15
3	Gudimangalam	51	45	4	2	51	45	4	2
4	Kangeyam	_	_	_	_	_	_	_	_
5	Kundadam	30.55	54.08	10.06	5.31	4.15	14.77	1.62	79.46
6	Madathukulam	52.96	21.9	24.28	0.83	65.38	20.41	58.44	8.34
7	Mulanur	25.04	25.55	47.27	2.13	5.09	13.6	71.03	10.27
8	Palladam	45.93	25.53	20.54	8	15.03	23.06	31.69	30.22
9	Pongalur	39	46	13	2	9	52	31	8
10	Tiruppur	4	11	79	6	7.4	67	14	10
11	Udumalpet	41.82	28.27	27.21	2.69	11.87	37.69	41.75	8.69
12	Uthukuli	42.75	34	_	23.25	12.84	25.97	_	61.18
13	Vellakovil	34.7	26.1	28.4	10.8	8.6	15.7	37.4	38.3
	Tiruppur district	**35.95**	**31.82**	**29.30**	**5.53**	**20.17**	**31.69**	**32.35**	**22.90**

Source: Office of the Deputy Director of Department of Economics and Statistics, Tiruppur

2.8 Sources of Irrigation

The details of irrigation and sources of water supply are described in the Table 2.10. The total irrigated area accounts to 1, 09,909 ha during 2014-15.

Table 2.10 Source wise areas irrigated in Tiruppur District (Ha)

Sl.No.	Particularls		2012-13	2013-14	2014-15	Average
1	Canals	Gross	19286	26530	25452	23756.00
		Net	19286	26530	25432	23749.33
2	Tanks	Gross	1005	900	1311	1072.00
		Net	1005	900	1311	1072.00
3	Tube wells / Bore wells	Gross	13387	15212	15470	14689.67
		Net	13377	15176	15368	14640.33
4	Open wells	Gross	63498	71025	76651	70391.33
		Net	63314	69453	74731	69166.00
5	Supplementary wells	Gross	0	0	0	0.00
		Net	0	0	0	0.00
6	Other Sources	Gross	0	0	0	0.00
		Net	0	0	0	0.00

Source: *(Source: Season and Crop Report, 2014-2015)*

2.9 Cropping pattern of agricultural crops

Paddy, Maize, Sorghum, Black gram, Groundnut, Sugarcane, Onion and Coconut are the major crops of Tiruppur district. Apart from these crops, Cotton, Banana, etc. are also being cultivated. The triennium average area under major crops in is presented in Table 2.11. The share of triennium area under major crops in various blocks of Tiruppur District is given in Table 2.12 and the share of various crops in Tiruppur district is given in Table 2.13

Table. 2.11. Area, Productivity and Production of Major Crops in 2014-15

Sl.No	Major crops	Area (in ha)	Production (in tonnes)	Productivity (in kg/ha)
1	Paddy	6177.33	35299.00	5714.281
2	Maize	21467.00	151819.67	7072.235
3	Cholam	24614.33	8419.67	342.0637
4	Cumbu	56.33	120.67	2142.198
5	Bengal Gram	2777.00	2008.67	723.3237
6	Red Gram	776.00	872.00	1123.711
7	Black Gram	2187.67	1727.33	789.5752
8	Green Gram	2851.33	936.33	328.3836
9	Horse Gram	5922.00	1042.67	176.0672
10	Groundnut	10305.67	11492.67	1115.179
11	Sunflower	54.00	82.67	1530.926
12	Gingelly	978.00	654.67	669.3967
13	Castor	55.00	16.67	303.0909
14	Cotton	520.67	1457.33	2798.951
15	Coconut	55651.00	4386.00	78.8126
16	Sugarcane	4331.00	420632.33	97121.3
17	Tobacco	244.00	384.00	1573.77
18	Onion	2367.33	26632.33	11249.94
19	Brinjal	266.33	2400.00	9011.377
20	Bhendi	172.00	1264.00	7348.837
21	Cabbage	13.00	666.33	51256.15
22	Tomato	1544.67	14565.67	9429.632
23	Banana	1925.33	79566.67	41326.25
24	Mango	1723.67	11781.00	6834.835
25	Jack Fruit	3.67	46.33	12623.98
26	Guava	63.00	393.00	6238.095
27	Grapes	1.33	58.67	44112.78
28	Orange	0.67	1.67	2492.537
29	Chillies	619.33	283.33	457.4782
30	Coriander	488.00	136.67	280.0615
31	Turmeric	1079.67	3321.33	3076.246
32	Tamarind	251.33	1457.33	5798.472
33	Potato	0.67	17.00	25373.13
34	Tapioca	273.33	7029.33	25717.37
	Total	**149761.67**		

(Source: Season and crop report, 2014-15)

Table 2.12 Triennium Average Area under Major Crops in Tiruppur District (ha)

S. No.	Major crops	Avinashi	Dharapuram	Gudimangalam	Kangayam	Kundadam	Madaththukulam	Moolanur
1	Paddy	5.67	2105.00	0.00	688.67	42.00	1654.67	64.67
2	Maize	174.67	4211.67	4020.33	75.33	2167.33	2494.33	865.00
3	Cholam	2863.00	1219.33	643.67	2151.00	1172.33	237.00	920.67
4	Ragi	0.00	0.00		0.00	0.00	0.00	0.00
5	Cumbu	1.33	17.33	3.00	0.00	6.67	0.67	0.00
6	Blackgram	5.67	196.33	213.67	62.33	298.33	451.33	224.67
7	Greengram	158.67	541.00	169.33	57.33	739.33	189.67	246.67
8	Redgram	39.00	59.33	51.00	87.67	69.00	80.33	68.67
9	Cowpea	146.00	150.67	259.67	135.67	360.00	235.00	201.67
10	Bengal gram	1.33	15.33	1397.33	0.00	1.33	0.00	2.00
11	Horse gram	132.67	310.33	165.00	853.00	953.00	143.00	1604.33
12	Other pulses	61.33	2.67	108.33	240.00	0.00	32.67	0.00
13	Groundnut	3607.33	451.00	0.00	44.67	34.67	51.00	295.00
14	Gingelly	2.00	120.67	4.67	272.33	0.67	28.33	14.33
15	Cotton	105.33	107.00	110.00	0.67	46.33	1.33	120.00
16	Sugarcane	373.67	604.00	0.00	354.67	0.00	1552.67	12.33
17	Coconut	1417.33	3421.67	12045.67	2345.67	5654.67	4299.67	951.33
18	Fodder crop	2928.67	909.00	202.33	2469.67	1514.67	119.33	2569.33
19	Mulberry	81.00	93.33	69.00	5.00	84.00	64.33	54.00
20	Others crops	2438	1607.04	906	654.99	1298.9	1089.67	2325
21	Gross Cropped Area	14542.67	16142.70	20369.00	10498.67	14443.23	12725.00	10539.67

(Contd……Table 2.12)

S. No.	Major crops	Palladam	Pongalur	Tiruppur	Udumalpet	Uthukuli	Vellakoil	District total
1	Paddy	0.00	1.00	0.33	616.33	0.67	989.67	6168.68
2	Maize	1190.33	1758.00	147.00	4054.33	71.33	198.33	21427.98
3	Cholam	3090.67	2476.33	2791.00	762.00	5119.33	1161.67	24608.00
4	Ragi	0.00	0.00	0.00	0.00	0.00	6.67	6.67
5	Cumbu	3.67	0.67	8.00	3.00	12.67	0.00	57.01
6	Blackgram	8.00	60.67	1.33	279.67	94.00	199.00	2095.00
7	Greengram	72.33	188.33	49.00	111.67	133.33	192.67	2849.33
8	Redgram	9.67	44.00	19.67	51.33	88.33	101.33	769.33
9	Cowpea	66.33	137.67	59.33	327.33	195.00	25.33	2299.67
10	Bengal gram	101.00	55.67	0.00	1179.33	27.33	0.00	2780.65
11	Horse gram	62.33	185.33	57.67	287.67	158.00	773.00	5685.33
12	Other pulses	53.33	114.33	138.33	768.33	228.00	0.00	1747.32
13	Groundnut	0.67	4.00	269.67	94.33	1712.00	198.00	6762.34
14	Gingelly	0.00	0.00	0.00	41.00	0.00	490.00	974.00
15	Cotton	0.00	0.00	3.00	6.33	6.00	10.33	516.32
16	Sugarcane	5.00	2.67	7.00	757.67	19.00	266.33	3955.01
17	Coconut	1972.00	5125.00	915.67	15038.67	578.00	1879.67	55645.02
18	Fodder crop	799.67	596.33	1547.67	261.33	3411.00	2300.00	19629.00
19	Mulberry	6.00	9.00	6.33	246.00	1.33	0.00	719.32
	others crops	1037	1773.67	856.67	3219.68	455.35	6816.3	24478.27
	Gross	8478.00	12532.67	6877.67	28106.00	12310.67	15608.30	183174.25

Table 2.13 Share of Triennium Area under Major Crops in Various Blocks of Tiruppur District (%)

S. No.	Major crops	Avinashi	Dharapuram	Gudimangalam	Kangayam	Kundadam	Madaththukulam	Moolanur
1	Paddy	0.04	13.04	0.00	6.56	0.29	13.00	0.61
2	Maize	1.20	26.09	19.74	0.72	15.01	19.60	8.21
3	Cholam	19.69	7.55	3.16	20.49	8.12	1.86	8.74
4	Ragi	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	Cumbu	0.01	0.11	0.01	0.00	0.05	0.01	0.00
6	Blackgram	0.04	1.22	1.05	0.59	2.07	3.55	2.13
7	Greengram	1.09	3.35	0.83	0.55	5.12	1.49	2.34
8	Redgram	0.27	0.37	0.25	0.84	0.48	0.63	0.65
9	Cowpea	1.00	0.93	1.27	1.29	2.49	1.85	1.91
10	Bengal gram	0.01	0.09	6.86	0.00	0.01	0.00	0.02
11	Horse gram	0.91	1.92	0.81	8.12	6.60	1.12	15.22
12	Other pulses	0.42	0.02	0.53	2.29	0.00	0.26	0.00
13	Groundnut	24.81	2.79	0.00	0.43	0.24	0.40	2.80
14	Gingelly	0.01	0.75	0.02	2.59	0.00	0.22	0.14
15	Cotton	0.72	0.66	0.54	0.01	0.32	0.01	1.14
16	Sugarcane	2.57	3.74	0.00	3.38	0.00	12.20	0.12
17	Coconut	9.75	21.20	59.14	22.34	39.15	33.79	9.03
18	Fodder crop	20.14	5.63	0.99	23.52	10.49	0.94	24.38
19	Mulberry	0.56	0.58	0.34	0.05	0.58	0.51	0.51
20	Other crops	16.76	9.96	4.45	6.24	8.99	8.56	22.06
Total Cropped Area		**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**

S. No.	Major crops	Palladam	Pongalur	Tiruppur	Udumalpet	Uthukuli	Vellakoil	District
1	Paddy	0.00	0.01	0.00	2.19	0.01	6.34	3.37
2	Maize	14.04	14.03	2.14	14.43	0.58	1.27	11.70
3	Cholam	36.46	19.76	40.58	2.71	41.58	7.44	13.43
4	Ragi	0.00	0.00	0.00	0.00	0.00	0.04	0.00
5	Cumbu	0.04	0.01	0.12	0.01	0.10	0.00	0.03
6	Blackgram	0.09	0.48	0.02	1.00	0.76	1.27	1.14
7	Greengram	0.85	1.50	0.71	0.40	1.08	1.23	1.56
8	Redgram	0.11	0.35	0.29	0.18	0.72	0.65	0.42
9	Cowpea	0.78	1.10	0.86	1.16	1.58	0.16	1.26
10	Bengal gram	1.19	0.44	0.00	4.20	0.22	0.00	1.52
11	Horse gram	0.74	1.48	0.84	1.02	1.28	4.95	3.10
12	Other pulses	0.63	0.91	2.01	2.73	1.85	0.00	0.95
13	Groundnut	0.01	0.03	3.92	0.34	13.91	1.27	3.69
14	Gingelly	0.00	0.00	0.00	0.15	0.00	3.14	0.53
15	Cotton	0.00	0.00	0.04	0.02	0.05	0.07	0.28
16	Sugarcane	0.06	0.02	0.10	2.70	0.15	1.71	2.16
17	Coconut	23.26	40.89	13.31	53.51	4.70	12.04	30.38
18	Fodder crop	9.43	4.76	22.50	0.93	27.71	14.74	10.72
19	Mulberry	0.07	0.07	0.09	0.88	0.01	0.00	0.39
20	Other crops	12.23	14.15	12.46	11.46	3.70	43.67	13.36
Total	**Cropped Area**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**

Table 2.14 Share of Triennium Area under Major Agricultural Crops (Across blocks) in Tirupur District (2012-2015) (%)

S. No.	Major crops	Avinashi	Dharapuram	Gudimangalam	Kangayam	Kundadam	Madaththukulam	Moolanur
1	Paddy	0.09	34.12	0.00	11.16	0.68	26.82	1.05
2	Maize	0.82	19.66	18.76	0.35	10.11	11.64	4.04
3	Cholam	11.63	4.96	2.62	8.74	4.76	0.96	3.74
4	Ragi	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	Cumbu	2.33	30.40	5.26	0.00	11.70	1.18	0.00
6	Blackgram	0.27	9.37	10.20	2.98	14.24	21.54	10.72
7	Greengram	5.57	18.99	5.94	2.01	25.95	6.66	8.66
8	Redgram	5.07	7.71	6.63	11.40	8.97	10.44	8.93
9	Cowpea	6.35	6.55	11.29	5.90	15.65	10.22	8.77
10	Bengal gram	0.05	0.55	50.25	0.00	0.05	0.00	0.07
11	Horse gram	2.33	5.46	2.90	15.00	16.76	2.52	28.22
12	Other pulses	3.51	0.15	6.20	13.74	0.00	1.87	0.00
13	Groundnut	53.34	6.67	0.00	0.66	0.51	0.75	4.36
14	Gingelly	0.21	12.39	0.48	27.96	0.07	2.91	1.47
15	Cotton	20.40	20.72	21.30	0.13	8.97	0.26	23.24
16	Sugarcane	9.45	15.27	0.00	8.97	0.00	39.26	0.31
17	Coconut	2.55	6.15	21.65	4.22	10.16	7.73	1.71
18	Fodder crop	14.92	4.63	1.03	12.58	7.72	0.61	13.09
19	Mulberry	11.26	12.97	9.59	0.70	11.68	8.94	7.51
20	Other crops	13.79	9.09	5.12	3.70	7.35	6.16	13.15

Source: Office of the Joint Director of Agriculture, Tiruppur

(Contd…..Table 2.13)

S. No.	Major crops	Palladam	Pongalur	Tiruppur	Udumalpet	Uthukuli	Vellakoil	District level
1	Paddy	0.00	0.02	0.01	9.99	0.01	16.04	100.00
2	Maize	5.56	8.20	0.69	18.92	0.33	0.93	100.00
3	Cholam	12.56	10.06	11.34	3.10	20.80	4.72	100.00
4	Ragi	0.00	0.00	0.00	0.00	0.00	100.00	100.00
5	Cumbu	6.44	1.18	14.03	5.26	22.22	0.00	100.00
6	Blackgram	0.38	2.90	0.06	13.35	4.49	9.50	100.00
7	Greengram	2.54	6.61	1.72	3.92	4.68	6.76	100.00
8	Redgram	1.26	5.72	2.56	6.67	11.48	13.17	100.00
9	Cowpea	2.88	5.99	2.58	14.23	8.48	1.10	100.00
10	Bengal gram	3.63	2.00	0.00	42.41	0.98	0.00	100.00
11	Horse gram	1.10	3.26	1.01	5.06	2.78	13.60	100.00
12	Other pulses	3.05	6.54	7.92	43.97	13.05	0.00	100.00
13	Groundnut	0.01	0.06	3.99	1.39	25.32	2.93	100.00
14	Gingelly	0.00	0.00	0.00	4.21	0.00	50.31	100.00
15	Cotton	0.00	0.00	0.58	1.23	1.16	2.00	100.00
16	Sugarcane	0.13	0.07	0.18	19.16	0.48	6.73	100.00
17	Coconut	3.54	9.21	1.65	27.03	1.04	3.38	100.00
18	Fodder crop	4.07	3.04	7.88	1.33	17.38	11.72	100.00
19	Mulberry	0.83	1.25	0.88	34.20	0.18	0.00	100.00
20	Other crops	4.95	10.03	4.84	18.21	-0.08	3.69	100.00

Source: Office of the Joint Director of Agriculture, Tiruppur

2.10 Animal Husbandry and Dairy Development

2.10.1 Livestock population

Livestock farms are maintained for selective scientific breeding of specific species of livestock. They serve as demonstration farms and training centre for needy farmers. Moreover, they act as a source for quality livestock to the farmers. The district and block wise livestock population is presented in the Table 2.14 & 2.15. The district possesses all the livestock's for the supplement income. About 2.87 lakhs numbers of cattle's, 0.47 lakhs of buffaloes, 3.67 lakhs of sheep's, 2.05 lakhs of goats present in the district. Thus sizable cattle and poultry population indicates the potentials for livestock development in the district.

2.10.2 Veterinary institutions and hospitals

Majority of the blocks in the district possess veterinary clinical centres and mobile units for welfare of the livestock. The details of veterinary institutions in Tiruppur district is furnished in Table. 2.16

Table 2.15 Livestock population

Sl. No.	Particulars	Population
1	Cattle	287141
2	Buffaloes	47740
3	Sheep	367557
4	Goats	205687
5	Horses and ponies	249
6	Donkeys	175
7	Camels	1
8	Pigs	3340
	Total Livestock	**911890**
9	Elephants	0
10	Dogs	81501
11	Rabbits	3430
	Poultry	
12	Back yard Poultry	443600
13	Farm Poultry	16561937
	Total Poultry	**17005537**

Source: 19th livestock census, 2012

Table2.16. Block wise Livestock Population in Tiruppur District

S.No.	Livestock	Avinashi	Dharapuram	Gudimangalam	Kangayam	Kundadam	Madathukulam	Mulanur	Palladam	Pongalur	Tiruppur	Udumalpet	Uthukuli	Vellakovil	District
1	Cattle	30252	35661	19190	17224	33251	12409	20945	21035	17300	13702	26526	11783	19169	278447
2	Buffalo	2006	4756	99	2281	2104	1290	1272	143	1091	3449	502	10961	2842	32796
3	Sheep	7028	90182	1686	37213	65179	112	127314	2606	7165	7431	5623	8472	42598	402609
4	Goat	23496	23698	9433	11482	13597	8875	9353	16041	11377	18387	17187	21510	18801	203237
5	Pigs	98	823		38			231	96	485	29		131	711	842
6	Poultry	488312	882668	2578366	286271	2470098	1244368	1725937	2075874	2669682	34919	1022060	1819085	401639	17699279
7	Others	31	16	-	11	-	-	1	35	7	54	-	4	9	168

Source: TANUVAS, Chennai. 2013-14.

Table 2.17. Veterinary Clinics, Dairy Co-operative Societies and Milk Collection Centres in Tiruppur District

S.No		Avinashi	Dharapuram	Gudimangalam	Kangayam	Kundadam	Madathukulam	Mulanur	Palladam	Pongalur	Tiruppur	Udumalpet	Uthukuli	Vellakovil
1	Dairy co-operative society		63						10		13		5	18
2	Veterinary clinics		8		1	4		8	20	1	13		3	9
3	Milk collection centre		86			1		16		10				

Source: TANUVAS, Chennai. 2013-14.

Table 2.18 Priceless Distributions of Sheep and Goat

(Rs. in lakhs)

Sl. No	Blocks	2011-12		2012-13		2013-14		2014-15		Total		% to Grand total	
		Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy	Fin
1	Avinashi	383.00	48.83	668.00	86.84	331.00	43.03	545.00	71.94	1927.00	250.64	16.10	16.21
2	Dharapuram	216.00	27.54	321.00	40.93	222.00	28.86	294.00	38.81	1053.00	136.14	8.80	8.80
3	Gudimangalam	226.00	28.81	227.00	28.94	347.00	45.11	0.00	0.00	800.00	102.87	6.69	6.65
4	Kangeyam	177.00	22.56	257.00	32.77	247.00	32.11	253.00	33.38	934.00	120.82	7.81	7.81
5	Kundadam	197.00	25.12	301.00	38.38	309.00	40.17	275.00	36.30	1082.00	139.97	9.04	9.05
6	Madathukulam	157.00	20.02	309.00	39.40	136.00	17.68	0.00	0.00	602.00	77.10	5.03	4.98
7	Mulanur	109.00	13.90	199.00	25.37	209.00	27.17	137.00	18.08	654.00	84.52	5.47	5.47
8	Palladam	249.00	31.75	379.00	47.84	368.00	47.84	350.00	46.20	1346.00	173.63	11.25	11.23
9	Pongalur									0.00	0.00	0.00	0.00
10	Tiruppur	238.00	30.35	108.00	14.04	258.00	33.54	313.00	41.32	917.00	119.24	7.66	7.71
11	Udumalpet	431.00	54.95	600.00	76.50	659.00	85.67	0.00	0.00	1690.00	217.12	14.12	14.04
12	Uthukuli	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	Vellakovil	127.00	16.19	262.00	33.41	269.00	34.97	303.00	40.00	961.00	124.57	8.03	8.05
	Grand Total	2510.00	320.02	3631.00	464.41	3355.00	436.15	2470.00	326.02	11966.00	1546.61	100.00	100.00

2.11 Banking and Insurance

The district is having a total of 433 branches of banks in 2012-13 (Table. 2.21) and majority of them are located in rural areas**..** The extent of loans sanctioned are given Tables 2.18, 2.19, 2.20 and 2.21.

Table 2. 19 Banking Profile of Tiruppur District

S. No	Agency	No. of Branches			Share of branches (%)	
		Total	Rural	Urban	Rural	Urban
1	Commercial Banks	219 (50.88)	90	129	41.10	58.90
2	Regional Rural Bank	7 (1.62)	6	1	85.71	14.29
3	District Central Coop. Bank	14 (3.23)	4	10	28.57	71.43
4	Coop. Agr. & Rural Dev. Bank	9 2.08)	9	-	100.00	0.00
5	Primary Agr. Coop. Society	182 (42.03)	182	-	100.00	0.00
6	Others	2 (0.46)		2	0.00	100.00
	Total	**433 (100.00)**	**291**	**142**	**67.21**	**32.79**

Figures in the parenthesis indicate percentage to total

Table 2.20 Performance to Fulfill National Goals (As on 31/03/2012)

S. No	Agency	Priority Sector Loans		Loans to Agr. Sector	
		Amount [Rs.'000]	% of Total Loans	Amount [Rs.'000]	% of Total Loans
1	Commercial Banks	69646400	52.98	18810800	14.31
2	Regional Rural Bank	230900	72.86	205700	64.91
3	Cooperative Banks	1008600	66.65	104000	6.87
4	Others	403200	75.73		
	Total	**71289100**	**53.28**	**19120500**	**14.29**

Table 2.21 Agency-Wise Performance under Annual Credit Plans

Agency	2009-10			2010-11			2011-12			Average Achievement [%] in last 3 years
	Target [Rs.'000]	Achievement [Rs. '000]	Achievement [%]	Target [Rs.'000]	Achievement [Rs. '000]	Achievement [%]	Target [Rs.'000]	Achievement [Rs. '000]	Achievement [%]	
Commercial Banks	38804362	39425702	102	41116728	41125202	100	49169669	44414688	90	97
Regional Rural Bank	430000	432600	100.6	43308	43350	100	47122	47692	101	101
Cooperative Banks	715638	399056	55.76	1176878	1311878	111	1227022	1211808	99	89
Others	50000	50250	100.5	500000	500006	100	600000	500200	83	95
All Agencies	40000000	40307608	100.77	42836914	42980436	100	51043813	46174388	90	97

Table 2.22 Sector-Wise Performance under Annual Credit Plans

Broad Sector	2009-10			2010-11			2011-12			Average Achievement [%] in last 3 years
	Target [Rs.'000]	Achievement [Rs. '000]	Achievement [%]	Target [Rs.'000]	Achievement [Rs. '000]	Achievement [%]	Target [Rs.'000]	Achievement [Rs. '000]	Achievement [%]	
Crop Loan	6410534	6560264	102.34	7636270	7734767	101.29	8742712	9291372	106.28	103.3
Term Loan (Agr)	1159466	1198986	103	1073423	1070980	99.77	1270426	922322	72.6	91.93
Total Agri. Credit	7570000	7759250	103	8709693	8805747	101.1	10013138	10213694	102	101.87
Non-Farm Sector	28580000	28582858	100	29690930	29694035	100.01	35697116	30570832	85.64	95.22
Other Priority Sector	3850000	3965500	103	4436291	4480654	101	5333559	5389862	101.06	101.69

CHAPTER III

DEVELOPMENT OF AGRICULTURAL AND ALLIED SECTOR

Before suggesting an action plan for development of agriculture and allied sectors, a brief analysis (at district level) was done in the following components:

i. Assessing the trends in area, production and productivity of major crops
ii. Yield gap analysis for the major crops

The action plan for enhancing the agricultural production includes the following components:

3.1Trends in area, production and productivity of major crops

3.2 Yield gap analysis

3.1 Trends in area, production and productivity of major crops

The past trends in area, production and productivity of major crops need to be analyzed to plan for future agricultural development. Compound Growth Rate (CGR) is used to measure the annual rate of growth in area, production and productivity of major crops cultivated in the district and it is expressed in percentage. The compound growth rate has been estimated using 15 year time series data from 1996-97 to 2010-11 due to availability of data for Salem district from 1996-97 onwards. The equation used to estimate the annual compound growth rate is:

$$\mathbf{Y_t = ab^te}$$

Logarithmic form of the above equation is: ln Y =ln a + t ln b

The compound growth rate (CGR) in percentage is derived using the formula:

$$CGR(r) = [\text{Antilog } b-1] \times 100$$

Where,

Y_t = Area or Production or Yield

a = Intercept

b = Regression coefficient of t

t = Time variable

r = Compound Growth Rate

Tiruppur district was formed in the year 2008-09, hence time series data on Tiruppur District was not readily available. The triennium average (2014-15) of area, production and productivity was estimated for Tiruppur district and the results are presented in tables 3.1 and 3.2 district.

The details of area under major crops in Tirippur district for the period from 2000-01 to 2014-2015 and for the triennium ending 2014-15 are furnished in Table 3.1. It could be seen from the table that cholam and maize were pridominantly cultivated by farmers in this district which accounted nearly 56 per cent of the total cropped area of the district. This might be due to the fact that the grains of these crops were used as poultry feed, since intensification of poultry in this region is significantly high. Further it was observed that next to cholam and maize, paddy has cultivated predominantly (8.37 per cent) and it was followed bygroundnut (8.31 per cent) and sugarcane (5.32 per cent)

Compound Growth Rate (CGR) is used to measure the annual rate of growth in area, production and productivity of major crops cultivated in Tirippur district. The compound growth rate has been estimated using fifteen year time series data from 2005-06 to 2014-15.

The compound growth rate of area, production and productivity of major crops in Tiruppur district during 2005-2015 are presented in Table 3.2. It could be seen from the table in account of area cultivated, it was found that the crops which registered positive growth were cholam, blackgram, redgram, mango, lemon, lady's finger, tomoto and cotton. While the crops registered negative growth were paddy, cumbu, maize, green gram, chillies, turmeric, sugarcane, banana, guava, tapioca, onion brinjal, ground and gingely. The positive growth in production was observed in crops cholam. Blackgram, redgram, sugarcane, mango and cotton, while the negative growth in production was observed in crops paddy, cumbu, greengram, chillies, turmeric, banana, guava, lemon, tapioca, onion, brinjal, lady's finger, tomato, groundnut, gingelly, cashewnet, sunflower and tamarind. The crops which registered positive growth for all the three parameters (area, production and productivity) were cholam, blackgram, redgram and mango. Decline in productivity of cholam is causing concern, since cholam accounted nearly 30 per cent of total cropped area of the district, conserted efforts should be taken for arresting the trend.

Table 3.1. Area Production and Yield of Major crops in Thiruppur district (Triennium average ending 2014-2015)

Sl.No	Crop	Area	%	Production	Yield (kg/ha)
1	Paddy	6814	8.37	35299	5475
2	Cholam	24614	30.22	8420	7260
3	Cumbu	56	0.07	121	1203
4	Maize	21467	26.35	151820	12453
5	Blackgram	2188	2.69	1727	1253

Sl.No	Crop	Area	%	Production	Yield (kg/ha)
6	Greengram	2851	3.50	936	1291
7	Redgram	776	0.95	872	754
8	Chillies	619	0.76	283	470
9	Turmeric	1080	1.33	3321	2499
10	Sugarcane	4331	5.32	420632	1897
11	Banana	1925	2.36	79567	41820
12	Mango	1724	2.12	11781	6823
13	Guava	63	0.08	480	6152
14	Lemon	55	0.07	95	1781
15	Tapioca	273	0.34	8859	17462
16	Onion	2367	2.91	26632	8704
17	Brinjal	266	0.33	2400	9034
18	Ladys finger	172	0.21	1264	7361
19	Tomato	1545	1.90	14566	9437
20	Cotton	521	0.64	1457	438
21	Groundnut	6768	8.31	11493	1643
22	Gingelly	978	1.20	655	620
23	Tamarind	N.A	N.A	1457	3953
24	Cashewnut	N.A	N.A	67	302
25	Sunflower	N.A	N.A	83	1466
	Total	**81454**	**100.00**		

N.A denotes Not Available

Compound Growth Rates (CGR) of Area, Production and Productivity

Under Major crop in Thiruppur District

		CGR during 2005-2006 to 2014-2015 (%)		
Sl.No	**Crops**	**Area**	**Production**	**Yield**
1	Paddy	-9.22	-9.73	11.57
2	Cholam	0.14	14.67	94.76
3	Cumbu	-21.43	-19.63	-42.23
4	Blackgram	2.39	18.34	36.58
5	Greengram	-4.97	-11.02	25.36
6	Redgram	51.71	105.95	9.16
7	Chillies	-8.71	-34.54	0.34
8	Turmeric	-9.76	-26.02	-20.63
9	Sugarcane	-11.09	130.75	70.06
10	Banana	-14.18	-13.99	1.00
11	Mango	0.40	3.08	2.10
12	Guava	-7.22	-16.12	-15.31
13	Lemon	8.41	-5.95	-16.42
14	Tapioca	-27.83	-29.33	-44.61
15	Onion	-4.52	-5.08	-16.42
16	Brinjal	-3.36	-3.46	-1.27
17	Ladys finger	2.29	-2.25	-3.90
18	Tomato	0.30	-1.54	-1.40
19	Cotton	7.37	0.50	-9.32
20	Groundnut	-4.34	-6.77	-4.57
21	Gingelly	-16.38	-7.93	9.44
22	Cashewnut	N.A	-6.99	-6.41
23	Sunflower	N.A	-37.90	-2.99
24	Tamarind	N.A	-17.47	-35.68

N.A denotes Not Available

(Source: Season and crop report, 2014-15)

Fig.5. District Map Showing Major Crops in Tiruppur

3.2 Yield Gap Analysis

The potential yield and the gap between the potential yield and the actual yield need to be identified for enhancing the production of crops in a region. The gap is calculated with potential, progressive yield and average yield (Table 3.2).Potential yield is the maximum yield which could be reached by a crop in given environment, as determined, with plausible physiological and agronomic assumptions. Progressive yield is the yield of the progressive farmer in a region. Average yield is the average of the actual yield of the crops in the region. Two stakeholder meetings were conducted with the farmer and officials of the department of agriculture to discuss about the yield target, technical constrains. The Potential yield and progressive yield are obtained from the crop cutting experiments conducted by the office of the Joint Directorate of Agriculture Tiruppur. These details help in identifying the yield gap existing in the different crops.

Table 3.2.Yield Gap Existing in the Tiruppur District

Crops	Potential Yield (kg) (A)	Progressive farmer yield (kg) (B)	Average Yield (kg) (C)	Yield GAP I(kg) (A-B)	Yield GAP II(kg) (B-C)	Overall YG (kg) (A-C)
Paddy	8250	6300	5600	1950	700	2650
Cholam	1500	1200	1200	300	0	300
Maize	9000	8000	7000	1000	1000	2000
Black gram	900	720	700	200	20	200
Groundnut	1900	1810	1700	90	110	200
Sugarcane	160000	130000	120000	30000	10000	40000

Source: Joint Directorate of Agriculture,Tiruppur.

The yield gap (Productivity) of the crops existing in Tiruppur district need to be minimized.

3.2.1. Technological Interventions and Strategies to Reduce the Yield Gaps

The adoption of suitable high yielding varieties and crop production technologies are the pre-requisites to boost the production. The strategy for increasing the production of potential crops in Tiruppur district through the increase in productivities of those identified crops has already been discussed in the previous section. The productivities could be raised by growing the suitable high yielding varieties and as a consequence, the prevailing yield gap could be bridged. The specific features and the technologies for cultivating the selected high yielding varieties of the select crops are discussed in Chapter IV.

3.3 Crop Coverage and Schemes Implemented by Various Departments

The details about various schemes implemented by the line departments of the district are presented in following tables.

3.3.1 Agriculture

Various schemes are implemented in the Department of Agriculture during the year 2012-13, 2013-14 and 2014-15. The details of the target area and funds allotted for the period are presented in the Table.3.3 to 3.5

Through various sponsored schemes, it is understood that the dry area is cultivated with oil seeds which were given a funding of 26.11 lakhs in 2012-13. Paddy and millets were provided with a budget of 383.13 lakhs and a major portion of the funding was from NADP under various schemes such as Paddy Mission, Pulses mission, Oilseed mission, Millet mission, etc. during 2014-15.

3.3.2 Horticulture

Various schemes are implemented in the Department of Horticulture during the year 2012-13, 2013-14 and 2014-15. The details of the target area and funds allotted for the period are presented in the Table.3.6 to 3.10

Through centrally sponsored schemes, majority of the funds are allotted in the National Mission on Micro irrigation. A sum of Rs. 500.00 lakhs (75 per cent of the total fund) was allotted during 2012-13. The other schemes which cover the majority are National Mission on Medicinal Plants (NMMP), National horticultural Mission (NHM) and IAMWARM. Under state sponsored schemes, a target of 1795 ha area was fixed under Integrated Horticulture Development Scheme (IHDS) with a budget allocation of 46.01 lakhs. Also National Agricultural Development Programme/Scheme was sanctioned with a budget outlay of 52.69 lakhs in the district.

3.3.3 Agricultural Engineering

The schemes implemented by the Department of Engineering during 2012-13, 2013-14 and 2014-15 are presented in the Table. 3.11. In this department, the schemes were shared between the state and central. About 377.52 lakhs were allotted during 2014-2015 for different programmes. During the year 2014-15, District Planning Commission work was Rs.12.64 lakhs. For Promotion and Strengthening of Agricultural Mechanization, 22 demonstrations, 40 trainings with financial Assistance for Procurement of Agricultural Machinery and Equipment a sum of Rs. 0.24 lakhs were allocated for financial year 2014-2015.Under National Agricultural Development Programme (NADP), a sum of Rs. 173.71

and Rs. 120.67 lakhs was allotted for financial year 2012-2013 and 2013-2014 under Agricultural Mechanization Programme.

3.3.4. Animal Husbandry

The summary of schemes implemented by Department of Animal Husbandry is presented in Table 3.12.

Table 3.3 Schemes Implemented by Department of Agriculture 2012 - 13

Sl. No	Name of the scheme	Name of the work	2012-13 (Rs. in lakhs)	Achievement (Rs. In lakhs)	% Achievement
1	SMS Paddy & Millets	Procurement of paddy and millets seeds	27.18	27.05	99.52
2	SMS Pulses	Procurement of pulses seeds	61.73	61.01	98.83
3	SMS Oilseeds	Procurement of oilseeds	70.62	70.12	99.29
4	ICDP -Rice	Seed and implements distribution	11.70	7.53	64.36
5	ISOPOM - Oilseeds	Production and distribution of oilseeds, implements, training and demonstrations	42.78	42.73	99.88
6	ISOPOM - Maize	Production and distribution of maize seeds, implements, training and demonstrations	5.54	5.00	90.25
7	Seed village	Distribution of paddy, millets, pulses, oilseeds and training	53.10	53.07	99.94
8	NADP	Enrichment of Soil Fertility, Programme on Pulse Mission, Integrated Farming System, Precision Farming & SSI, Increasing Cotton Production & Productivity, Distribution of Power tillers to SC/ST farmers group, Integrated Development of Pulses Villages in Rainfed Areas, INSIMP	266.22	226.50	85.08
9	Mini Mission on Cotton	Demonstration and Farmers field school	0.79	0.75	94.94
10	NFSM	Pulses seed distribution and implements	8.75	13.90	158.86
11	KT-Pulses	Production and distribution of pulses seeds	10.04	8.58	85.46
12	IAMWARM	Demonstration, distribution of agricultural inputs and implements for paddy, maize, pulses			
a	Amaravathy		175.10	166.84	
b	Palar		81.27	70.73	87.03
13	ATMA	Demonstration, exposure visit, training and Farm school, Farmer award	112.86	95.83	84.91
Total			**927.68**	**849.64**	**91.59**

Table 3.4 Schemes Implemented by Department of Agriculture 2013 - 14

Sl. No	Name of the scheme	Name of the work	2013-14		
			2013 - 14 (Rs. In lakhs)	Achievement (Rs. In lakhs)	% Achievement
1	SMS Paddy & Millets	Procurement of paddy and millets seeds	27.67	27.44	99.18
2	SMS Pulses	Procurement of pulses seeds	45.267	42.64	94.21
3	SMS Oilseeds	Procurement of oilseeds	61.486	61.05	99.29
4	ISOPOM - Oilseeds	Production and distribution of oilseeds, implements, training and demonstrations	25.60	23.98	93.65
5	ISOPOM - Maize	Production and distribution of maize seeds, implements, training and demonstrations	5.07	4.87	96.07
6	Seed Village	Distribution of paddy, millets, pulses, oilseeds and training	37.85	37.84	99.97
7	NADP	NADP - Paddy Mission Pulses Mission - Red gram transplantation and Oilseed Mission, Precision Farming & SSI, Increasing Cotton Production & Productivity, Upscaling Food grain Mission (Paddy and Millets), Distribution of coconut seedlings, Copra Drier, Precision Farming, Oilpalm Area Expansion, Sustainable Sugarcane Initiative	249.33	219.90	88.20
8	Mini Mission on Cotton	Demonstration and Farmers field school	0.57	0.54	95.94
9	National Food Security Mission - Pulses	Pulses seed distribution, Cluster demonstrations, distribution of weedicide, MN Mixture, implements, biofertilizers, biopesticides, pipelines, sprinklers and Accelerated Pulses Production Programme	80.38	64.05	79.68
10	KT-Pulses	Production and distribution of pulses seeds	2.21	0.00	0.00
11	Coconut Development Board Scheme	Laying out of new Demonstration plots	2.45	2.45	100.00
12	IAMWARM	Demonstration, distribution of agricultural inputs and implements for paddy, maize, pulses and model villages			
a	Amaravathy		181.02	134.67	74.39
b	Palar		31.44	26.44	84.08
13	ATMA	Demonstration, exposure visit, training , Farm school and Farmer award	171.70	112.39	65.46
14	JQ - Vermicompost	Vermicomposting of Agricultural Waste	0.785	0.785	100.00
15	AW-Green Manure	Distribution of Green Manure seeds @ 50 % Subsidy	2.00	2.00	100.00
16	WGDP	Western Ghat Development Programme	5.94	5.94	100.00
	Total		**930.77**	**766.99**	**82.40**

Table 3.5 Schemes implemented by Department of Agriculture 2014 - 15

Sl. No	Name of the scheme	Name of the work	2014 -15		
			2014 -15 (Rs. In lakhs)	Achievement (Rs. In lakhs)	% Achievement
1	SMS Paddy & Millets	Procurement of paddy and millets seeds	73.635	73.629	99.99
2	SMS Pulses	Procurement of pulses seeds	44.014	43.990	99.95
3	SMS Oilseeds	Procurement of oilseeds	46.57	46.55	99.96
4	Seed Village	Distribution of paddy, millets, pulses, oilseeds and training	33.11	33.11	100.00
5	NADP	NADP - Paddy Mission Pulses Mission and Oilseed Mission ,Programme on Millet Mission, SSI, Distribution of coconut seedlings, Oilpalm Area Expansion, Promoting Red gram transplantation for Nutritional Security, Sustainable Sugarcane Initiative	231.92	208.80	90.03
6	National Food Security Mission - Pulses	Pulses seed distribution, Cluster demonstrations, distribution of weedicide, MN Mixture, implements, bio-fertilizers, biopesticides, Sprinklers	45.62	45.62	100.00
7	National Food Security Mission - Coarse cereals	Demonstrations in Sorghum,Maize and Ragi and Distribution of HYVs and Hybrids	72.35	63.58	87.88
8	NMOOP	National Mission on Oilseeds and Oil Palm (Production of Foundation seeds, Certified seeds, Distribution of Certified seeds, Distribution of bio - fertilizers, bio - pesticides, Micro - Nutrients, Nuclear Polyhedrosis virus, Pipes for carrying water from source to field)	26.11	26.11	100.00
9	NMSA	Cropping System based demonstrations and Value Addition and Resource Conservation	32.69	31.00	94.83
10	KT-Pulses	Subsidy for Production and distribution of pulses seeds	7.36	7.36	100.00
11	Coconut Development Board Scheme	Laying out of new Demonstration plots	4.90	4.90	100.00
12	IAMWARM	Demonstration, distribution of agricultural inputs and implements for paddy, maize, pulses and model villages			
a	Amaravathy		2.55	0.00	0.00
b	Palar		7.46	0.00	0.00
13	ATMA	Demonstration, exposure visit, training , Farm school and Farmer award	66.77	64.61	96.77
14	JQ - Vermicompost	Vermicomposting of Agricultural Waste	0.270	0.270	100.00
15	AW-Green Manure	Distribution of Green Manure seeds @ 50 % Subsidy	2.06	2.06	100.00
	Total		**697.38**	**651.58**	93.43

Table 3.6 Expenditure Incurred by Department of Horticulture and Plantation Crops Tiruppur District

(Rs. in lakhs)

Sl. No	Name of Scheme	2011 - 2012		2012 - 2013		2013 - 2014		2014 - 2015	
		Target	Achievement	Target	Achievement	Target	Achievement	Target	Achievement
1	State Schemes	50.69	61.18	225.23	203.78	581.84	360.34	139.59	126.60
2	Government of India Schemes	952.70	808.73	658.63	589.14	861.81	623.99	640.96	571.67
	Total	**1003.39**	**869.91**	**883.86**	**792.93**	**1443.65**	**983..33**	**780.55**	**698.27**

Table 3.7 Schemes Implemented In Horticulture Department - 2011-2012

Sl. No	Name of Scheme	Physical (Ha)		Financial (Rs. in lakhs)	
		Target	Achievement	Target	Achievement
I. STATE SCHEMES					
1	Integrated Horticulture Development Scheme	658.00	658.00	10.810	37.849
2	National Agricultural Development Programme				
	a) Precision farming	100.00	80.00	20.00	15.983
	b) NADP Hi - Tech Productivity Enhancement programme	125.00	88.00	18.155	5.625
3	National Agricultural Insurance Scheme	60.00	40.00	0.48	0.48
4	Weather Based Crop Insurance Scheme	100.00	100.00	1.246	1.246
	TOTAL	**1043**	**966**	**50.691**	**61.183**
II. GOVERNMENT OF INDIA SCHEMES					
6	National Horticulture Mission	9673.00	9174.00	356.45	188.74
7	National Mission on Micro Irrigation	1870.00	1390.00	500.00	527.00
8	National Mission on Medicinal Plants	140.00	135.26	96.25	92.99
TOTAL		**11683**	**10699.26**	**952.7**	**808.73**
GRAND TOTAL		**12726**	**11665.26**	**1003.391**	**869.913**

Table 3.8 Schemes Implemented In Horticulture Department - 2012-2013

Sl. No	Name of Scheme	Physical (Ha)		Financial (Rs. in lakhs)	
		Target	Achievement	Target	Achievement
I. STATE SCHEMES					
1	Integrated Horticulture Development Scheme	1795.00	1716.00	46.005	37.849
2	National Agricultural Development Programme	250.00	200.00	52.50	42.33
	a) NADP Hi - Tech Productivity Enhancement programme	112.00	112.00	11.85	11.61
	b) NADP - Pandal	20.00	18.264	31.12	28.417
3	IAMWARM - Amaravathy Sub-Basin	549.00	549.00	83.75	83.57
4	National Agricultural Insurance Scheme	300.00	125.00	6.00	1.125
5	Weather Based Crop Insurance Scheme	180.00	12.00	1.20	0.20
	TOTAL	**2726.00**	**2595.26**	**225.23**	**203.78**
II. GOVERNMENT OF INDIA SCHEMES					
6	National Horticulture Mission	4757	2283.00	62.380	58.597
7	National Mission on Micro Irrigation	900	861.87	500.000	434.295
8	National Mission on Medicinal Plants	140	140.00	96.250	96.250
TOTAL		**5797**	**3284.87**	**658.630**	**589.142**
GRAND TOTAL		**8523**	**5880.13**	**883.86**	**792.93**

Table 3.9 Schemes Implemented in Horticulture Department - 2013-2014 (Rs. in lakhs)

Sl. No	Name of Scheme	Physical (Ha)		Financial (Rs. in lakhs)	
		Target	Achievement	Target	Achievement
I. STATE SCHEMES					
1	Integrated Horticulture Development Scheme	550.00	550.00	11.00	10.98
2	National Agricultural Development Programme	837.00	787.60	91.76	77.51
3	Coimbatore Perimetro Cluster Development Scheme	2275.00	1403.00	307.23	141.726
4	IAMWARM - Amaravathy Sub-Basin	524.00	524.00	80.25	78.011
5	IAMWARM - Palar Sub-Basin	95.00	95.00	14.25	14.11
6	IAMWARM - Model Village	2201.00	2201.00	38.10	38.00
7	National Agricultural Insurance Scheme	500.00		10.00	
8	Weather Based Crop Insurance Scheme	180.00		1.20	
9	Rainfed Area Development Programme	203.00	203.00	28.05	28.05
	TOTAL	**7365.00**	**5763.6**	**581.84**	**360.337**
II. GOVERNMENT OF INDIA SCHEMES					
10	National Horticulture Mission	25929.00	26857.00	224.31	116.782
11	National Mission on Micro Irrigation	1140.00	830.10	500.00	409.859
12	National Mission on Medicinal Plants	200.00	200.00	137.50	137.500
TOTAL		**27269**	**27887.10**	**861.81**	**623.989**
GRAND TOTAL		**34634.00**	**33650.7**	**1443.65**	**938.276**

Table 3.10 Schemes Implemented in Horticulture Department - 2014-2015

Sl. No	Name of Scheme	Physical (Ha)		Financial (Rs. in lakhs)		Number of Beneficiaries / Remarks
		Target	Achievement	Target	Achievement	
I. STATE SCHEMES						
1	National Agricultural Development Programme	130.5	130.2	42.750	42.109	252
2	Coimbatore Perimetro Cluster Development Scheme	799.0	799.0	78.980	67.500	1598
3	National Mission for Sustainable Agriculture (Rainfed Area Development)	91.0	91.0	17.860	17.000	97
	TOTAL	**1020.5**	**1020.2**	**139.590**	**126.609**	
II. GOVERNMENT OF INDIA SCHEMES						
4	National Horticulture Mission	12882.00	12882.00	147.988	119.348	1004 beneficiaries benefitted. Work under progress for 6 Nos of Polygreen House
5	National Mission for Sustainable Agriculture (OFWM-On Farm Water Management)	355.00	355.00	246.870	206.220	347 Beneficiaries.
6	National Mission on Medicinal Plants	356.85	356.85	245.334	245.334	527 Beneficiaries.
7	National Bamboo Mission	20.000	5.000	0.770	0.770	
TOTAL		**13613.850**	**13598.850**	**640.962**	**571.672**	
GRAND TOTAL		**14634.350**	**14619.050**	**780.552**	**698.281**	

Table 3.11 Schemes Implemented in Agricultural Engineering Department - 2014-2015

Sl.No.	Name of the scheme	2010-11		2011-12		2012-13		2013-14		2014-15	
		Target	Exp.	Target	Exp.	Target	Exp.	Target	Exp.	Target	Exp.
1	Western Ghats Development Programme	84.06	84.04	69.33	69.32	104.73	104.61	46.35	23.75	46.35	46.35
2	Rain Water Harvesting And Run Off Management	10	9.99	11.40	11.39	0	0	12.73	12.70	0	0
3	Artificial Recharge To Ground Water Scheme	55.3	55.28	0	0	99.68	90.77	0	0	0	0
4	TNIAMWARM	372.60	111.34	801.58	652.34	670.81	558.51	461.64	438.60	210.23	209.44
5	National Agricultural Development Programme (Machinery)	79.3	67.80	47.18	47.17	173.71	173.68	120.67	120.67	104.50	104.50
6	Promotion And Strengthening Of Agricultural Mechanization Through Training, Testing And Demonstration	1.82	1.81	1.22	1.21	0.36	0.36	1.58	1.58	0.24	0.24
7	Agricultural Mechanisation Programme Under Macro Management Of Agriculture	21.2	21.2	10.05	10.05	2.2	2.2	9.35	7.55	0	0
8	National Horticulture Mission Works	11.35	11.29	0	0	0	0	0	0	0	0
9	Sister Department Works	0	0	0	0	2.65	2.23	0	0	0	0
10	District Planning Commission Works:	0	0	0	0	0	0	0	0	12.70	12.64
11	Sub Mission on Agrl. Mechanization	0	0	0	0	0	0	0	0	3.5	3.5
	Total	**635.63**	**362.75**	**940.76**	**791.48**	**1054.14**	**932.36**	**652.32**	**604.85**	**377.52**	**376.67**

Table 3.12 Schemes Implemented in Animal Husbandry Department

(₹. in lakhs)

Sl.No.	Name of the Scheme	2011-12		2012-13		2013-14		2014-15		2015-16	
		Target	**Exp.**	**Target**	**Exp.**	**Target**	**Exp.**	**Target**	**Exp.**	**Target**	**Exp.**
1	Goat Scheme	385.56	383.75	545.43	543.52	513.5	513.46	526.55	526.07	508.31	506.58
2	KPT	2.18	2.18	2.18	2.18	2.18	2.18	2.18	2.18	2.18	2.18
3	NADP	54.94	46.72	363.76	101.07	34.00	34.00	0	0	0	0
4	SFDS/AFDP	108.37	107.16	10.24	10.24	82.125	81.84	67.57	65.86	27.66	0
5	IAMWARAM	0	0	47.82	47.82	22.46	22.46	2.82	2.82	0	0
6	Fodder Depot	0	0	0	0	40.00	40.00	40.00	40.00	0	0
7	Western Ghats Development Programme	0	0	14.12	14.12	13.065	12.92	19.59	19.37	0	0
8	Backyard Poultry							11.22	11.22		
	Total	**551.05**	**539.81**	**983.55**	**718.95**	**707.33**	**706.86**	**669.93**	**667.52**	**538.15**	**508.76**

CHAPTER IV

DISTRICT PLAN

4.1. AGRICULTURE

4.1.1. Enhancing Rice Productivity

An integrated crop management approach (water, soil fertility / nutrients, weeds / pests / diseases, and post-harvest processing) is vital to maximize the productivity and profitability of rice farmers. All technologies and practices should be used synergistically to help farmers increase and/or maintain grain yields at the same or reduced cost. Efficient fertilizer management integrated with other appropriate agronomic and pest management practices is needed to improve and sustain productivity of paddy fields. There is still vast scope for increasing production. Hence, it is important to create facilities for increasing paddy production and productivity in Tiruppur district.

Project Components

a) Distribution of certified seeds in all the blocks except Avinashi, Dharapuram, Palladam, Pongalur, Tiruppur and Vellakoil blocks
b) Promotion of SRI in Gudimangalam, Kangeyam, Madathukulam, Udumalpet and Vellakoil
c) Distribution of biofertilizer and herbicides in all the blocks except Dharapuram and Gudimangalam blocks
d) Incentives for paddy machine planting in Dharapuram, Kangeyam, Madathukulam blocks
e) Distribution of Zinc sulphate, MN mixture in all the blocks except Avinashi, Gudimnagalam, Palladam, Pongalur, Tiruppur and Vellakoil blocks

Budget:

To enhance the production of paddy in this district a budget ₹ **722.22** lakhs is proposed for a period of five years.

Expected Outcome:

- ✓ It enhance rice production at least 15-20 per cent than present level
- ✓ It will reduce the pest and disease incidence and improve the quality of rice

Implementing Agency:

The projects will be implemented by the Department of Agriculture.

Table 4.1.Budget requirement for Rice Production

(₹. in lakhs)

Sl. No	Interventions	Unit	Unit cost	Block Covered	2017-18		2018-19		2019-20		2020-21		2021-22		Total	
					Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin
1	Promotion of SRI	Ha	0.15	B2, B4, B6, B11 & B13	0	0.00	270	40.50	280	42.00	280	42.00	290	43.50	1120	168.00
2	Distribution of High Yielding Varieties	MT	0.35	All Blocks except B1, B3, B8, B9, B10 & B12	84	29.40	86	30.10	88	30.80	90	31.50	94	32.90	442	154.70
3	Distribution of Foundation	MT	0.4	B2, B6 & B11	3	1.20	3	1.20	3	1.20	3	1.20	3	1.20	15	6.00
4	seed production - Foundation	MT	0.32	B6	20	6.40	20	6.40	20	6.40	20	6.40	20	6.40	100	32.00
5	seed production - Certified class	MT	0.26	All Blocks except B1, B3, B8, B9, B10 & B12	89	23.14	91	23.66	93	24.18	95	24.70	99	25.74	467	121.42
6	Incentives for paddy machine planting	Ha	0.1	B2, B4, B6, B11 & B13	50	5.00	300	30.00	300	30.00	405	40.50	405	40.50	1460	146.00
7	Distribution of MN mixture/ Copper Sulphate	Ha	0.01	All Blocks except B1, B3, B8, B9, B10 & B12	325	3.25	525	5.25	520	5.20	525	5.25	525	5.25	2420	24.20
8	Distribution of biofertilizer / PPFM / bioinputs / plant nutrient mobilizing bacteria	Ha	0.003	All Blocks except B1, B3, B8, B9, B10 & B12	235	0.71	745	2.24	750	2.25	750	2.25	750	2.25	3230	9.69
9	Distribution of Zinc sulphate (Soil application & foliar)	Ha	0.01	All Blocks except B1, B3, B8, B9, B10 & B12	330	3.30	532	5.32	561	5.61	573	5.73	580	5.80	2576	25.76
10	Distribution of biocontrol agents/biopesticides	Ha	0.01	B2	0	0.00	100	1.00	100	1.00	100	1.00	100	1.00	400	4.00
11	Distribution of herbicides	Ha	0.01	All Blocks except B1, B3, B8, B9, B10 & B12	200	2.00	455	4.55	465	4.65	465	4.65	480	4.80	2065	20.65
12	Polyvinyl coated Tarpaulin (6m x 5m)	No	0.02	B2, B6, B11 & B13	0	0.00	160	3.20	110	2.20	110	2.20	110	2.20	490	9.80
13	Demonstration of drip irrigation	Ha	1	All Blocks	20	20.00	20	20.00	20	20.00	20	20.00	20	20.00	100	100.00
	Total					**94.45**		**173.42**		**175.49**		**187.38**		**191.54**		**822.22**

Avinashi - B1, Dharapuram - B2, Gudimangalam - B3, Kangayam - B4, Kundadam - B5, Madathukulam - B6, Mulanur - B7, Palladam - B8, Pongalur - B9, Tiruppur - B10, Udmalpet - B11, Uthukuli - B12, Vellakoil - B13

4.1.2 .Enhancing Millets Productivity

Millets are highly favoured due to its productivity and short growing season under dry and high-temperature conditions. The area under millets has been declining due to several reasons. Millets, however, do respond to high fertility and moisture. Millet grain produced per hectare could be 2-4 times higher with use of irrigation and soil supplements. Improved breeds of millet, improve disease resistance which could significantly enhance farm yield productivity. Hence, it is important to create facilities for increasing millet production and productivity.

Project Component:

a) Distribution of LPG operated bird scarrer in Gudimangalm, Kangeyam and Palladam blocks

b) Distribution of biofertilizers liquid / carrier in all the blocks except Kudadam, Madathukulam, Mulanur and Udumalpet

c) Expansion of area under minor millets in Gudimangalm, Kangeyam and Palladam blocks

d) Distribution of maize maxim at Gudimangalm block

Budget:

To enhance the production of millet in this district a budget of ₹ **637.245** lakhs is proposed.

Expected Outcome:

It is expected to increase the area under millet production by 20 per cent. It also improves the soil heath by addition of soil health promotion to improvement of the nutrient status.

Implementing Agency:

The projects will be implemented by the Department of Agriculture. The project will be monitored by Director of Agriculture at state level and Joint Director of Agriculture at district level.

Table 4.2 Budget requirement for Millets Production

(₹. in lakhs)

Sl. No.	Components	Unit	Unit cost	Blocks covered	2017-18		2018-19		2019-20		2020-21		2021-22		Total	
					Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin
	Millets															
1	Distribution of LPG operated Bird Scarrer	Nos.	0.1	B3, B4 & B8	0	0.00	4	0.40	4	0.40	4	0.40	4	0.40	16	1.60
2	Expansion of area under Minor Millets (Demo - supply of seed, seed treatment, MN mixture & Organic package)	Ha	0.05	B3, B4 & B8	0	0.00	7	0.35	7	0.35	7	0.35	7	0.35	28	1.40
3	Seed Production / Incentives for quality seed	MT	0.63	B3, B4 & B8	0	0.00	11	6.93	11	6.93	14	8.82	18	11.34	54	34.02
	Soil moisture conservation practices	Ha	0.05	All Blocks	300	15.00	300	15.00	300	15.00	300	15.00	300	15.00	1500	75.00
	Initiative for Nutritional Security through Intensive Millet Promotion (INSIMP)	ha	0.04	All Blocks	300	12.00	300	12.00	300	12.00	300	12.00	300	12.00	1500	60.00
	Sorghum															
4	Demonstration (Supply of seed, seed treatment, MN mixture & Organic package)	Ha	0.05	B10 & B12	0	0.00	3	0.15	3	0.15	3	0.15	3	0.15	12	0.60

Sl. No.	Components	Unit	Unit cost	Blocks covered	2017-18		2018-19		2019-20		2020-21		2021-22		Total	
					Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin
5	Distribution of biofertilizers Liquid / Carrier	Ha	0.003	All Blocks except B5, B6, B7 & B11	2000	6.00	2140	6.42	2250	6.75	2370	7.11	2430	7.29	11190	33.57
6	Distribution of MN mixture (12.5kg/ha)	Ha	0.007	B1, B4, B8, B9, B10 & B12	1590	11.13	1730	12.11	1840	12.88	1950	13.65	2010	14.07	9120	63.84
7	Seed distribution	MT	0.7	B4, B8, B10 & B12	0	0.00	6.5	4.55	7.5	5.25	9	6.30	10	7.00	33	23.10
	Maize															
8	Demonstration (Supply of seed, seed treatment & MN mixture, organic package)	Ha	0.05	All Blocks except B1, B2, B4, B6, B12 & B13	210	10.50	620	31.00	620	31.00	620	31.00	620	31.00	2690	134.50
9	Distribution of biofertilizers - Liquid / Carrier	Ha	0.003	All Blocks except B1, B2, B4, B5 & B12	475	1.43	525	1.58	525	1.58	530	1.59	550	1.65	2605	7.82
10	Distribution of herbicides	Ha	0.008	B3, B8 & B9	50	0.40	250	2.00	250	2.00	250	2.00	250	2.00	1050	8.40
11	Distribution of Maize maxim (15 kg/ha)	Ha	0.045	B3	0	0.00	10	0.45	10	0.45	10	0.45	10	0.45	40	1.80
12	Drip irrigation for maize	Ha	1	All Blocks except B1, B2, B5, B10, B12 & B13	10	10.00	50	50.00	57	57.00	64	64.00	70	70.00	251	251.00
13	Seed Distribution	MT	1.8	All Blocks except B1, B2, B4, B5 & B13	6	10.80	7.5	13.50	8.5	15.30	10	18.00	10	18.00	42	75.60
						77.26		**156.44**		**167.04**		**180.82**		**190.7**		**772.25**

Avinashi - B1, Dharapuram - B2, Gudimangalam - B3, Kangayam - B4, Kundadam - B5, Madathukulam - B6, Mulanur - B7, Palladam - B8, Pongalur - B9, Tiruppur - B10, Udmalpet - B11, Uthukuli - B12, Vellakoil - B1

4.1.3. Enhancing Pulses Production

Pulses are the major sources of dietary protein in the vegetarian diet in our country. Besides being a rich source of protein, they maintain soil fertility through biological nitrogen fixation in soil and thus play a vital role in furthering sustainable agriculture. In Tamil Nadu, the total area under pulses is around 9.5 lakh ha with a production of 4.08 lakh tons. The average productivity of pulses in the state is around 430 Kg/ha which is far below the average productivity of the country as well as that of the global productivity. An integrated crop management approach (water, soil fertility/nutrients, pests/diseases,) is vital to maximize the productivity and profitability of pulses. There is still vast scope for increasing production by adopting improved package of practices. Hence, it is important to create facilities for increasing production and productivity of pulses through scientific technologies.

Project Component:

a) Production and distribution of seed materials in all the blocks
b) DAP spray, biofertilizers in all the blocks
c) Distribution of yellow sticky trap /pheromone trap in Avinashi, Dharapuram, Mulanur and Tiruppur blocks
d) Line sowing in all the blocks except Palladam block
e) Distribution of micro nutrient mixture in all the blocks except Vellakoil block

Budget:

To enhance the production of pulses in this district a budget ₹ **1,546.01** lakhs is proposed.

Expected Outcome:

It enhances quality seed availability at a right time and right place and also increases the pulses production by 15-20 per cent.

Implementing Agency:

The projects will be implemented by the Department of Agriculture. The project will be monitored by Director of Agriculture at state level and Joint Director of Agriculture at district level.

Table 4.3. Budget requirement for Pulses Production

(₹. in lakhs)

Sl. No.	Interventions	Unit	Unit cost	Block Covered	2017-18		2018-19		2019-20		2020-21		2021-22		Total	
					Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin
1	Purchase of breeder seeds	MT	2.50	B6	0	0.00	1	2.50	1	2.50	1	2.50	1	2.50	4	10.00
2	Production of Foundation/ Certified pulses seeds	MT	0.86	All Blocks	87	74.82	91	78.26	96	82.56	99	85.14	107	92.02	480	412.80
3	Distribution of Certified Seeds	MT	1.00	All Blocks	87	87.00	91	91.00	96	96.00	99	99.00	107	107.00	480	480.00
4	DDistribution of Biofertilizer/ Organic packages (Rhizobium + Phosphobacteria) - Liquid / Carrieristribution of Biofertilizer (Rhizobium + Phosphobacteria) - Liquid / Carrier	Ha	0.006	All Blocks	1050	6.30	1080	6.48	1090	6.54	1130	6.78	1230	7.38	5580	33.48
5	Distribution of Micro Nutrients(5 kgs/ Ha)	Ha	0.0035	All Blocks except B13	500	1.75	555	1.94	615	2.15	675	2.36	725	2.54	3070	10.75
6	DAP Spray	Ha	0.007	All Blocks	865	6.06	895	6.27	1000	7.00	1041	7.29	1095	7.67	4896	34.27
7	Bund Cropping	Ha	0.003	All Blocks except B8, B9	402	1.21	435	1.31	435	1.31	445	1.34	470	1.41	2187	6.56
8	Line sowing	Ha	0.025	All Blocks except B8	370	8.33	432	9.72	473	10.64	494	11.12	615	13.84	2384	53.64
9	Distribution of Yellow sticky trap /pheromone trap	ha	0.01	B1, B2, B7 & B10	270	2.70	270	2.70	270	2.70	270	2.70	270	2.70	1350	13.50
10	Cropping system based demonstration	Ha	0.125	B1, B2, B3, B8, B10 & B11	300	37.50	440	55.00	440	55.00	440	55.00	440	55.00	2060	257.50
11	Plant Protection Chemicals	Ha	0.01	B4, B5, B6, B8, B11 &	145	1.45	156	1.56	160	1.60	165	1.65	165	1.65	791	7.91

Sl. No.	Interventions	Unit	Unit cost	Block Covered	2017-18		2018-19		2019-20		2020-21		2021-22		Total	
					Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin
				B13												
12	Seed treatment and soil application with Trichoderma viridi	Ha	0.007	All Blocks except B4, B5, B8, B9 & B11	440	3.08	340	2.38	340	2.38	340	2.38	340	2.38	1800	12.60
13	Pure crop demonstration - Black gram and green gram	Ha	0.063	B2, B3, B7 & B8	200	12.60	400	25.20	400	25.20	400	25.20	400	25.20	1800	113.40
14	Demonstration on intercropping of pulses with other crops	Ha	0.083	B2, B3 & B8	0	0.00	300	24.90	300	24.90	300	24.90	300	24.90	1200	99.60
	Total					**242.78**		**309.21**		**320.48**		**327.34**		**346.18**		**1546.01**

Avinashi - B1, Dharapuram - B2, Gudimangalam - B3, Kangayam - B4, Kundadam - B5, Madathukulam - B6, Mulanur - B7, Palladam - B8, Pongalur - B9, Tiruppur - B10, Udmalpet - B11, Uthukuli - B12, Vellakoil - B13

4.1.4. Enhancing Oilseeds Production

Oilseeds are the primary source of income for many farmers in the rainfed areas. With limited scope of bringing additional area under oilseeds, increase in oilseed production will have to come primarily from a combination of high yield plant type, supply of high yielding quality certified seed materials to farmers in time, increased area under oilseeds in irrigated conditions, standard crop management practices, balanced crop nutrition and timely plant protection measures against pest and diseases. Hence, it is important to create facilities for increasing production and productivity of oilseeds by adopting improved package of practices.

Project Components:

a) CBD for oil seeds in Avinashi, Tiruppur, Uddumalpet and Uthukuli blocks
b) Herbicide distribution at Udumalpet blocks
c) Light trap distribution at Mulanur and Tiruppur blocks
d) Biopesticide distribution in Tiruppur blocks
e) Polythene mulch in Udumalpet block
f) Distriubution of liquid biofertilizer in all the blocks except Gudimangalam and Palladam blocks

Budget:

To enhance the production of oilseeds in this district a budget ₹ **1000.74** lakhs is proposed.

Expected Outcome:

Immediate output would be increasing the oilseed especially groundnut yield per hectare so as to improve the production further at State level. Based on the profitability in oilseed cultivation, it is expected that the oilseed area would increase from 15 to 20 per cent from the exiting area under oilseed especially groundnut cultivation.

Implementing Agency:

The projects will be implemented by the Department of Agriculture. The project will be monitored by Director of Agriculture at state level and Joint Director of Agriculture at district level.

Table 4.4 Budget requirement for Oilseeds Production

(₹. in lakhs)

Sl. No	Components	Unit	Unit Cost	Blocks Covered	2017-18		2018-19		2019-20		2020-21		2021-22		Total	
					Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin
I	**OILSEEDS**															
1	Purchase of Breeder seed	MT	1.5	B1, B10 & B12	0	0.00	3	4.50	3	4.50	5	7.50	6	9.00	17	25.50
2	Polythene mulch Inclusive of erection	Ha	0.5	B11	0	0.00	10	5.00	0	0.00	0	0.00	0	0.00	10	5.00
3	Herbicide	Ha	0.01	B10	0	0.00	30	0.30	30	0.30	35	0.35	35	0.35	130	1.30
4	Light trap (NCIPM)	Nos.	0.01	B7 & B10	10	0.10	15	0.15	20	0.20	25	0.25	35	0.35	105	1.05
5	Bio pesticide/fungicide	Ha	0.01	B10	20	0.20	25	0.25	30	0.30	30	0.30	30	0.30	135	1.35
6	Compact Block Demonstration - Groundnut	Ha	0.2	B1, B10, B11, B12	150	30.00	250	50.00	250	50.00	250	50.00	250	50.00	1150	230.00
7	Compact Block Demonstration - Gingelly / Castor	Ha	0.06	B1, B10, B11 & B12	0	0.00	50	3.00	50	3.00	50	3.00	50	3.00	200	12.00
	GROUNDNUT															
8	Seed Production-Foundation seeds	Mt	0.76	B1, B2, B10 & B12	7	4.94	8	5.70	8	5.70	8	6.08	8	6.08	38	28.50
9	Seed Production - certified seeds	Mt	0.73	All Blocks except B3, B8	89	64.97	97	70.81	100	73.00	109	79.57	117	85.41	512	373.76
10	Distribution of Certified seeds	Mt	0.84	All Blocks except B1, B3, B8, B10 & B12	29	24.36	32	26.88	35	29.40	39	32.76	43	36.12	178	149.52
11	Application of Gypsum to Groundnut Crop	Ha	0.016	All Blocks except B3, B4, B8, B9 & B13	280	4.48	420	6.72	580	9.28	640	10.24	800	12.80	2720	43.52
12	Distribution of Micro Nutrient Mixture	Ha	0.015	B1, B2, B6, B10, B11 & B12	250	3.75	310	4.65	475	7.13	490	7.35	640	9.60	2165	32.48

Sl. No	Components	Unit	Unit Cost	Blocks Covered	2017-18		2018-19		2019-20		2020-21		2021-22		Total	
					Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin
13	Distribution of Biofertilizer	Ha	0.006	All Blocks except B3 & B8	520	3.12	527	3.16	695	4.17	700	4.20	880	5.28	3322	19.93
14	Distribution of Liquid Biofertilizer	Ha	0.006	All Blocks except B3,B8	530	3.18	537	3.22	705	4.23	710	4.26	890	5.34	3372	20.23
15	Distribution of Rhizobium/ PSB Culture	Ha	0.006	B1, B10 & B12	200	1.20	225	1.35	350	2.10	400	2.40	550	3.30	1725	10.35
16	Castor as Bund crop	Ha	0.006	B1, B10 & B12	90	0.54	90	0.54	180	1.08	190	1.14	200	1.20	750	4.50
17	Seed Drill Sowing / Line sowing of Groundnut with Pulses as intercrop(hiring charges only)	Ha	0.03	B1, B10 & B12	125	3.75	175	5.25	250	7.50	250	7.50	325	9.75	1125	33.75
18	Seeddrill Sowing of Groundnut with Redgram as Intercrop	Ha	0.04	B12	0	0.00	50	2.00	50	2.00	50	2.00	50	2.00	200	8.00
	Total					**144.59**		**193.48**		**203.89**		**218.90**		**239.88**		**1000.74**

Avinashi - B1, Dharapuram - B2, Gudimangalam - B3, Kangayam - B4, Kundadam - B5, Madathukulam - B6, Mulanur - B7, Palladam - B8, Pongalur - B9, Tiruppur - B10, Udmalpet - B11, Uthukuli - B12, Vellakoil - B13

4.1.5. Enhancing the oil palm productivity

India is the largest consumer of palm oil in the world, consuming around 17 per cent of total world consumption. India is also the largest importer of palm oil amounting to 44 per cent of world imports. Palm Oil contains an equal proportion of saturated and unsaturated fatty acid containing about 40 per cent oleic acid, 10 per cent linoleic acid, 44 per cent palmitic acid and 5 per cent stearic acid. The unprocessed palm oil is used for cooking in various countries. Palm Oil is a very rich source of Beta Carotene, an important source of Vitamin A and it contains Tocopherols and Tocotrienols, a natural source of Vitamin E. Vitamin A and Vitamin E contents are the highest in palm oil in comparison with any other types of oil and hence consumption of the same boosts health. By virtue of the high vitamin contents the Red Palm Oil is a nature's gift for the human beings.

In view of the rich content of vitamins, palm oil can be utilized for the preparation of cosmetics as well there is a need to promote oil palm by the way of area expansion and better cultivation practices. It is equally important to focus on innovative growth strategies through National Mission on Oilseeds and Oil Palm (NMOOP) has been launched in which Mini Mission-II (MM-II) is dedicated to oil palm area expansion and increased productivity increases. MM-II of NMOOP and MM-III of NMOOP is being implemented in 13 States *viz,* Tamil Nadu, Andhra Pradesh, Assam, Arunachal Pradesh, Chhattisgarh, Gujarat, Karnataka, Kerala, Mizoram, Nagaland, Odisha, Telangana, and West Bengal.

Project components

a) Oil palm Area Expansion Programme in Avinashi, Gudimangalm, Mulanur and Uthukuli blocks
b) Cultivation maintenance in Avinashi, Gudimangalm, Mulanur, Tiruppur and Uthukuli blocks
c) Inputs for Intercropping in Avinashi, Gudimangalm, Mulanur, Tiruppur and Uthukuli blocks
d) Supply of diesel pumps
e) Construction of borewells, motorised chisel and alumium portable ladder in Avinashi block
f) Neem/ Pungam Area Expansion Programme
g) Distribution of wire mesh to Mulanur and Uthukuli blocks
h) Distribution of oilpalm cutter to Avinashi block

Budget

It is proposed to incur **₹ 184.22 Lakhs** over a period of five years with the finance facilities under the NADP and other sources.

Expected outcome

The expected outcome of the project, will result in an increase in the production of oil palm for producing oil and major supply of quality raw material to the oilseed industry which will improve the income of the farmers and requirement of oilseeds.

Table 4.5. Budget requirement for OilPalm

(₹. in lakhs)

Sl. No	Components	Unit	Unit Cost	Blocks Covered	2017-18		2018-19		2019-20		2020-21		2021-22		Total	
					Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin
II	**OILPALM**															
1	NMOOP -Mini Mission -II (Oilpalm)															
2	Oilpalm Area Expansion Programme	Ha	0.14	B1, B3, B6, B11	37	5.18	19	2.66	20	2.80	21	2.94	22	3.08	119	16.66
3	Cultivation maintenance	Ha	0.1	B1, B3, B6, B9 & B11	56	5.62	59	5.90	79	7.90	100	10.00	122	12.20	416	41.62
4	Inputs for Intercropping	Ha	0.1	B1, B3, B6, B9 & B11	56	5.62	59	5.90	79	7.90	100	10.00	122	12.20	416	41.62
5	Supply of Diesel pumps	No	0.3	B1 & B11	2	0.60	2	0.60	2	0.60	2	0.60	2	0.60	10	3.00
6	Construction of Borewells	No	1	B1	2	2.00	2	2.00	2	2.00	2	2.00	2	2.00	10	10.00
7	Motorised Chisel	No	0.2	B1	0	0.00	1	0.20	1	0.20	1	0.20	1	0.20	4	0.80
8	Alumium portable ladder	No	0.06	B1	4	0.24	4	0.24	4	0.24	4	0.24	4	0.24	20	1.20
9	Wire mesh	No	0.1	B6 & B11	8	0.80	0	0.00	0	0.00	0	0.00	0	0.00	8	0.80
10	Oilpalm Cutter	No	0.03	B1	0	0.00	0	0.00	0	0.00	2	0.06	2	0.06	4	0.12
11	**NMOOP -Mini Mission -III (Tree Borne Oilseeds)**															
12	Neem/ Pungam Area Expansion Programme	Ha	0.2	B1, B2, B3, B6, B7, B8 & B11	27	5.40	27	5.40	27	5.40	27	5.40	30	6.00	138	27.60
13	Cultivation maintenance	Ha	0.05	B1, B2, B3, B6, B7, B8 & B11	27	1.35	54	2.70	81	4.05	108	5.40	138	6.90	408	20.40
14	Inputs for Intercropping	Ha	0.05	All Blocks except B4, B5, B9, B10, B12 & B13	27	1.35	54	2.70	81	4.05	108	5.40	138	6.90	408	20.40
	Total					**28.16**		**28.30**		**35.14**		**42.24**		**50.38**		**184.22**

Avinashi - B1, Dharapuram - B2, Gudimangalam - B3, Kangayam - B4, Kundadam - B5, Madathukulam - B6, Mulanur - B7, Palladam - B8, Pongalur - B9, Tiruppur - B10, Udmalpet - B11, Uthukuli - B12, Vellakoil - B13

4.1.6. Enhancing Sugarcane Production

Sugarcane occupies a major place in the Tiruppur district in terms of production and productivity. To increase the production and productivity, sustainable sugarcane initiative and enrichment of soil fertility through sugarcane thrash mulching must be implemented. Supply of quality sets and implementing sustainable sugarcane initiative is very important to enhance the sugarcane production in the district.

Project Components:

a) Sustainable Sugarcane Initiative (SSI) in Avinashi, Kangeyam, Madathukulam, Udumalpet and Vellakoil blocks

b) Distribution of gypsum in all the blocks

c) Trash mulching in Madathukulam and Udumalpet block

d) Demonstration on intercropping in Kangeyam and Vellakoil blocks

e) Distribution of water soluble fertilizer in Avinashi and Dharapuram, Madathukulam and Udumalpet block

Budget:

To enhance the production of sugarcane in this district a budget ₹. **625.67** lakhs is proposed.

Expected Outcome:

Minimum of 15 to 20 tonnes increase in cane production per hectare could be achieved.

Implementing Agency:

The projects will be implemented by the Department of Agriculture. The project will be monitored by Director of Agriculture at state level and Joint Director of Agriculture at district level.

Table 4.6. Budget requirement for Sugarcane Production

(₹. in lakhs)

Sl. No	Components	Unit	Unit cost	Block Covered	2017-18		2018-19		2019-20		2020-21		2021-22		Total	
					Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin
1	Disribution of Gypsum (500 Kg/Ha)	Ha	0.02	All Blocks	30	0.60	30	0.60	30	0.60	30	0.60	30	0.60	150	3.00
2	Distri. of weedicide (Ha)	Ha	0.01	B1, B6 & B11	30	0.30	30	0.30	30	0.30	30	0.30	30	0.30	150	1.50
3	Distribution of Chip Cutter	Nos	0.05	B1, B4, B6, B11 & B13	28	1.40	28	1.40	28	1.40	28	1.40	28	1.40	140	7.00
4	Distribution of Parasite Trichogramma	Ha	0.00125	B1, B2, B4, B6, B11 & B13	60	0.08	60	0.08	60	0.08	65	0.08	70	0.09	315	0.39
5	Distribution of Water Soluble Fertiliers	ha	0.25	B1, B4, B6 & B11	30	7.50	30	7.50	30	7.50	30	7.50	30	7.50	150	37.50
6	Microirrigation - Drip (1.2x0.6)	ha	1.24	B1, B4, B6 & B11	40	49.60	50	62.00	55	68.20	60	74.40	70	86.80	275	341.00
	Sustainable Sugarcane Initiative (SSI)															
7	A. Establishment of Shadenet	Nos	1.5	B1, B4, B6, B11 & B13	14	21.00	14	21.00	14	21.00	14	21.00	14	21.00	70	105.00
8	B.Distribution of Single Bud Seedling	Ha	0.225	B1, B4, B6, B11 & B13	103	23.18	103	23.18	103	23.18	103	23.18	103	23.18	515	115.88
9	Trash Mulching	Ha	0.04	B6 & B11	40	1.60	40	1.60	40	1.60	40	1.60	40	1.60	200	8.00
10	Demonstration on intercropping in Sugarcane	Ha	0.08	B4 & B13	0	0.00	20	1.60	20	1.60	20	1.60	20	1.60	80	6.40
	Total					**105.25**		**119.25**		**125.45**		**131.66**		**144.06**		**625.67**

Avinashi - B1, Dharapuram - B2, Gudimangalam - B3, Kangayam - B4, Kundadam - B5, Madathukulam - B6, Mulanur - B7, Palladam - B8, Pongalur - B9, Tiruppur - B10, Udmalpet - B11, Uthukuli - B12, Vellakoil - B13

4.1.7. Enhancing Coconut Production

Coconut production plays an important role in the national economy of India is the third largest coconut producer in the world with an area of 2.14 million hectares accounting for a production of 14.91 million tons. Tamil Nadu, Kerala and Karnataka are the major producers of coconut contributing for 83 per cent both in total area and production of the country. Tamil Nadu topped the country in coconut production with 4.76 million tonnes (2014-15). It is cultivated across 0.46 million hectares in the state. The coconut producing districts in the state are mainly Coimbatore, Tiruppur, Thanjavur, Dindigul, Kanyakumari, Vellore and Theni. This increased production could be achieved by balanced nutrition and timely plant protection measures against pest and diseases.

Project Components

a) Production and distribution of quality seedlings for all theblocks
b) Drip irrigation in all the blocks
c) Distribution of MN mixture in all the blocks
d) Intercropping with green manures in all the blocks
e) Distribution of tree climbers in Dhrapuram, Madathukulam, Tiruppur and Udumalpet blocks
f) Distribution of coconut shredder
g) corpus fund release for FPG for all the block
h) establishment of Neera processing unit at Palladam block

Budget:

To enhance the production of coconut in this district a budget ₹ **4,589.99** lakhs is proposed.

Expected Outcome:

Minimum of 5 to 10 tonnes increase in coconut production per hectare could be achieved.

Implementing Agency:

The projects will be implemented by the Department of Agriculture. The project will be monitored by Director of Agriculture at state level and Joint Director of Agriculture at district level.

Table 4.7. Budget requirement for Coconut Production

(₹. in lakhs)

Sl. No	Components	Unit	Unit cost	Block Covered	2017-18		2018-19		2019-20		2020-21		2021-22		Total	
					Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin
1	Distribution of T x D hybrid seedlings	No	0.0006	All Blocks	9600	5.76	8600	5.16	8700	5.22	8800	5.28	8900	5.34	44600	26.76
2	Distribution of Tall Seedlings	No	0.0004	All Blocks	27100	10.84	15100	6.04	15800	6.32	16300	6.52	16850	6.74	91150	36.46
3	Distribution of D xT hybrid Seedlings	No	0.0015	B2, B4, B6 & B11	0	0.00	4000	6.00	4000	6.00	4000	6.00	4000	6.00	16000	24.00
4	Distribution of power operated coconut leaf shredder	No	0.6	B8 & B10	1	0.60	2	1.20	3	1.80	3	1.80	4	2.40	13	7.80
5	Distribution of MN mixture	Ha	0.1	All Blocks	1350	135.00	1370	137.00	1380	138.00	1400	140.00	1410	141.00	6910	691.00
6	Distribution of Pheromone traps for Red palm weevil/ Rhinocerous beetle	Ha	0.016	B1, B11 & B12	170	2.72	220	3.52	270	4.32	320	5.12	370	5.92	1350	21.60
7	Distribution of power operated rocker sprayer	No	0.1	B10	0	0.00	1	0.10	2	0.20	3	0.30	3	0.30	9	0.90
8	Distribution of tree climbers	No	0.15	B2, B6, B10 & B11	0	0.00	17	2.55	17	2.55	18	2.70	19	2.85	71	10.65
9	Drip irrigation	Ha	0.35	All Blocks	107	37.45	114	39.90	148	51.80	157	54.95	177	61.95	703	246.05
10	Intercropping with green manures	Ha	0.03	All Blocks	405	12.15	430	12.90	505	15.15	520	15.60	605	18.15	2465	73.95
11	Thanjavur wilt management (root feeding /soil application)	Ha	0.03	B1 & B2	30	0.90	30	0.90	30	0.90	30	0.90	30	0.90	150	4.50
12	Demonstration on Integrated fertiliser management	Ha	0.75	B11	10	7.50	20	15.00	30	22.50	40	30.00	50	37.50	150	112.50
13	Control of Eriophid mite	No. of tree	0.0002	B10	0	0.00	20	0.00	20	0.00	20	0.00	25	0.01	85	0.02

Sl. No	Components	Unit	Unit cost	Block Covered	2017-18		2018-19		2019-20		2020-21		2021-22		Total	
					Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin
14	Establishment of Neera processing unit	No	600	B8	1	600.00	1	600.00	1	600.00	1	600.00	1	600.00	5	3000.00
15	Distribution of wheel barrow	No	0.04	All Blocks except B1, B9, B10 & B12	0	0.00	55	2.20	55	2.20	55	2.20	55	2.20	220	8.80
16	corpus fund release for FPG (2000 nos.)	No	5	All Blocks	65	325.00	0	0.00	0	0.00	0	0.00	0	0.00	65	325.00
	Grand Total					**1137.92**		**832.47**		**856.96**		**871.37**		**891.26**		**4589.99**

Avinashi - B1, Dharapuram - B2, Gudimangalam - B3, Kangayam - B4, Kundadam - B5, Madathukulam - B6, Mulanur - B7, Palladam - B8, Pongalur - B9, Tiruppur - B10, Udmalpet - B11, Uthukuli - B12, Vellakoil - B13

4.1.8. Enhancing the livelihood of farmers through training

Agricultural extension is being provided at block level and below, under the Extension Reforms scheme being implemented. Contact them or any other functionary of the State Government in Agriculture and allied departments to get answers for the queries, information about any Programme / Scheme and appropriate technologies for the area or individual farmer. The new information that farmers gain through these training sessions makes their daily farming activities much easier. It also leads to an increase in productivity and profits in the long run.

Project components

- Training for 536 groups for quality seed production in all the blocks except Madathukulam and Uthukuli blocks
- Training to farmers with in the state in Madathukulam block
- Training with in the state for IFS, major, minor millets cultivation and moisture conservation practices for increasing millet production in all the blocks
- Exposure visit in all the locks with in the state and district

Budget

It is proposed to incur ₹ **113.33** lakhs over a period of five years with the finance facilities under the NADP and other sources.

Expected outcome

The projects will results better income to farmers. They may learn many things to improve their knowledge of cultivation if they listen this programme which will improve the income of the farmers.

Implementing Agency

The projects will be implemented by the Department of Agriculture. The project will be monitored by Director of Agriculture at state level and Joint Director of Agriculture at district level.

Table 4.8. Budget requirement for Trainings

(₹. in lakhs)

Sl. No	Components	Unit	Unit Cost	Block Covered	2017-18		2018-19		2019-20		2020-21		2021-22		Total	
					Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin
	Training of Farmers															
1	Training of 536 Groups of Seed Village Farmers in quality Seed Production technology.	Nos.	0.1	All Blocks except B6 & B12	0	0.00	11	1.10	11	1.10	11	1.10	11	1.10	44	4.40
2	Training of Farmers under Mission Soil Health Card	Nos.	0.15	B1, B10 & B11	0	0.00	3	0.45	3	0.45	3	0.45	3	0.45	12	1.80
3	With in the district training of Farmers	Nos.	0.1	B6	0	0.00	1	0.10	1	0.10	1	0.10	1	0.10	4	0.40
4	With in the State training of Farmers	Nos.	1.2	B6	0	0.00	1	1.20	1	1.20	1	1.20	1	1.20	4	4.80
	Training of Farmers With in the district															
5	Groundnut	Nos.	0.1	B1, B10 & B12	8	0.80	8	0.80	9	0.90	9	0.90	9	0.90	43	4.30
6	IFS	Nos.	0.1	All Blocks	13	1.30	13	1.30	13	1.30	13	1.30	13	1.30	65	6.50
7	Major & Minor Millets	Nos.	0.1	All Blocks	41	4.10	41	4.10	41	4.10	41	4.10	41	4.10	205	20.50
8	Moisture conservation practices	Nos.	0.1	All Blocks except B1 & B10	11	1.10	11	1.10	11	1.10	11	1.10	11	1.10	55	5.50
9	Organic cultivation practices	Nos.	0.1	B1 & B10	2	0.20	2	0.20	2	0.20	2	0.20	2	0.20	10	1.00
10	Paddy	Nos.	0.1	B2, B4, B6 B11 & B13	8	0.80	8	0.80	8	0.80	8	0.80	8	0.80	40	4.00
11	Pulses	Nos.	0.1	All Blocks	26	2.60	26	2.60	26	2.60	26	2.60	26	2.60	130	13.00
12	Value addition training	Nos.	0.1	B1, B10 & B12	3	0.30	3	0.30	3	0.30	3	0.30	3	0.30	15	1.50

Sl. No	Components	Unit	Unit Cost	Block Covered	2017-18		2018-19		2019-20		2020-21		2021-22		Total	
					Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin
	Exposure visit of Farmers		0.4													
13	Rodent Pest Management Demonstration	Nos.	0.04	All Blocks except B1, B10 & B12	47	1.88	50	2.00	50	2.00	50	2.00	50	2.00	247	9.88
14	With in State Exposure visit	Nos.	0.4	All Blocks	13	5.20	13	5.20	13	5.20	13	5.20	13	5.20	65	26.00
15	With in the district exposure visit	Nos.	0.15	All Blocks	13	1.95	13	1.95	13	1.95	13	1.95	13	1.95	65	9.75
	TOTAL					**20.23**		**23.20**		**23.30**		**23.30**		**23.30**		**113.33**

Avinashi - B1, Dharapuram - B2, Gudimangalam - B3, Kangayam - B4, Kundadam - B5, Madathukulam - B6, Mulanur - B7, Palladam - B8, Pongalur - B9, Tiruppur - B10, Udmalpet - B11, Uthukuli - B12, Vellakoil - B13

4.1.9. Infrastructure development

Facilities for Seed production

Seed is the most basic input in agriculture. Therefore, the sustained supply of the quality seeds will continue to be a key factor for augmenting agricultural growth. The seed processing is a vital part of the seed production activities and the State Government has accorded high priority. In view of above, efforts have to be taken with the objective of production of quality seeds of agricultural crops, through scientific methods and adopting appropriate processing techniques through establishment and modernization of State seed processing plants.

After harvesting, cleaning, drying, processing, and packaging, the representative samples of seed lot are required to be taken the laboratory for quality testing. From the test results, genetic, physical, physiological, and health qualities of seeds are determined. Different countries have set their own standards to find out these qualities in the seed lot. The National Seed Board, for instance, has approved maximum amount of moisture content, minimum germination potential, and minimum physical purity in foundation, certified and truthfully labeled seeds of different crops as basic seed standards. The test results must conform the approved seed standards to send the seeds in the market for commercial transaction.

Establishment of Laboratories

Quality control is the process of checking the quality of the material against the standard set by the organizations and if the material does not match with the standards, then such material is said to be substandard. Quality control laboratories are being established by the Government with an intention to supply quality inputs viz., seed, fertilizers, pesticide and services like soil testing to the farmers. To have effective quality control of inputs, quality inspectors are to be appointed.

The Agricultural Research - NABL Accreditation lab, Organic Fertilizer testing laboratory, Bio-Fertilizer Quality Control Laboratory, Pesticide Residual Laboratory and laboratory for leaf analysis for selective nutrient application, Soil Testing Laboratory and Fertilizer Control Laboratory, Strengthening of Mobile Soil Testing Laboratory for Ensuring Soil Health were proposed.

The major interventions are

1. Construction of IAEC with vehicle shed and compound wall in Avinashi, Dharapuram, Tiruppur and Vellakoil blocks.
2. Construction of Sub-AEC in Dharapuram and Kageyam blocks

Budget

It is proposed to incur ₹ **1610.00** lakhs over a period of five years with the finance facilities under the NADP and other sources.

Expected outcome

The projects will results better income to farmers. They may learn many things to improve their knowledge of cultivation through basic infrastructure facilities which improve the income of farmers.

Implementing Agency

Department of Agriculture will implement the project and report the progress to the District-level officials.The project will be monitored by Director of Agriculture at state level and Joint Director of Agriculture at district level.

Table 4.9. Budget requirement for Infrastructure develpment

(₹. in lakhs)

Sl. No	Components	Unit	Unit Cost	Blocks Covered	2017-18		2018-19		2019-20		2020-21		2021-22		Total	
					Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin
1	Construction of Integrated Agricultural Extension Centre with vehicle shed and compound wall	Nos.	25000000	B1, B2, B10 & B13	0	0.00	4	1000.00	0	0.00	0	0.00	0	0.00	4	1000.00
2	Construction of Sub-Agricultural Extension Centre (498 Nos.)	Nos.	3000000	B2 & B4	1	30.00	1	30.00	0	0.00	0	0.00	0	0.00	2	60.00
3	Strengthening of training institute / nursery / FTC / KVK	Nos.	50000000	All Blocks	0	0.00	0	0.00	0	0.00	1	500.00	0	0.00	1	500.00
4	Infrastructure for empowerment of coconut nurseries	Nos.	5000000	All Blocks	0	0.00	0	0.00	1	50.00	0	0.00	0	0.00	1	50.00
	Grand total					**30.00**		**1030.00**		**50.00**		**500.00**		**0.00**		**1610.00**

Avinashi - B1, Dharapuram - B2, Gudimangalam - B3, Kangayam - B4, Kundadam - B5, Madathukulam - B6, Mulanur - B7, Palladam - B8, Pongalur - B9, Tiruppur - B10, Udmalpet - B11, Uthukuli - B12, Vellakoil - B13

4.1.10. Soil Health Management

It has been observed that the average productivity of major crops in Tamil Nadu is only about 60 per cent of the potential yield. The reason is due to decline in organic matter content of the soil that leads to low soil fertility. The availability of organic manures to farmers has become scanty and costly. The importance of FYM/Green manuring in maintaining the organic matter status of the soil has to be educated to the farmers. The total production of bio-fertilizers has to be stepped up to meet the growing demand. Similarly, crop based micronutrient mixtures need to be promoted. Soil amendments *viz.,* gypsum and lime have to be provided at a subsidized rate as a reclamation measure for the cultivable acid and alkali soils. Besides, efficient earthworm cultures should be provided for vermicompost unit for establishment of vermicompost units with training in vermicompost production.

Project Component

- Distribution of enriched press mud and blue green algae
- Establishment of model organic villages
- Distribution of soil health card in all the blocks
- Composting of Farm waste through pluerotus in Madathukulam, Mulanur, Pongalur, Palladam, Udumalpet and Tiruppur blocks.
- Establishment of permanent vermicomposting units in all the blocks except Dharamangalam and Vellakoil blocks
- Establishment of HDPE vermicomposting units in all the blocks

Budget

Enhancing soil health by distributing enriched farm yard manure, micro-nutrient mixture, gypsum, bio-fertilizers, *etc.* is essential to maximize profit. The overall budget to undertake the various interventions in the district is **₹1,593.09** lakhs.

Expected Outcome

Healthy soils are the foundation for profitable, productive and environmentally sound agricultural systems. In an agricultural context, it refers to the ability of the soil to sustain agricultural productivity and protect environmental resources. The proposed soil health management practices will improve soil health by increasing productivity and profitability immediately and into the future.

Implementing Agency

The projects will be implemented by the Department of Agriculture.The project will be monitored by Director of Agriculture at state level and Joint Director of Agriculture at district level.

Table 4.10. Budget for interventions in Soil Health Management

(₹. in lakhs)

Sl. No	Components	Unit	Unit Cost	Blocks Covered	2017-18		2018-19		2019-20		2020-21		2021-22		Total	
					Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin
	Soil Health Management															
1	Permanent Vermi compost units	Cluster Nos.	50000	All Blocks except B2 & B13	8	4.00	16	8.00	16	8.00	17	8.50	17	8.50	74	37.00
2	HDPE Vermi compost units	Kit Nos	12000	All Blocks	9	1.08	21	2.52	21	2.52	21	2.52	22	2.64	94	11.28
3	Green Manuring	Nos	4000	All Blocks	1145	45.80	1175	47.00	1225	49.00	1255	50.20	1295	51.80	6095	243.80
4	Establishment of Model organic villages	Ha	1000000	B1, B2, B3, B10, B11, B12 & B13	0	0.00	7	70.00	0	0.00	0	0.00	0	0.00	7	70.00
5	Adoption of PGS certification through cluster approach	Nos	1495000	B1, B10 & B12	0	0.00	3	44.85	3	44.85	3	44.85	3	44.85	12	179.40
6	Production of Enriched FYM	MT	2500	B3	10	0.25	10	0.25	10	0.25	10	0.25	10	0.25	50	1.25
7	Composting of Farm Waste Through Pluerotus (Production and Distribution of Kits)	MT	200	B6, B7, B8, B9, B10 & B11	31	0.06	50	0.10	56	0.11	62	0.12	69	0.14	268	0.54
8	Distribution of Soil Health Card	Ha	300	All Blocks	68033	204.10	71996	215.99	68353	205.06	72356	217.07	69202	207.61	349940	1049.82
	Total					**255.29**		**388.71**		**309.79**		**323.51**		**315.78**		**1593.09**

Avinashi - B1, Dharapuram - B2, Gudimangalam - B3, Kangayam - B4, Kundadam - B5, Madathukulam - B6, Mulanur - B7, Palladam - B8, Pongalur - B9, Tiruppur - B10, Udmalpet - B11, Uthukuli - B12, Vellakoil - B13

4.1.11. Rainfed Area Development (RAD)

Rainfed areas account for nearly 57 per cent of the agricultural land in India. Rainfed areas if managed properly have the potential to contribute a larger share in the food grain production. These high potential rainfed areas provide us with the opportunities for faster agricultural growth compared to irrigated areas that have reached a plateau. In-fact the potential is such that there is more opportunity for faster agricultural growth here than in irrigated areas. With proper management, rainfed areas have the potential of contributing a larger share to food grain production. Increasing agricultural productivity of rainfed areas in a sustainable manner by adopting appropriate farming system based approaches through restoration of confidence in rainfed agriculture by creating sustained employment opportunities through improved on-farm technologies and cultivation practices.

Project components

- Stress management in crops by the Application of Pink Pigmented Facultative Methylotrophs (PPFM spray)/ Kcl Spray in Gudimangalm, Pongalur and Udumalpet.
- Promotion of Milch Animal (1 no) + 1 ha cropping system with inter crop & border plantation like castor/sesbania etc. in Kangeyam and Uthukuli
- Small ruminant (9+1)+ 1 ha Tree based farming system (Cropping system with inter crop & border plantation like castor/sesbania etc.)
- Promotion of Farmers club for Sustainable Dryland Agriculture in Gudimangalm block

Budget

It is proposed to incur **₹1,602.36** lakhs over a period of five years with the finance facilities under the NADP and other sources.

Expected outcome

The e outcome of the project will result in an increase in the production of the rainfed crops which will improve the income of the farmers.

Implementing Agency

The projects will be implemented by the Department of Agriculture. The progress will be monitored by Director of Agriculture and State nodal agencies.

4.11. Budget requirement for Rainfed Area Development (RAD)

(₹. in lakhs)

Sl. No	Components	Unit	Unit cost	Block Covered	2017-18		2018-19		2019-20		2020-21		2021-22		Total	
					Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin
1	Stress Management in crops by the Application of Pink Pigmented Facultative Methylotrophs (PPFM spray)/ Kcl Spray	Ha	0.004	B3, B8,B10	70	0.28	80	0.32	90	0.36	100	0.40	110	0.44	450	1.80
2	Milch Animal (1 no) + 1 ha cropping farming system (Cropping system with inter crop & border plantation like castor/sesbania etc.) @ Rs.27500/ as subsidy per Unit	Ha	0.55	B3 & B12	104	57.20	200	110.00	200	110.00	200	110.00	200	110.00	904	497.20
3	Small ruminant (9+1)+ 1 ha Tree based farming system (Cropping system with inter crop & border plantation like castor/sesbania etc.) @ Rs.23500/ as subsidy per Unit	Ha	0.47	B5 & B7	200	94.00	0	0.00	0	0.00	0	0.00	0	0.00	200	94.00
4	Creation of Farm pond	Nos.	0.75	B3	20	15.00	20	15.00	20	15.00	20	15.00	20	15.00	100	75.00
5	Promotion of Farmers club for Sustainable Dryland Agriculture	Cluster	84.9415	All Blocks except B1 & B6	0	0.00	11	934.36	0	0.00	0	0.00	0	0.00	11	934.36
	Grand Total					**166.48**		**1059.68**		**125.36**		**125.40**		**125.44**		**1602.36**

Avinashi - B1, Dharapuram - B2, Gudimangalam - B3, Kangayam - B4, Kundadam - B5, Madathukulam - B6, Mulanur - B7, Palladam - B8, Pongalur - B9, Tiruppur - B10, Udmalpet - B11, Uthukuli - B12, Vellakoil - B13

4.1.12. Integrated Pest Management (IPM)

Integrated Pest Management also known as integrated pest control is a broad based approach that integrates practices for economic control of pests. IPM aims to suppress pest populations below the economic injury level. IPM used in agriculture, horticulture, forestry, human habitations, preventive conservation and general pest control, including structural pest management. The principle is on control not eradication. IPM holds that wiping out an entire pest population is often impossible and the attempt can be expensive and unsafe. IPM programmes first work to establish acceptable pest levels, called action thresholds, and apply controls if those thresholds are crossed. The IPM process starts with monitoring, which includes inspection and identification, followed by the establishment of economic injury levels. Integrated pets management employs variety of actions including cultural controls, including physical barriers, biological controls, including adding and conserving natural predators and enemies to the pest and finally chemical controls or pesticides.

Farmers Field Schools (FFS) is group based learning process that has been used by a governments to promote Integrated Pest Management (IPM). The FFS is a form of adult education, which evolved from the concept that farmers learn optimally from field observation and experimentation. It was developed to help farmers tailor their IPM practices to diverse and dynamic ecological conditions.

Interventions

1. Farmers Field Schools (FFS) in Mulanur blocks
2. Field days

Budget

It is proposed to incur ₹ **2.00** lakhs over a period of five years with the finance facilities under the NADP and other sources.

Expected outcome

The project will results may increase the productivity of crops through following of IPM technologies for controlling of pest and disease which will improve the income of the farmers.

Implementing Agency

Department of Agriculture will implement the project and report the progress to the District-level officials. The project will be monitored by Director of Agriculture at state level and Joint Director of Agriculture at district level.

Table 4.12. Budget for interventions in IPM

(₹. in lakhs)

Sl. No	Components	Unit	Unit Cost	Blocks covered	2017-18		2018-19		2019-20		2020-21		2021-22		Total	
					Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin
1	Farmers Field Schools (FFS)	Nos.	0.20	B7	1	0.20	1	0.20	1	0.20	1	0.20	1	0.20	5	1.00
2	Field days	No.	0.20	B7	1	0.20	1	0.20	1	0.20	1	0.20	1	0.20	5	1.00
	Total					**0.40**		**0.40**		**0.40**		**0.40**		**0.40**		**2.00**

Avinashi - B1, Dharapuram - B2, Gudimangalam - B3, Kangayam - B4, Kundadam - B5, Madathukulam - B6, Mulanur - B7, Palladam - B8, Pongalur - B9, Tiruppur - B10, Udmalpet - B11, Uthukuli - B12, Vellakoil - B13

4.1.13. Farm Mechanization

Agricultural mechanization is the need of the hour to meet out the growing shortage of labour workforce in agriculture. It has been identified as one of the critical inputs for increasing production in time. The labour intensive crops need high man power requirement, which is fast depleting and posing a big challenge to crop productivity. Agricultural labour wages are increasing at an alarming rate in Tamil Nadu resulting in shifting from labour intensive to mechanization intensive techniques. The farm machinery for land preparations, land development, seeding, planting, transplanting, weeding and intercultural operations, harvesting and threshing which are predominantly used in other parts of the country / other countries are proposed for introduction in the farmers field of Cuddalore district.

Project Component

- Solar light trap, power operated sparyer, distributin of tarpaulins, battery operated sprayer in all the blocks except Kudadam.
- Distribution of cono weeder in Madathukulam.
- Distribution of power tiller in Udumalpet blocks.
- Distribution of tractor in Gudimangalm and Pongalur blocks.

Budget:

Agricultural mechanization programs are proposed to implement in a big way to increase the agricultural production and to popularize the agricultural machinery among the farmers of this district with a budget of ₹ **1,470.25** lakhs.

Expected Outcome:

Distribution of farm machinery / implements to farmers will increase the farm power. All the proposed agricultural machinery / implements will be put into use by the farmers. The acute agricultural labour scarcity will be reduced. The benefit of agricultural mechanization is to be extended to all categories of farmers with due consideration to small, marginal, scheduled caste, scheduled tribes and women farmers.

Implementing Agency:

The projects will be implemented by the Department of Agriculture. The project will be monitored by Director of Agriculture at state level and Joint Director of Agriculture at district level.

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Table 4.13. Budget for interventions in Farm Machineries

(₹. in lakhs)

Sl. No	Components	Unit	Unit Cost	Block Covered	2017-18		2018-19		2019-20		2020-21		2021-22		Total	
					Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin
	Farm Mechanization															
1	Solar light trap	Nos.	0.04	All Blocks except B5	180	7.20	180	7.20	200	8.00	200	8.00	240	9.60	1000	40.00
2	Battery operated sprayer	Nos.	0.04	All Blocks except B5	87	3.48	87	3.48	88	3.52	88	3.52	88	3.52	438	17.52
3	Power operated sprayer	Nos.	0.08	All Blocks except B5	73	5.84	78	6.24	78	6.24	78	6.24	80	6.40	387	30.96
4	Hand operated sprayer	Nos.	0.015	B3	5	0.08	5	0.08	5	0.08	5	0.08	5	0.08	25	0.38
5	Distribution of chaff cutter	Nos	0.25	All Blocks except B5, B6, B8 & B10	39	9.75	344	86.00	344	86.00	344	86.00	344	86.00	1415	353.75
6	Distribution of cono weeder	Nos	0.02	B6	1	0.02	1	0.02	1	0.02	1	0.02	1	0.02	5	0.10
7	Distribution of Mobile Sprinklers	Ha	0.30	All Blocks except B2, B5 & B9	112	33.60	114	34.20	119	35.70	128	38.40	147	44.10	620	186.00
8	Distribution of Powertiller	Nos	1.5	B11	0	0.00	1	1.50	1	1.50	1	1.50	1	1.50	4	6.00
9	Distribution of Pumpset	Nos	0.30	B10	2	0.60	2	0.60	2	0.60	2	0.60	2	0.60	10	3.00
10	Distribution of Rain guns	Ha	0.40	All Blocks except B3, B5, B7, B8 & B9	51	20.20	51	20.20	54	21.30	61	24.10	67	26.30	284	112.10
11	Distribution of Rotavator	Nos	0.80	All Blocks except B5 & B8	23	18.40	26	20.80	27	21.60	27	21.60	27	21.60	130	104.00
12	Distribution of Tarpaulins	Nos	0.08	All Blocks except B5	87	6.96	99	7.92	102	8.16	106	8.48	114	9.12	508	40.64
13	Distribution of Tractor	Nos	6.00	B3 & B9	2	12.00	3	18.00	3	18.00	2	12.00	2	12.00	12	72.00

Sl. No	Components	Unit	Unit Cost	Block Covered	2017-18		2018-19		2019-20		2020-21		2021-22		Total	
					Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin
14	PVC Pipes to carry Irrigation water from source to field	Unit	0.40	All Blocks except B3 & B5	103	41.20	105	42.00	107	42.80	109	43.60	113	45.20	537	214.80
15	Solar power pump system	Nos	6.00	B1, B2, B4, B9, B12 & B13	5	29.00	11	65.00	11	65.00	11	65.00	11	65.00	49	289.00
	Total					**188.33**		**313.24**		**318.52**		**319.14**		**331.04**		**1470.25**

Avinashi - B1, Dharapuram - B2, Gudimangalam - B3, Kangayam - B4, Kundadam - B5, Madathukulam - B6, Mulanur - B7, Palladam - B8, Pongalur - B9, Tiruppur - B10, Udmalpet - B11, Uthukuli - B12, Vellakoil - B13

4.1.14. Strengthening of State Seed Farm

Seed is the basic and most critical input for sustainable agriculture. The response of all other inputs depends on quality of seeds to a large extent. It is estimated that the direct contribution of quality seed alone to the total production is about 15–20 per cent depending upon the crop and it can be further raised up to 45 per cent with efficient management of other inputs. The total seed requirement of the country amounts to 2.56 lakh tonnes. However, about 20 per cent of the total seed requirement is met as quality seeds, while the rest is managed by farm saved seeds. The main reason for wider gap in agricultural crops especially pulses and oilseeds was that most of the private and multinational companies are concentrating on high value and low volume crops like hybrid cotton, millets and vegetables whereas only public institutions are producing and marketing high volume and low value crops like pulses and oilseeds. Hence, high emphasis has to be given for the production and supply of quality seeds of pulses and oilseeds to farmers and increase the Seed Replacement Rate. Hence there is an urgent need for the State Seed Corporations also to transform themselves in tune with the industry in terms of infrastructure, technologies, approach and the management culture to be able to survive in the competitive market and to enhance their contribution in the national endeavour of increasing food production to attain food & nutritional security.Therefore, the infrastructure facilities at the SSFs like levelled land, more area, assured irrigation, thrashing floor, drying yard, processing units, storage etc., are essential to produce, process and pack quality seeds. Therefore, the strengthening of state seed farms is aimed for quality seed production in Tamil Nadu.

Project components

- Soil Fertility Improvement and Land development works.
- Provision of Irrigation facilities viz., Solar pump sets, Deepening of bore well Laying of pipelines, Rain gun, Mobile sprinkler, Laying of drip, New bore well with EB connection, Deepening of open well and Farm pond in Madathulam block.
- Infrastructure development for seed production.

Budget

It is proposed to incur ₹ **172.05** lakhs over a period of five years with the finance facilities under the NADP and other sources.

Expected outcome

The expected outcome of the project will result it will enhance production of quality seeds of different crop varieties and ensure timely delivery of seeds to farmers and it will increase supply of good quality seed which increase the production of the crops and the income of the farmers of Tamil Nadu.

Implementing Agency

Department of Agriculture will implement the project and report the progress to the District-level officials.

Table 4.14. Budget for interventions in SSF

(₹. in lakhs)

Sl. No	Components	unit	unit cost	Blocks covered	2017-18		2018-19		2019-20		2020-21		2021-22		Total	
					Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin
I	**Soil Fertility Improvement and Land development works in SSF**	ac	2	B6	0	0.00	0	0.00	0	0.00	0	0.00	8	16.00	8	16.00
II	**Irrigation Component**															
1	Laying of pipelines	mt	0.05	B6	1000	50.00	0	0.00	0	0.00	0	0.00	0	0.00	1000	50.00
2	Rain gun	nos	0.4	B6	0	0.00	5	2.00	0	0.00	0	0.00	0	0.00	5	2.00
3	Laying of drip	nos	2	B6	0	0.00	1	2.00	0	0.00	0	0.00	0	0.00	1	2.00
4	New bore well with EB connection	nos	8	B6	0	0.00	0	0.00	1	8.00	0	0.00	0	0.00	1	8.00
5	Deepening of open well	nos	8	B6	0	0.00	1	8.00	0	0.00	0	0.00	0	0.00	1	8.00
III	**Machineries**															
6	Dunnage (Poly Pallets)	nos	0.075	B6	0	0.00	50	3.75	0	0.00	0	0.00	0	0.00	50	3.75
7	Seed grading machine	nos	20	B6	1	20.00	0	0.00	0	0.00	0	0.00	0	0.00	1	20.00
8	Tarpaulin	nos	0.1	B6	3	0.30	0	0.00	0	0.00	0	0.00	0	0.00	3	0.30
9	Generator	nos	7	B6	1	7.00	0	0.00	0	0.00	0	0.00	0	0.00	1	7.00
IV	**Civil Works**															
10	seed godown	nos	25	B6	0	0.00	1	25.00	0	0.00	0	0.00	0	0.00	1	25.00
11	culvert	nos	6	B6	2	12.00	0	0.00	0	0.00	0	0.00	0	0.00	2	12.00
12	Farm office renovation	nos	3	B6	0	0.00	0	0.00	0	0.00	1	3.00	0	0.00	1	3.00
13	Farm connectivity	Meter	0.015	B6	0	0.00	0	0.00	1000	15.00	0	0.00	0	0.00	1000	15.00
	Total					**89.30**		**40.75**		**23.00**		**3.00**		**16.00**		**172.05**

Avinashi - B1, Dharapuram - B2, Gudimangalam - B3, Kangayam - B4, Kundadam - B5, Madathukulam - B6, Mulanur - B7, Palladam - B8, Pongalur - B9, Tiruppur - B10, Udmalpet - B11, Uthukuli - B12, Vellakoil - B13

4.1.15. Information Technology in Agriculture

Agriculture is the major sector which is vital for the survival of modern man. The produce from agriculture drives trade from one country to another, brings income for farmers, makes productive use of otherwise idle land, and brings food on the table. It is such an important part of everyone's daily life, although it may not be seen as a direct factor since the produce goes a long way before reaching the hands of everyone who benefits from it. Because of its importance to society, it's must to evolve with the times and adjust to meet the needs of modern people. By adapting and making use of IT to help improve agricultural progress, everyone benefits from the union of these sectors.

Role of IT in Agriculture

In the context of agriculture, the potential of information technology (IT) can be assessed broadly under two heads: (a) as a tool for direct contribution to agricultural productivity and (b) as an indirect tool for empowering farmers to take informed and quality decisions which will have positive impact on the way agriculture and allied activities are conducted. The indirect benefits of IT in empowering farmers are significant and remain to be exploited. The farmer urgently requires timely and reliable sources of information inputs for taking decisions. At present, farmers depend on trickling down of decision inputs from conventional sources which are slow and unreliable. The changing environment faced by farmers makes information not merely useful, but necessary to remain competitive.

Components include distribution of input devices, output devices, processors, storage devices, software, networking devices, transmission media and other accessories in all the blocks.

Budget

It is proposed to incur ₹ **113.52** lakhs over a period of five years with the finance facilities under the NADP and other sources.

Expected outcome

The expected outcome of the project will result in an increase in the adoption of technologies for production of the crops which will improve the income of the farmers

Implementing Agency

Department of Agriculture will implement the project and report the progress to the District-level officials.

Table 4.15. Budget for interventions in Information Technonlogy

(₹. in lakhs)

Sl. No	Components	Unit	Unit Cost (in Rs.)	Blocks Covered	2017-18		2018-19		2019-20		2020-21		2021-22		Total	
					Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin
1	Procurement of Hardware for replacement of old hardware	Nos	0.50	All Blocks	0	0.00	13	6.50	13	6.50	13	6.50	15	7.50	54	27.00
2	Connectivity Charges	Nos	0.11	All Blocks	0	0.00	13	1.43	13	1.43	13	1.43	15	1.65	54	5.94
3	Printer cum Scanner	Nos	0.20	All Blocks	0	0.00	13	2.60	0	0.00	0	0.00	0	0.00	13	2.60
4	UPS and Electrical Accessories	Nos	0.35	All Blocks	0	0.00	13	4.55	0	0.00	0	0.00	0	0.00	13	4.55
5	Xerox machine	Nos	0.75	All Blocks	0	0.00	13	9.75	0	0.00	0	0.00	0	0.00	13	9.75
6	Laptop/Desktop	Nos	0.50	All Blocks	0	0.00	13	6.50	0	0.00	0	0.00	0	0.00	13	6.50
7	Anti -virus software	Nos	0.025	All Blocks	0	0.00	12	0.30	0	0.00	0	0.00	0	0.00	12	0.30
8	Television	Nos	1.00	All Blocks	0	0.00	13	13.00	0	0.00	0	0.00	0	0.00	13	13.00
9	Colour printer	Nos	0.15	All Blocks	0	0.00	13	1.95	0	0.00	0	0.00	0	0.00	13	1.95
10	4G Internet - Dongle	Nos	0.025	All Blocks	0	0.00	13	0.33	0	0.00	0	0.00	0	0.00	13	0.33
11	**Equipments for Documentation**															
a	Handycam	Nos	0.30	All Blocks	0	0.00	13	3.90	0	0.00	0	0.00	0	0.00	13	3.90
b	Camera	Nos	0.25	All Blocks	0	0.00	13	3.25	0	0.00	0	0.00	0	0.00	13	3.25
c	GPS instrument	Nos	0.20	All Blocks	0	0.00	13	2.60	0	0.00	0	0.00	0	0.00	13	2.60
d	Android mobile	Nos	0.15	All Blocks	0	0.00	13	1.95	0	0.00	0	0.00	0	0.00	13	1.95
e	External Hard disk	Nos	0.05	All Blocks	0	0.00	13	0.65	0	0.00	0	0.00	0	0.00	13	0.65
12	Audio - visual Aids	Nos	1.50		0	0.00	13	19.50	0	0.00	0	0.00	0	0.00	13	19.50
	LCD projector	Nos	0.75	All Blocks	0	0.00	13	9.75	0	0.00	0	0.00	0	0.00	13	9.75
	Total					**0.00**		**88.51**		**7.93**		**7.93**		**9.15**		**113.52**

Avinashi - B1, Dharapuram - B2, Gudimangalam - B3, Kangayam - B4, Kundadam - B5, Madathukulam - B6, Mulanur - B7, Palladam - B8, Pongalur - B9, Tiruppur - B10, Udmalpet - B11, Uthukuli - B12, Vellakoil - B13

4.16. Budget requirement for Agriculture sector

(₹. in lakhs)

Sl. No	Components	2017-18	2018-19	2019-20	2020-21	2021-22	Total
1	Paddy	94.45	173.42	175.49	187.38	191.54	822.22
2	Millets	77.26	156.44	167.04	180.82	190.70	772.25
3	Pulses	242.78	309.21	320.48	327.34	346.18	1546.01
4	Oilseeds	144.59	193.48	203.89	218.90	239.88	1000.74
5	Oilpalm	28.16	28.30	35.14	42.24	50.38	184.22
6	Cotton	0.00	0.00	0.00	0.00	0.00	0.00
7	Sugarcane	105.25	119.25	125.45	131.66	144.06	625.67
8	Coconut	1137.92	832.47	856.96	871.37	891.26	4589.99
9	Training	20.23	23.20	23.30	23.30	23.30	113.33
10	Infrastructure	30.00	1030.00	50.00	500.00	0.00	1610.00
11	Soil Health Management	255.28	388.71	309.79	323.51	315.78	1593.09
12	Rainfed Area Development	166.48	1059.68	125.36	125.40	125.44	1602.36
13	Integrated Pest Management	0.40	0.40	0.40	0.40	0.40	2.00
14	Farm Mechanization	188.34	313.24	318.52	319.14	331.04	1470.25
15	Strengthening of State Seed Farm	89.31	40.75	23.00	3.00	16.00	172.05
16	Agriculture Information Technology	0.00	88.51	7.93	7.93	9.15	113.52
	Total	**2580.45**	**4757.06**	**2742.75**	**3262.39**	**2875.11**	**16217.70**

4.2. HORTICULTURE

Horticulture plays a vital role in the food and nutritional security of the people as well as in earning foreign exchange through export of raw and value added horticultural crops. Farmers are ready to go for the cultivation of horticultural crops which prove remunerative. The challenge lies in taking the technologies to 90 per cent of farmers who are small and marginal farmers. In all, horticulture crops are grown in 10.01 lakh hectares, of which vegetables, spices, plantation crops, flowers and medicinal plants are the major crops cultivated in the State. Totally, 86 horticultural crops are grown in the State which clearly indicates the crop diversity and also the possibility of augmenting the income of farmers. The major strategies suggested are as follows:

Area expansion of Horticultural crops

Fruit Crops

Today's changing food pattern enhances the area expansion under fruits. The preferable choices of fruits are Mango, Apple, Banana, Grapes, Orange, Guava, Pomegranate, Sapota etc. Fruits are rich in fiber which is very essential for the smooth conduct of the digestive system. There are some fruits that gives body energy as they contain carbohydrates which are the main source of energy. Carbohydrates in fruits are mainly sugar which actually breaks down easily and make a quick source of energy. They also contain minerals, vitamins and nutrients that are useful for healthy life. Considering the importance of fruits, the productivity can be increased by promotion of cultivation of fruit crops in the potential areas.

Vegetable crops

Vegetables are the store houses of most of the vitamins and minerals and also proteins. In order to ensure continuous supply of fresh vegetables to the burgeoning urban markets, it is absolutely necessary to create forward linkages from rural to urban areas. This will also ensure assured income to farmers in the rural areas adjoining the cities. Cultivation of vegetables, formation of farmer clusters, formation of farmers society, collection centers, reefer vans, retail outlets, mobile stores are the components to be promoted for increasing the productivity and marketing of vegetables.

Flower crops

The major flowers grown are Gundumalli, Mullai, Rose, Crossandra, Chrysanthemum, Marigold, Tuberose, Arali, Jathimalli etc. Floriculture activity has evolved as a viable and

profitable alternative, with a potential to generate remunerative self-employment among small & marginal farmers. The flower crops require lots of manpower for picking flowers and perform other operations, hence providing opportunity to marginal and small farmers for generating more income, employment and promote greater involvement of women work force. Keeping this in mind, the promotion area of cultivation of traditional and cut flowers are planned for different flower crops.

Spice crops

Spice crops play a unique role in India's economy by improving the income of the rural people. Cultivation of spices is labor intensive so it can generate lot of employment for the rural population. The demand of Indian spice is very much in other countries. Hence production of spices has very much scope to meet that demand by huge production.

Plantation crops

Plantation crops are high value commercial crops of greater economic importance. These crops help to conserve the soil and ecosystem. The crops include tea, coffee, rubber, cocoa, coconut, arecanut, oil palm, cashew, cinchona etc. So the promotion of cultivation of plantation crops in the potential districts will increase the income of the farmer and also Indian economy.

Rainfed Area development

Rainfed Area Development Programme is structured in Thiruvarur with broad objectives of; a) Increasing agricultural productivity of rainfed areas in a sustainable manner by adopting appropriate farming system based approaches; b) To minimize the adverse impact of possible crop failure due to drought, flood or un-even rainfall distribution through diversified and composite farming system; c) Restoration of confidence in rainfed agriculture by creating sustained employment opportunities through improved on-farm technologies and cultivation practices; d) Enhancement of farmer's income and livelihood support for reduction of poverty in rainfed areas e) Convergence of relevant developmental programmes in project area for optimal utilization of resources by establishing an integrated and coordinated system involving different sectors and institutions.

Organic farming

Organic farming is an alternative agricultural system which originated early in the 20th century in reaction to rapidly changing farming practices. It relies on fertilizers of organic origin such as compost, manure, green manure, and bone meal and places emphasis on techniques such as crop rotation, companion planting. Biological pest control, mixed cropping and fostering of insect predators are encouraged. Since 1990, the market for organic food and other products has grown rapidly, reaching $63 billion worldwide in 2012. This demand has driven a similar increase in organically managed farmland that grew from 2001 to 2011 at a compounding rate of 8.9 per cent per annum. As of 2011, approximately 3.70 lakh hectares worldwide were farmed organically, representing approximately 0.9 per cent of total world farmland. Organic farming encourages crop diversity. The science of agro ecology has revealed the benefits of polyculture (multiple crops in the same space), which is often employed in organic farming. Planting a variety of vegetable crops supports a wider range of beneficial insects, soil microorganisms, and other factors that add up to overall farm health. Crop diversity helps environments thrive and protects species from going extinct. The profitability of organic agriculture can be attributed to a number of factors. First, organic farmers do not rely on synthetic fertilizer and pesticide inputs, which can be costly. In addition, organic foods currently enjoy a price premium over conventionally produced foods, meaning that organic farmers can often get more for their yield.

The price premium for organic food is an important factor in the economic viability of organic farming. Organic agriculture can contribute to ecologically sustainable, socio-economic development, especially in poorer countries. The application of organic principles enables employment of local resources (e.g., local seed varieties, manure, etc.) and therefore cost-effectiveness. Local and international markets for organic products show tremendous growth prospects and offer creative producers and exporter's excellent opportunities to improve their income and living conditions.

Bee keeping for pollination

Production of apiary honey in the country reached 10,000 tons, valued at about Rs.300 million. Bee-Keeping Industry is one of the important activities. The Government provides financial support to this Industry by way of providing grant for supply of bee-hives to the Tribal on hill areas, Scheduled Castes /Scheduled Tribes under Western Ghats Development Programmes, Hill Area Development Programme and Integrated Tribal Development

Programme. The income earned by the farmers through bee-keeping activities is an additional income to their agriculture income. Honey industry in the country can well become a major foreign exchange earner if international standards are met. Beekeeping is an age-old tradition in India but it is considered a no-investment profit giving venture in most areas. Of late, it has been recognized that it has the potential to develop as a prime agri-horticultural and forest-based industry. Honey production is a lucrative business and it generates employment.

Crop Insurance and Risk Mitigating schemes

Risk is exacerbated by a variety of factors, ranging from climate variability and change, frequent natural disasters, uncertainties in yields and prices, weak rural infrastructure, imperfect markets and lack of financial services including limited span and design of risk mitigation instruments such as credit and insurance. Farmers face not only yield loss but also economic loss. Therefore, to protect the farmers against yield and market losses, crop insurance is an important need.

Protected cultivation

Precision Farming through Hi tech cultivation Practices is proposed to plan for increasing the production of crops by adopting advanced technology like high tech cultivation practices which includes high density planting, use of quality planting materials, tissue culture planting materials, canopy management, micro irrigation fertigation, mulching, use of bunch sleeves for banana, protected cultivation, shade net nursery and mechanization in horticulture crop cultivation by popularizing the same among the growers to enhance productivity. It is proposed to adopt high density planting in mango, guava and sapota in selected districts of the State by providing subsidy.

Vermi compost Units

It is also imperative to establish vermi compost production laboratories. Organic input like vermi compost is now a days in high demand by most of the farmers and house owners especially by the city dwellers. To promote the organic input like vermi compost by providing HDPE vermi beds.

Supporting structures for fruit production

The allocation of area under fruits is highly influenced by the prevailing market prices and hence the area is fluctuating year after year. The productivity of fruits is also comparatively lower than the attainable average yield. As the area under fruit crops is influenced by market

price, the possibility of increasing the production can be increased by improving the productivity of fruits. The major goal or objective of the project is to increase the area and productivity of fruits by 15 to 20 per cent in the next five years. The major intervention in this project is; permanent pandal installation to increase the fruit` production, staking/ trellies/ propping in fruits crops to increase the productivity as well as the standard of living of the farming communities.

Post-Harvest Management

In agriculture, postharvest handling is the stage of crop production immediately following harvest, including cooling, cleaning, sorting and packing. Postharvest treatment largely determines final quality, whether a crop is sold for fresh consumption, or used as an ingredient in a processed food product. The most important goals of post-harvest handling is to avoid moisture loss and slow down undesirable chemical changes, and avoiding physical damage such as bruising, to delay spoilage. Sanitation is also an important factor, to reduce the possibility of pathogens that could be carried by fresh produce, for example, as residue from contaminated washing water.

Mechanization - Machineries, Equipments and Tools

Horticultural mechanization helps in increasing production, productivity and profitability in horticulture by achieving timeliness in farm operations, bringing precision in metering and placement of inputs, reducing available input losses, increasing utilization efficiency of costly inputs (seed, chemical, fertilizer, irrigation, water etc.), reducing unit cost of produce, enhancing profitability and competitiveness in the cost of operation. It also helps in the conservation of the produce and byproducts from qualitative and quantitative damages; enables value addition and establishment of agro processing enterprises for additional income and employment generation from farm produce. It is one of the important inputs to usher in all round development of the district.

District Horticulture information and training centre

The information center also houses a training center where all the training programmes are being imparted. This includes training under various schemes like Mission for Integrated Development of Horticulture, Micro Irrigation, Medicinal plants, Perimetro vegetable cluster development Scheme, ATMA (SSEPER) etc. The Centre would not only provide employment,

but also training to agriculturists in batches on raising vegetable and horticultural crops and conduct orientation programme for Department officials.

Additionally, to augment the promotion of cut flowers and other horticulture crops cold storage facilities can also be made in the horticulture complex. The other facilities like glass house, green house for production and multiplication of ornamental plants will also be established in the training centre for demonstration purpose.

Water / Irrigation Management

Irrigation Management is important since it helps determine future irrigation expectations. Irrigation is the artificial exploitation and distribution of water at project level aiming at application of water at field level to agricultural crops in dry areas or in periods of scarce rainfall to assure or improve crop production. The goal of irrigation management is to use water in the most profitable way at sustainable production levels.

Capacity building

Building the indigenous human capacity required to support smallholders investing in horticultural enterprises is very essential. This can be done with the a) Promoting training and capacity building, b) Organizing in situ training sessions with the skilled and experienced faculties, c) Organizing e-learning programs with specific partners, d) Organizing workshops and seminars to better implicate these farmers in the horticultural sector. This is achieved by bringing the farmers to the nearby district and also outside the district through training programmes thereby creating awareness among farmers for the cultivation of horticulture crops and also in adoption of new technologies.

Budget

The total cost of the project for 5 years is estimated as **₹ 24,587.28** lakhs

Implementing Agency

The projects will be implemented by the Department of Horticulture.

Table 4.17.Budget requirement for Horticultural Productivity

(₹. in lakhs)

Sl. No.	Interventions	Unit	Unit cost	Block Covered	2017-2018		2018-2019		2019-2020		2020-2021		2021-2022		Total	
					Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin
A	**Production Growth**															
I	**Area expansion of fruit crops**															
1	TC Banana & TC Pineapple	Ha	1.25	B12,B4,B10,B8,B9,B11,B1	75	93.75	86	107.50	90	112.50	102	127.50	109	136.25	462	577.50
2	Banana / Hill Banana sucker & Pine apple sucker	Ha	0.875	B1,B8,B9,B10	52	45.50	60	52.50	65	56.88	69	60.38	73	63.88	319	279.13
3	HDP in Mango, Guava, Litchi, Pomegranate	Ha	1	B2,B3,B4,B5,B11,B13	25	25.00	31	31.00	33	33.00	39	39.00	45	45.00	173	173.00
4	Normal Planting in lime / lemons	Ha	0.6	B3,B9,B11	7	4.20	8	4.80	9	5.40	10	6.00	11	6.60	45	27.00
5	Normal planting in Papaya	Ha	0.6	B1,B6,B8,B9,B11	10	6.00	13	7.80	15	9.00	15	9.00	15	9.00	68	40.80
6	Commercial production of Traditional fruits (Woodapple, Manila Tamarind, Jamun, Ber, Karonda, Annona, Egg fruit, etc.,)	Ha	0.6	B3,B6,B11	10	6.00	12	7.20	12	7.20	15	9.00	19	11.40	68	40.80
II	**Area expansion of vegetable crops**															
7	Brinjal	Ha	0.5	B3,B6,B7,B11, B13	20	10.00	22	11.00	25	12.50	27	13.50	30	15.00	124	62.00
8	Bhendi	Ha	0.5	All Blocks Except B1,B2,B5,B6	50	25.00	55	27.50	60	30.00	65	32.50	70	35.00	300	150.00
9	Green Chillies	Ha	0.5	B9,B5,B2,B3,B6,B11	35	17.50	40	20.00	45	22.50	51	25.50	55	27.50	226	113.00
10	Tomato	Ha	0.5	All Blocks	150	75.00	170	85.00	190	95.00	211	105.50	225	112.50	946	473.00
11	Gourds including pumpkin and tinda	Ha	0.5	All Blocks	50	25.00	55	27.50	60	30.00	65	32.50	70	35.00	300	150.00
12	Small Onion	Ha	0.5	All Blocks	545	272.50	565	282.50	600	300.00	660	330.00	689	344.50	3059	1529.50

Sl. No.	Interventions	Unit	Unit cost	Block Covered	2017-2018		2018-2019		2019-2020		2020-2021		2021-2022		Total	
					Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin
13	Bellary Onion	Ha	0.5	B5,B9	10	5.00	15	7.50	20	10.00	25	12.50	30	15.00	100	50.00
14	Cauliflower	Ha	0.5	B6,B8,B9,B11	15	7.50	17	8.50	21	10.50	21	10.50	26	13.00	100	50.00
15	Annual Moringa	Ha	0.5	B7	20	10.00	23	11.50	26	13.00	30	15.00	34	17.00	133	66.50
16	Cabbage	Ha	0.5	B6,B8,B9,B11	15	7.50	17	8.50	20	10.00	22	11.00	22	11.00	96	48.00
17	Cucumber/gherkin	Ha	0.5	All Blocks	13	6.50	15	7.50	17	8.50	20	10.00	22	11.00	87	43.50
18	Lab Lab	Ha	0.5	B2,B3,B5,B6, B11	15	7.50	17	8.50	19	9.50	25	12.50	27	13.50	103	51.50
19	Melons	Ha	0.5	B1,B3,B11, B12,B13	10	5.00	13	6.50	15	7.50	17	8.50	20	10.00	75	37.50
20	Beetroot	Ha	0.5	B3,B11	60	30.00	65	32.50	75	37.50	79	39.50	85	42.50	364	182.00
21	Tapioca	Ha	0.5	B1,B4,B12, B13	65	32.50	70	35.00	75	37.50	85	42.50	94	47.00	389	194.50
III	**Area expansion of Medicinal and Aromatic plants**															
22	Amla	Ha	0.7771	B7,B13	15	11.66	20	15.54	23	17.87	27	20.98	30	23.31	115	89.37
23	Gloriosa	Ha	1.6438	B7	135	221.91	140	230.13	145	238.35	150	246.57	155	254.79	725	1191.76
IV	**Area expansion of Spices crops**															
24	Seed and Rhizomatic spices (Coriander, Turmeric, Ginger, Dry Chilly, Cumin, Fennel, Fenu greek, Dil, Cardamom etc.,)	Ha	0.3	All Blocks	160	48.00	170	51.00	190	57.00	213	63.90	227	68.10	960	288.00
25	Perennial spices (Pepper, Curry leaf, All spice, Cinnamon, Clove, Tamarind, Nut meg etc.,)	Ha	0.5	B3,B8,B11	10	5.00	10	5.00	10	5.00	10	5.00	15	7.50	55	27.50

Sl. No.	Interventions	Unit	Unit cost	Block Covered	2017-2018		2018-2019		2019-2020		2020-2021		2021-2022		Total	
					Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin
V	**Area expansion of Flower crops**															
26	Loose flowers - Jasminum sp, Crossandra, Marigold, Rose, Chrysanthemum, Nerium, Torenia	Ha	0.4	B1,B4,B11, B12	5	2.00	5	2.00	5	2.00	5	2.00	5	2.00	25	10.00
27	Bulbous flowers - Tube rose, Gladioli, Dahlia, Bird of paradise, Heliconia, Tulip	Ha	1.5	B1,B4,B12	10	15.00	10	15.00	10	15.00	10	15.00	10	15.00	50	75.00
VI	**Area expansion /Gap filling of Plantation crops**															
28	Cocoa	Ha	0.5	B6,B11	50	25.00	55	27.50	60	30.00	65	32.50	70	35.00	300	150.00
29	Arecanut	Ha	0.5	B6,B11	5	2.50	5	2.50	5	2.50	5	2.50	5	2.50	25	12.50
VII	**Rejuvenation/INM-IPM/Mulching/Anti bird net**															
30	INM/IPM for Horticultural crops	Ha	0.04	All Blocks	130	5.20	156	6.24	169	6.76	182	7.28	195	7.80	832	33.28
31	Mulching	Ha	0.32	All Blocks	65	20.80	78	24.96	85	27.20	104	33.28	117	37.44	449	143.68
32	Anti Bird net	1000 Sq.m	0.35	B1,B2,B3,B6, B9,B11	10	3.50	10	3.50	10	3.50	10	3.50	14	4.90	54	18.90
VIII	**Pollination Support through Bee Keeping**															
33	Bee hive & Colony	No	0.04	All Blocks	260	10.40	390	15.60	520	20.80	650	26.00	780	31.20	2600	104.00
34	Honey Extractor	No	0.2	All Blocks	26	5.20	39	7.80	52	10.40	65	13.00	78	15.60	260	52.00
IX	**Organic Farming**															
35	Organic farming and PGS certification in 50 acre cluster	1 cluster	14.95	B3	0	0.00	0	0.00	0	0.00	0	0.00	1	14.95	1	14.95
36	HDPE Vermibed	No	0.16	All Blocks	65	10.40	75	12.00	80	12.80	91	14.56	110	17.60	421	67.36

Sl. No.	Interventions	Unit	Unit cost	Block Covered	2017-2018		2018-2019		2019-2020		2020-2021		2021-2022		Total	
					Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin
X	**Rainfed Area development**															
37	Integrated farming system - Horticulture Based farming	Ha	0.5	B1,B4,B12, B13	40	20.00	40	20.00	45	22.50	49	24.50	54	27.00	228	114.00
38	Moisture stress management - Minimum irrigation gurantee by PUSA hydrogel	Ha	0.1	All Blocks	130	13.00	143	14.30	156	15.60	169	16.90	182	18.20	780	78.00
B	**Infra structures and Assets creation**															
I	**Protected cultivation**															
1	Poly Green House	1000 Sq.m	9.35	B1,B3,B6,B11	2	18.70	3	28.05	6	56.10	9	84.15	14	130.90	34	317.90
2	Shadenet	1000 Sq.m	7.1	B3,B6,B11	1.5	10.65	2	14.20	5	35.50	9	63.90	15	106.50	33	230.75
II	**Mushroom production**															
1	Mushroom production and compost making	1 No.	20	B10	1	20.00	0	0.00	0	0.00	1	20.00	1	20.00	3	60.00
2	Spawn Production	1 No.	15	B10	0	0.00	0	0.00	0	0.00	1	15.00	1	15.00	2	30.00
3	Cottage mushroom unit	1 No.	1	B6	0	0.00	1	1.00	1	1.00	1	1.00	0	0.00	3	3.00
III	**Vermicompost unit**															
4	Permanent Vermicompost Unit	600 cu.ft	1	B2,B4,B3,B8, B12,B11,B10, B1,B5	25	25.00	35	35.00	40	40.00	50	50.00	70	70.00	220	220.00
IV	**Supporting structures for Horticulture crop production**															
5	Staking/ Trellies/ Propping	Ha	1	B1,B11,B3,B2, B6	10	10.00	15	15.00	20	20.00	25	25.00	30	30.00	100	100.00
6	Permanent Pandhal structure	Ha	4	All Blocks	38	152.00	38	152.00	40	160.00	40	160.00	40	160.00	196	784.00
C	**Special interventions**															
1	Offseason Annual Moringa production -Leaf	Ha	2	B7,B13	20	40.00	25	50.00	30	60.00	35	70.00	40	80.00	150	300.00

Sl. No.	Interventions	Unit	Unit cost	Block Covered	2017-2018		2018-2019		2019-2020		2020-2021		2021-2022		Total	
					Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin
2	Promotion of Roof top Garden/ Potager garden Kit	No	0.005	All Blocks	2150	10.75	2400	12.00	2650	13.25	2900	14.50	3150	15.75	13250	66.25
3	Promotion of Roof top Garden/ Potager garden Kit with shadenet	No	0.0735	B9,B5,B2,B3, B6,B11,B1	3500	257.25	0	0.00	0	0.00	0	0.00	0	0.00	3500	257.25
4	AESA based IPM in fruits and vegetables Pheramone trap	Ha	0.04	B1,B3,B11	5	0.20	7	0.28	9	0.36	12	0.48	15	0.60	48	1.92
5	AESA Based IPM in fruits and vegetables Light trap	Ha	0.08	All Blocks	160	12.80	176	14.08	189	15.12	202	16.16	215	17.20	942	75.36
6	Coastal area development programme - Public	Per village	1	All Blocks	160	160.00	176	176.00	189	189.00	202	202.00	215	215.00	942	942.00
D	**Post Harvest Management**															
1	Low cost onion structure 25 mt	1 No	1.75	B1,B3,B6,B4, B10,B11	6	10.50	7	12.25	7	12.25	7	12.25	7	12.25	34	59.50
2	Drying yard	1 No	5	B10,B9,B5,B2, B3,B6,B11	20	100.00	20	100.00	20	100.00	20	100.00	20	100.00	100	500.00
E	**Development of Farms, Nurseries and Parks**															
1	Deveopment of eco park / Rose garden	No	600	B6	0.25	150.00	0.25	150.00	0.25	150.00	0.25	150.00	0	0.00	1	600.00
F	**Mechanization - Machineries, Equipments & Tools**															
1	Land development, tillage and seed bed preparation equipments	Nos	0.3	All Blocks	24	7.20	26	7.80	26	7.80	27	8.10	26	7.80	129	38.70
2	Nets for safe harvesting of fruits,Headlights for flower picking	Nos	0.005	All Blocks	26	0.13	30	0.15	43	0.22	57	0.29	70	0.35	226	1.13
3	Power operated sprayer	Nos	0.05	All Blocks	65	3.25	70	3.50	78	3.90	91	4.55	104	5.20	408	20.40
4	Plastic crates for vegetable & fruits handling	No of sets containing 10crate	0.075	All Blocks	130	9.75	156	11.70	169	12.68	182	13.65	195	14.63	832	62.40

Sl. No.	Interventions	Unit	Unit cost	Block Covered	2017-2018		2018-2019		2019-2020		2020-2021		2021-2022		Total	
					Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin
5	Turmeric Boiler		2.5	All Blocks	260	650.00	286	715.00	299	747.50	312	780.00	325	812.50	1482	3705.00
6	Aluminium Ladders for Harvesting	No	0.2	All Blocks	225	45.00	250	50.00	263	52.60	276	55.20	289	57.80	1303	260.60
G	**Water / Irrigation Management**															
1	Rain gun	Ha	0.34	All Blocks	1573	534.82	1650	561.00	1729	587.86	1807	614.38	1891	642.94	8650	2941.00
2	Community Tank / On Farm Pond	No	20	B12,B7,B13, B4,B10,B8 B11,B1	50	1000.00	50	1000.00	50	1000.00	50	1000.00	50	1000.00	250	5000.00
3	Water harvesting system for individuals	No	1.5	B10	1	1.50	2	3.00	2	3.00	2	3.00	3	4.50	10	15.00
H	**Capacity Building**															
1	Training to farmers outside the state. 30 farmers/Batch	No	0.105	All Blocks	520	54.60	520	54.60	650	68.25	650	68.25	650	68.25	2990	313.95
2	Exposure visit to farmers for 5 days. Rs.1000/farmer/day	No	0.05	All Blocks	260	13.00	260	13.00	299	14.95	315	15.75	350	17.50	1484	74.20
3	Training to farmers at HTC	No	0.0025	All Blocks	65	0.16	100	0.25	130	0.33	143	0.36	143	0.36	581	1.45
4	Exposure visit of farmers outside India	No	4	B12,B7,B13, B6,B11,B1	3	12.00	3	12.00	3	12.00	3	12.00	3	12.00	15	60.00
5	Training to staff outside the state / Batch of 5 members	No	0.04	All Blocks	5	0.20	5	0.20	5	0.20	5	0.20	5	0.20	25	1.00
6	Training to staff outside India	No	6	B7,B13,B4,B9, B5,B2,B3,B11	2	12.00	2	12.00	2	12.00	2	12.00	2	12.00	10	60.00
7	District level seminar	No	2	B1,B4,B6,B11	1	2.00	1	2.00	1	2.00	1	2.00	1	2.00	5	10.00
8	Computerization & governance	No	1	B10	0	0.00	0	0.00	0	0.00	1	1.00	1	1.00	2	2.00
9	Publicity and Documentation	No	0.5	All Blocks	5	2.50	5	2.50	5	2.50	6	3.00	5	2.50	26	13.00

Sl. No.	Interventions	Unit	Unit cost	Block Covered	2017-2018		2018-2019		2019-2020		2020-2021		2021-2022		Total	
					Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin
I	**Crop Insurance and Risk Mitigating schemes**															
1	Crop Insurance	Ha	0.025	All Blocks	5200	130.00	5200	130.00	5200	130.00	5200	130.00	5200	130.00	26000	650.00
	Grand Total					**4592.48**		**4581.93**		**4855.61**		**5188.01**		**5369.24**		**24587.28**

Avinashi - B1, Dharapuram - B2, Gudimangalam - B3, Kangayam - B4, Kundadam - B5, Madathukulam - B6, Mulanur - B7, Palladam - B8, Pongalur - B9, Tiruppur - B10, Udmalpet - B11, Uthukuli - B12, Vellakoil - B13

4.3. Agricultural Engineering

Agricultural mechanization is the process whereby equipments, machineries and implements are utilized to boost agricultural and food production. It is the application of machineries, equipments and implements in the day to day farm activities to increase marginal output in food production and poverty eradication. It increases productivity of land and labour by meeting timeliness of farm operations and increase work out-put per unit time. Besides its paramount contribution to the multiple cropping and diversification of agriculture, mechanization also enables efficient utilisation of inputs such as seeds, fertilisers and irrigation water. The agricultural mechanization is the only way out to face the challenge of farm worker's shortage. Thus the ultimate objective of Agricultural Mechanization Strategies in developing countries is to help increase the welfare of farm households and create positive dynamics and opportunities for economic growth in rural areas.

Strategies:

- Promotion and strengthening of Agricultural Mechanization through training, Testing and Demonstration inorderto ensure performance testing of agricultural machinery and equipment, capacity building of farmers and end users and promoting farm mechanization through demonstrations.
- Demonstration, Training and Distribution of post-harvest Technology and Management (PHTM) to popularize the technology for primary processing, value addition, low cost scientific storage/transport and the crop by-product management through demonstrations, capacity building of farmers and end users. Provides financial assistance for establishing PHT units.
- Promotion of ownership to small and marginal farmers for various agricultural machinery and equipments such as Tractors, Power tillers, Rice transplanter, Self-propelled machinery, Tractor/Power tiller drawn equipments (MB Plough, Disc plough, Cultivator, Harrow, Leveler Blade, Ridger, Laser Land Leveller, Reversible Mechanical Plough, Rotavator, Rotopuddler, Reversible Hydraulic Plough, Post hole digger, Reaper, Seed driller, Balers, Coconut thrash cutter, coconut frond chopper, Multi crop thresher, Paddy thresher, Brush cutter, Chaff cutter, Drum Seeder) and Plant protection equipments .
- Provision of suitable financial assistance to establish farm machinery banks for custom hiring for appropriate locations and crops

- Establishment of hi-tech machinery hubs for high value crops like sugarcane, cotton etc.
- Promotion of appropriate technologies and to set up farm machinery banks in identified villages
- Provision of financial assistance on per hectare basis to the beneficiaries hiring machinery/equipments from custom hiring centres
- Increases the tractor hire services in the farms of small and marginal farmers
- Strengthening of Minor irrigation for the rainfed and hard rock areas. It would establish through construction of open well, tubewells and Bore wells. Revitalisation of wells by side boring and blasting in hard rock areas.
- Introduction of renewable energy in the villages which would replace other fuels. Also attractive for water pumping applications in remote areas. Hence solar operated photovoltaic water pumping system provides better sustainable alternative option to fulfill irrigation requirement of agriculture.
- Provision of components such as hightech earth excavator, poly green house with fogging facility, vermi compost unit with packing accessories, farm pond / fish pond, farmers kit (crow bar, hand hoe, rose can, pruning siccature, coconut dehusker, trolley etc.,), land levelling, pipe laying, stening wall, well deepening, replacement of old pumpsets, infrastructure like packing unit, godown, cattle shed and threshing floor, publicity and propaganda for farm mechanization in aed, special training for coconut growers, special training for coconut tree climbing, j c b, mini drill, compartmental bund formation, farm ponds, community bore wells, deepening of open wells, renovation of mi tanks, check dam, percolation pond, recharge shaft, summer ploughing, pvp pipe laying, replacement of submersible motors pump sets, telescopic pruner, motorized rubber roller, trays for paddy nursery raising, combine harvester, diesel pump, rotary tiller, smoke house, mist blower, tea harvester, construction of LD & MI repair shed and construction of training centre for farmers with furniture and accessories at the department of agricultural engineering
- Strengthening of communication and information facilities in order to disseminate the information in rural areas
- Awareness to be created towards the usage of Sugarcane infielder, Bird scarer, Mechanized row crop cultivation and Modernization of tractor workshop which indirectly increase the production.
- Promotion of agro-processing and management machinery at community level through supply of post-harvest machinery such as self-propelled/other driven horticultural

machinery (Chain saw/ wheel barrow/ Mango grader/ planter and other suitable self-propelled machineries and equipments), manual horticultural equipments (aluminium ladder/ ladder, aluminium pole, plucker), post-harvest equipments for grains, oil seeds and horticultural crops (mini rice mill, mini dhall mill, millet mill, oil mill with filters, extractor, pomegranate air extractor, custard apple pulper, dehydration unit, pricking machine, humidifier, packing machine, power driven dehusker, thresher, harvester, de-spiking, deconing, peeler, splitter, stripper, boiler, steamer, dryer solar, washing machine, grinder, pulveriser, polisher, cleaner cum grader, gradient separator, specific gravity separator) this would make sure that more value is added to farm outputs locally

- Promotion of bio-mass gasifier unit which hold huge potential technology for decentralized electricity generation in rural villages. Biomass is a CO_2 neutral fuel and, therefore, unlike fossil fuels such as diesel does not contribute to net CO_2 emissions, which makes biomass based power generation systems an attractive option in mitigating the adverse effects of climate change.
- Establishment of Agricultural Engineering Extension centres in order to collect information related to Government subsidy on agricultural / machineries / equipment / irrigation systems etc., compilation of latest technologies related to Agricultural Engineering and Development of video cassettes library related to processing of agricultural products, working of important agricultural machines and equipment and repair, maintenance and proper setting of the different agricultural machines / and equipment
- Promotion of training to AED engineers on post-harvest techniques and bio energy
- Rehabilitation of irrigation network to bring water directly to the root zone of the crop, improve application and conveyance efficiency, thereby reduce the wastage of water due to flood irrigation.
- Prevention of sea water intrusion through construction of subsurface dyke, village pond / community pond, farm pond, recharge shaft and weir/bed dam.
- Reclamation of problem soils which needs special management for satisfactory crop production. Physical limitations can be managed by irrigation, drainage, mulching, manuring, tillage, and soil conservation measures such as terracing, contouring, and cover crops whichever is appropriate.

Expected outcome

Implementation of the above strategies such as supply of farm implements to carry out mechanised cultivation operations and demonstration to farmers the advantage of using agricultural implements and machinery would increase the production and productivity. Post-harvest technologies to farmers would prevent loss of food grains during harvest and storage and preserve the quality of produce in respect of perishable commodities. Disseminated technologies on renewable energies, in particular, solar energy for agricultural activities in

respect of pumping with solar powered pumps, drying farm produce for enhancement of quality to fetch reasonable market price.

Budget

Agriculture continues to be the most predominant sector of this district economy, as 70 per cent of the population is engaged in Agriculture and allied activities for their livelihood. Agricultural mechanization could provide the stability in agricultural production in a sustainable manner to meet the food requirement of growing population and also to meet the raw material needs of agro based industries, thereby providing employment opportunities to the rural population**.** The Major component required to implement in this district are capacity building of farmers and end users with the budget of ₹ 6.40 lakhs, financial assistance for the procurement of agricultural machinery, Post-harvest machinery and equipments in rural areas with the budget of ₹ 2,282.00 lakhs, Establishment of farm machinery banks, Hi-tech productive equipment hub, promotion of farm mechanization in selected villages with the budget of ₹ 339.00 lakhs and also implementation of minor irrigation, Tractor hiring scheme, Solar energy, Innovative schemes of AED, pilot mechanization demonstration, post-harvest technology and management machinery with budget of ₹ 2,259.00 lakhs. Some other interventions such as Bio- mass gasifier, Construction of Agricultural Engineering Extension Centres (AEECs) with the budget of ₹ 150.40 lakhs are required to implement in this district to enhance the agricultural productivity.The overall budget requirement for implementation of above interventions is ₹ **5,036.80** lakhs.

Implementing agency

The projects will be implemented by the Department of Agricultural Engineering

Table.4.18. Budget requirement for Agricultural Engineering

(₹. in lakhs)

Sl. No	Interventions	Unit	Unit cost	Blocks Covered	2017-18		2018-19		2019-20		2020-21		2021-22		Total	
					Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin
1	Demonstration of Agricultural Machinery	No's/Ha	0.04	All Blocks	13	0.52	13	0.52	13	0.52	13	0.52	13	0.52	65	2.60
2	Training of farmers	No's/Ha	0.04	All Blocks	13	0.52	13	0.52	13	0.52	13	0.52	13	0.52	65	2.60
3	Demonstration of Post Harvest Technologies	No's/Ha	0.04	B2 , B4, B5, B7, B10, B13	6	0.24	6	0.24	6	0.24	6	0.24	6	0.24	30	1.20
4	Financial assistance for Post Harvest Equipment	No's/Ha	4	All Blocks	3	12.00	0	0.00	3	12.00	3	12.00	3	12.00	12	48.00
5	Tractor (15-20 PTO HP)	No's/Ha	4	All Blocks	40	160.00	40	160.00	45	180.00	45	180.00	45	180.00	215	860.00
6	Tractor (Above 20-40 PTO HP)	No's/Ha	6	All Blocks	4	24.00	4	24.00	4	24.00	4	24.00	4	24.00	20	120.00
7	Tractor (40-70 PTO HP)	No's/Ha	8.5	All Blocks	6	51.00	3	25.50	3	25.50	3	25.50	3	25.50	18	153.00
8	Power Tiller (8 BHP & above)	No's/Ha	1.75	All Blocks	15	26.25	15	26.25	15	26.25	15	26.25	15	26.25	75	131.25
9	Self Propelled Rice Transplanter (Above 4-8 rows)	No's/Ha	16	All Blocks	1	16.00	1	16.00	1	16.00	1	16.00	1	16.00	5	80.00
10	Reaper cum Binder	No's/Ha	3	All Blocks	2	6.00	2	6.00	2	6.00	2	6.00	2	6.00	10	30.00
11	Reaper	No's/Ha	1.1	All Blocks	5	5.50	5	5.50	5	5.50	5	5.50	5	5.50	25	27.50
12	Power Weeder (engine operated below 2 BHP)	No's/Ha	0.25	All Blocks	10	2.50	10	2.50	10	2.50	10	2.50	10	2.50	50	12.50

Sl. No	Interventions	Unit	Unit cost	Blocks Covered	2017-18		2018-19		2019-20		2020-21		2021-22		Total	
					Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin
13	Brush Cutter	No's/Ha	0.25	All Blocks	10	2.50	10	2.50	10	2.50	10	2.50	10	2.50	50	12.50
14	f. Chaff Cutter (Operated by engine / electric motor below 3 hp and by power tiller and tractor of below 20 BHP tractor)	No's/Ha	0.25	All Blocks	400	100.00	300	75.00	300	75.00	200	50.00	150	37.50	1350	337.50
15	Disc Plow	No's/Ha	0.6	All Blocks	5	3.00	5	3.00	5	3.00	5	3.00	5	3.00	25	15.00
16	Cultivator	No's/Ha	0.3	All Blocks	15	4.50	10	3.00	10	3.00	10	3.00	10	3.00	55	16.50
17	Rotavator	No's/Ha	0.95	All Blocks	60	57.00	60	57.00	60	57.00	60	57.00	60	57.00	300	285.00
18	Tractor drawn reaper	No's/Ha	1.25	All Blocks	5	6.25	5	6.25	5	6.25	5	6.25	5	6.25	25	31.25
19	Post Hole digger	No's/Ha	1.05	All Blocks	3	3.15	3	3.15	3	3.15	3	3.15	3	3.15	15	15.75
20	Coconut Frond chopper	No's/Ha	1.05	All Blocks	15	15.75	15	15.75	10	10.50	10	10.50	10	10.50	60	63.00
21	Balers (Round)	No's/Ha	3.5	All Blocks	2	7.00	2	7.00	2	7.00	2	7.00	2	7.00	10	35.00
22	Drum Seeder (Above 4 Row)	No's/Ha	0.15	All Blocks	5	0.75	5	0.75	5	0.75	5	0.75	5	0.75	25	3.75
23	Powered Knapsack Sprayer/Power operated Taiwan sprayer (capacity 8-12 lts)	No's/Ha	0.06	All Blocks	15	0.90	15	0.90	15	0.90	15	0.90	15	0.90	75	4.50
24	Establishment of Farm Machinery Banks for Custom Hiring	No's/Ha	28	All Blocks	8	224.00	0	0.00	0	0.00	0	0.00	0	0.00	8	224.00
25	Promotion of Farm Mechanization in Selected Villages	No's/Ha	11.5	All Blocks	2	23.00	2	23.00	2	23.00	2	23.00	2	23.00	10	115.00

Sl. No	Interventions	Unit	Unit cost	Blocks Covered	2017-18		2018-19		2019-20		2020-21		2021-22		Total	
					Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin
26	Purchase of Tractors for AED	No's/Ha	8	B3 ,B6,B11	1	8.00	1	8.00	1	8.00	1	8.00	1	8.00	5	40.00
27	Purchase of Tractor drawn implemnets for AED	No's/Ha	0.5	All Blocks	3	1.50	3	1.50	3	1.50	3	1.50	3	1.50	15	7.50
28	Purchase of Resitivity Metres for AED	No's/Ha	3	B3 ,B6,B11	1	3.00	1	3.00	1	3.00	0	0.00	0	0.00	3	9.00
29	5 hp	No's/Ha	3.75	All Blocks	50	187.50	50	187.50	50	187.50	50	187.50	50	187.50	250	937.50
30	7.5 hp	No's/Ha	5.3	All Blocks	10	53.00	10	53.00	10	53.00	10	53.00	10	53.00	50	265.00
31	upto 200sq.ft	No's/Ha	2	All Blocks	10	20.00	10	20.00	10	20.00	10	20.00	10	20.00	50	100.00
32	upto 400sq.ft	No's/Ha	4.25	All Blocks	6	25.50	6	25.50	6	25.50	6	25.50	6	25.50	30	127.50
33	400-600sq.ft	No's/Ha	6.5	All Blocks	5	32.50	5	32.50	5	32.50	5	32.50	5	32.50	25	162.50
34	Computer & its accessories	No's/Ha	0.8	B3 ,B6,B11	1	0.80	2	1.60	1	0.80	1	0.80	1	0.80	6	4.80
35	Tablet (Tab)	No's/Ha	0.25	All Blocks	8	2.00	8	2.00	8	2.00	0	0.00	0	0.00	24	6.00
36	Xerox machine	No's/Ha	1.5	B3 ,B6,B11	1	1.50	1	1.50	1	1.50	1	1.50	1	1.50	5	7.50
37	Chain saw/ Wheel barrow/ Mango grader/ planter and other suitable self propelled machineries and equipments for horticulture Crops	No's/Ha	1	All Blocks	5	5.00	10	10.00	25	25.00	300	300.00	5	5.00	345	345.00
38	Aluminium Ladder/ Ladder	No's/Ha	0.2	All Blocks	100	20.00	200	40.00	200	40.00	200	40.00	100	20.00	800	160.00
39	Aluminium pole	No's/Ha	0.03	All Blocks	50	1.50	50	1.50	50	1.50	50	1.50	50	1.50	250	7.50
40	Plucker	No's/Ha	0.02	All Blocks	100	2.00	100	2.00	100	2.00	100	2.00	100	2.00	500	10.00
41	Mini Dal Mill	No's/Ha	1.7	B3 ,B6,B11	2	3.40	1	1.70	2	3.40	1	1.70	2	3.40	8	13.60

Sl. No	Interventions	Unit	Unit cost	Blocks Covered	2017-18		2018-19		2019-20		2020-21		2021-22		Total	
					Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin
42	Oil mill with filter press (for all type of Horticulture / Food grain / Oil seeds crop)	No's/Ha	1.2	All Blocks	5	6.00	2	2.40	2	2.40	2	2.40	2	2.40	13	15.60
43	All types of Boiler/ Steamer/ Dryer solar (for all type of Horticulture / Food grain / Oil seeds crop)	No's/Ha	2	All Blocks	5	10.00	3	6.00	2	4.00	4	8.00	6	12.00	20	40.00
44	Construction of Agricultural Engineering Extension centres (AEECs)	No's/Ha	75	B6,B11	0	0.00	2	150.00	0	0.00	0	0.00	0	0.00	2	150.00
45	Training of AED Engineers on " Agricultural Processing" and " Bio- Energy"	No's/Ha	0.04	All Blocks	2	0.08	2	0.08	2	0.08	2	0.08	2	0.08	10	0.40
	Total					**1135.61**		**1014.11**		**904.76**		**1152.06**		**830.26**		**5036.80**

Avinashi - B1, Dharapuram - B2, Gudimangalam - B3, Kangayam - B4, Kundadam - B5, Madathukulam - B6, Mulanur - B7, Palladam - B8, Pongalur - B9, Tiruppur - B10, Udmalpet - B11, Uthukuli - B12, Vellakoil - B13

4.4. Seed and Organic Certification

Seed is a critical input for long-term sustained growth of agriculture. Timely availability of certified quality seeds with good yield potential continues to be a decisive factor in agricultural production. Farmers in Tamilnadu state are well aware of the benefits of using quality seeds which include foundation, certified and truthfully labelled seeds. In our State, the seed replacement rate is being adopted as per the guidelines of Government of India. In order to achieve the target of doubling the income of farmers, timely availability of quality seeds is given utmost importance. Concerted efforts are essential in ensuring timely availability of seeds as well as increasing the Seed Replacement Rate (SRR). The National Mission on Seeds has been formulated with a view to upgrade the quality of farm saved seeds and also to enhance Seed Replacement Rate. The Department of Seed Certification & Organic Certification plays the supporting role in the enhancement of Seed Replacement Rate by certifying quality seeds in an increasing trend over the years.

Seed certification is a legally sanctioned system for quality control of seed multiplication and production. The immediate objective of seed certification is to supply high quality seed to farmers and other growers, which is true to identity, high in purity and germination capacity and free from certain pests and diseases. Seed quality is most important in crop production, as high quality seed is essential for good crop yields and good returns, and minimize the likelihood of crop failure. Moreover, growing consciousness of health hazards due to possible contamination of farm products from use of chemicals have immensely contributed to the revival of organic agriculture. Organic certification is a certification body for organic production which was established as a government department on 17 of May 2007. Thus the major focus of the department will be creation of new facilities for better certification by strengthening the lab facilities, and infrastructure, create more awareness on quality seed and organic agriculture through capacity building, expanding communication and networking facilities in order to enhance the activities on seed and organic certification.

Project components

- Strengthening of Seed Testing laboratories

Samples received in a seed testing laboratory should be processed through various stages in the laboratory as quickly as possible so that result may be sent to sender promptly. The space provided for seed testing, the arrangement of that space and furnishing available would contribute greatly in the efficient functioning of the laboratory. In order to carry out seed quality tests and maintaining the purity in the seed testing laboratory the equipments such as dehumidifier, R.O. system, humidifier, thermo hydrometer, digital moisture meter, microscope,

working table, working chair, air conditioner, sample racks, geaser, heater, trolley for carriages, generator 30KV, induction stove, fabricated display racks, conductivity meter, dehuller/scarifier, seed grinder, blower, hot air oven, incubator and miscellaneous are required.

- Creation of infrastructure facilities in seed testing laboratories

A laboratory may be a completely separate building, or a part of a larger building housing a department. Regardless of how this space need is met a minimum of 1500 sq. ft. of working space should be provided for the laboratory analyzing about 10,000 samples annually. The space provided should be divided into general work areas. These may be completely separate rooms or they may be portions of the same room. The areas to be considered include sample receiving, preparation, purity analysis, germination, seed storage, tags, supplies, mailing, general storage and office with a main objective to occupy large number of samples.

- Capacity building

Promotion of quality seed production and distribution the training programmes would be organized. The training to be given on the seed production to seed producers. The training includes seed growers who are mostly small and marginal farmers. Also training to be given to the seed dealers on quality maintenance in storage, selling of seeds.

- Strengthening of communication and networking facilities

Information on quality seed production techniques would be disseminate among the farmers and seed growers.

Expected outcome

Enhancement of infrastructure facilities, capacity building, communication and networking would promote the quality of seed and organic certification.

Budget

Seed testing plays a pivotal role in modern agriculture. It is being carried out to analyze factors like germination, physical purity, moisture, seed health and admixture of other distinguishable varieties. Seed testing is carried out in the notified seed testing laboratories. The Seed testing results are very important for the successful implementation of Seed Certification and Seed Law Enforcement programmes. Apart from certified seed samples and samples received from the seed quality control wing, the service samples sent by the farmers, seed dealers and seed producers are also tested in these laboratories of Tiruppur district. The overall budget requirement for implementation of above interventions is ₹ 13.36 lakhs.

Implementing agency

The projects will be implemented by the Directorate of seed and organic certification.

Table.4.19. Budget requirement for Seed and Organic Certification

(Rs.in lakhs)

Sl.No	Interventions	Blocks Covered	Unit	Unit Cost	2017-18		2018-19		2019-20		2020-21		2021-22		Total	
					Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin
I	**Strengthening of Seed Certification lab**															
1	Blower, Conductivity meter, Dehuller/Scarifier, Dehumidifier Air Conditioner, Digital moisture meter, Dunnage, Fabricated display Racks ,Geaser, Generator, Heater,Hot air oven,Humidifier,Incubator,Induction stove,Microscope,Moisture meter,Packing machine,R. O system,Sample racks,Seed Grinder,Sieve,Thermohydro meter,Dunnage,Trolley for carriages,Working chair,Working table, Miscellaneous,	All blocks	No	13.36	1.00	13.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	13.36
	Total					**13.36**		**0.00**		**0.00**		**0.00**		**0.00**		**13.36**

4.4. Animal husbandry

Livestock have been an integral component of India's agricultural and rural economy since time immemorial, supplying energy for crop production in terms of draught power and organic manure, and in turn deriving their own energy requirements from crop by products and residues. Livestock are now more valued as source of food and contribute over one-fourth to the agricultural gross domestic product and engage about 9 per cent of the agricultural labour force. The livestock sector has been growing faster than crop sector; however, in recent years, the growth both in livestock production and productivity has decelerated considerably. India's livestock sector is one of the largest in the world. It has 56.7 per cent of world's buffaloes, 12.5 per cent cattle, 20.4 per cent small ruminants, 2.4 per cent camel, 1.4 per cent equine, 1.5 per cent pigs and 3.1 per cent poultry. In 2010-11, livestock generated outputs worth Rs. 2075 billion which comprised 4 per cent of the GDP and 26 per cent of the agricultural GDP. The total output worth was higher than the value of food grains.

Animal Husbandry sector plays a crucial role in ensuring the welfare of rural population. A majority of farmers depend on Animal Husbandry for their livelihood. Moreover, livestock sector provides supplementary employment and sustainable source of income to many small and marginal farmers. Thus, this sector is emerging as an important sector, leveraging the rural economy. In addition, this sector provides a continuous flow of essential food products like milk, meat, eggs besides draught power, raw materials like wool and hides for industries, and manure. With increase in production of livestock products, livestock rearing is also considered as an avocation with high export potential. Distribution of livestock wealth is more egalitarian, compared to land and hence, from the equity and livelihood perspective, it is considered as an important component in poverty alleviation programmes.

Keeping this view in mind, various major interventions are being planned and proposed in the district agricultural plan to be implemented beyond 12th five year plan. The major interventions are:

1. Increasing the availability of fodder through field level interventions
2. Increasing the availability of fodder by strengthening farm infrastructure
3. Livestock breeding management
4. Livestock health
5. Improving the livestock productivity
6. Improving the service delivery at veterinary institutions
7. Enhancing livestock management
8. Capacity building

Increasing the availability of fodder through field level interventions

Livestock rearing is one of the major occupations in India and is making significant contribution to the country's GDP. The livestock population, over the years, has shown a steady growth on broadly two counts i.e. (i) increase in the number of stall feeding based bovine livestock viz. buffaloes and hybrid cattle, and (ii) increase in the number of free grazing based livestock like goats and sheep that can survive on the fast degrading pasturage.The animal husbandry sector has a good growth potential. However, further growth of the sector will be as much dependent upon the availability of fodder.The available data reveals that the present fodder availability in the country is well below requirement. The data also reveals that only about half of the annual fodder requirement is met from the cultivated fodder and crop residues, whereas open grazing and fodder availability from common property resources like forests, pastures, village commons, etc. fulfills the remaining half of the annual fodder requirement. The issue to be taken note of is that it is the open grazing and fodder availability from the common property resources that provides sustenance to a vast majority of households with animal husbandry as the only vocation.

The increasing number of livestock and the changing dynamics of animal husbandry practices require corresponding increase in the type of fodder needed to meet the requirements of these new situations. To overcome these issues the following field level interventions are proposed to improve the fodder availability.

1. Establishment of vermicomposting unit in all the blocks
2. Distribution of Azolla trays in all the blocks
3. Fodder plot development in all the blocks
4. Meikal land development in all the blocks
5. Distribution of seedlings, sprinklers, grass cutter and raingun to the farmers in all the blocks
6. Development of seed production plots in all the blocks

Livestock breeding management

Over the past few decades, imported exotic cow varieties have gained a boost in milk production in Tamil Nadu. Most of the cattle breeds are exotic. These breeds theoretically produce a lot of milk, but are not well-adapted to our conditions. About 69 per cent of Indian cows are owned by the economically poor strata of the society. These folks cannot afford to house these exotic breeds in regulated climate conditions.

The government has significantly mis-managed cow breeding. The average milk yield per animal in India is just 3.2 kgs, compared to a global average of 6.6 kgs. The dairy policy and outlook is highly outdated and needs to be replaced with modern, evidence-based thinking

Livestock industry continues to demonstrate a beneficial impact on rural people by improving their income, employment and consumption and thereby acting as a potential tool in alleviating rural poverty. Artificial insemination (AI) has proven to be very effective for the improvement of the genetic potential of animals for higher production and there is no surprise why today AI is the back bone of all breeding programmes in India. The replacement of unproductive and ageing animals in the herd and its expansion are very important to maintain the scale of economy of the farm. Augmentation of fertility in repeat breeders and sex-sorted semen are some of the modern scientific tools which have been proposed to be employed for effective breeding management to enhance the livestock fertility and productivity. The following interventions will help to improve livestock breeding management, such as

1. CIDR for all the blocks
2. Establishment of semen processing lab at Pongalur block

Improving the livestock productivity

Although India is a major producer of livestock products the average productivity of livestock is lower compared to world average. Inadequate availability of feed and fodder, insufficient coverage through artificial insemination, low conception rates, non-availability of quality males for breeding, poor management practices, high mortality and morbidity losses due to diseases, inadequate marketing infrastructure and unorganized marketing are the other major concerns. To maximize the livestock productivity the following activities should be implemented. The intervention proposed are as follows:

1. Distribution of sheep, goat, buffalo, piggery, poultry units in all the blocks
2. Establishment of modern poultry, rabbit , piggery, sheep, goat and bull shed in all the blocks
3. Popularizing quail rearing in all the blocks
4. Integrated farming
5. Establishment of animal ambulance facilities for Palladam block

Enhancing livestock management

The country has rich and diverse genetic resources of livestock in the form of a large number of species, breeds, and strains within a species. India has some of the best breeds of

cattle and buffaloes with traits for dairy, draught power and dual purposes, several carpet wool breeds of sheep, highly prolific breeds of goats and adaptive breeds of poultry. Such utility genes and breeds would be identified, conserved and utilized for breeding and research. The focus would be on conservation of indigenous breeds of livestock and poultry. By developing slaughter house, livestock shandy also is helpful to enhancing livestock management. The intervention proposed are

1. Animal identification and traceability in all the blocks
2. Conservation of indigenous breeds in all the blocks

Capacity building

Educating the farmers about the advanced crop production technologies as well as the techniques will enrich the knowledge of farmers through conduct of trainings and demonstrations to the farmers, youths and young entrepreneurs. On field demonstrations are conducted on fodder production technologies, seed production, poultry farming and sheep farming etc. Capacity building programme is to strengthen the capacities of farmers, indigenous and local communities, and their organizations and other stakeholders, to manage sustainable biodiversity so as to increase their benefits, and to promote awareness and responsible action, in the form of trainings, demonstrations, exposure visits, etc. To create awareness among the farmers the following trainings and campaigns have to be conducted.

1. Establishment of farmers training Centre
2. Conducting demonstrations camps and campaigns
3. Establishment of farmers training centre at Palladam blocks
4. Creating awareness of livestock management to the farmers through training programmes.

Budget allocation

The major themes proposed in the plan for animal husbandry sector with a total budget out lay of₹ **3,946.00.**

Project implementing agency

The projects proposed will be implemented by the Department of Animal husbandry sector.

Table.4.20 Budget requirement for Animal Husbandry

(₹. in lakhs)

Sl. No	Interventions	Unit	Unit cost	Blocks covered	2017-18		2018-19		2019-20		2020-21		2021-22		Total	
					Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin
	Increasing the Availability of Fodder through Field level Interventions															
1	Establishment of Vermicomposting unit (single bed)	Nos	0.05	All Blocks	13	0.65	13	0.65	13	0.65	13	0.65	13	0.65	65	3.25
2	Fodder production to the farmers by Hydrophonic methods	Nos	0.1	All Blocks	260	26.00	260	26.00	260	26.00	260	26.00	260	26.00	1300	130.00
3	Distrbution of Azolla trays	Nos	0.03	All Blocks	130	3.90	130	3.90	130	3.90	130	3.90	130	3.90	650	19.50
4	Distribution of Silage bags for conservation of fodder crops	Nos	0.005	All Blocks	78	0.39	78	0.39	78	0.39	78	0.39	78	0.39	390	1.95
5	Fodder plot development	acre	0.05	All blocks	400	20.00	400	20.00	400	20.00	200	10.00	200	10.00	1600	80.00
6	Distribution of Chaff Cutter to farmers	Nos	0.25	All Blocks	520	130.00	520	130.00	520	130.00	520	130.00	520	130.00	2600	650.00
7	Developemnt of Seed Production plots	acre	0.25	All Blocks	13	3.25	0	0.00	0	0.00	13	3.25	0	0.00	26	6.50
	Livestock Breeding Management															
8	CIDR (Controlled Internal Drug Release) for increasing Fertility in Cattle	Nos	0.01	All Blocks	260	2.60	260	2.60	260	2.60	260	2.60	260	2.60	1300	13.00
9	Establishment/ Strengthening of Semen Processing Lab	Nos	200	B9	0	0.00	1	200.00	0	0.00	0	0.00	0	0.00	1	200.00
	Improving the Livestock Productivity															
10	Distibution of Sheep/Goat units -semi intensive system	Nos	0.6	All Blocks	91	54.60	91	54.60	91	54.60	91	54.60	91	54.60	455	273.00

Sl. No	Interventions	Unit	Unit cost	Blocks covered	2017-18		2018-19		2019-20		2020-21		2021-22		Total	
					Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin
11	Distribution of Buffalo units(5 Buffaloes)	Nos	4.5	All Blocks	13	58.50	0	0.00	0	0.00	13	58.50	0	0.00	26	117.00
12	Integrated farming (Goat+Cattle+Fish+Agriculture /Horticulture)	Unit	2	All Blocks	5	10.00	5	10.00	5	10.00	5	10.00	5	10.00	25	50.00
13	Development of Native chicken farms	Farm	1	All Blocks	25	25.00	25	25.00	25	25.00	25	25.00	25	25.00	125	125.00
14	Establishment of disposal pits for poultry unit	Nos	1	All Blocks	25	25.00	25	25.00	25	25.00	25	25.00	25	25.00	125	125.00
15	Deep freezer facility for Storage of vaccines and Medicines	Nos	10	All Blocks	0	0.00	0	0.00	13	130.00	0	0.00	0	0.00	13	130.00
16	Establishment of Infrastructure facilities for Veterinary Institutions	Nos	30	All Blocks	8	240.00	5	150.00	3	90.00	6	180.00	1	30.00	23	690.00
17	Establishment of Mobile Disease Diagnostic Labs	Nos	20	B1, B3, B6	3	60.00	0	0.00	0	0.00	0	0.00	0	0.00	3	60.00
18	Establishment of Mobile Veterinary Units	Nos	10	B5, B6	0	0.00	1	10.00	1	10.00	0	0.00	0	0.00	2	20.00
19	Establishment of surgical theatres at veterinary institution	Nos	30	All Blocks	3	90.00	2	60.00	2	60.00	3	90.00	3	90.00	13	390.00
20	Package of Modern Veterinary Diagnostic Aids to Veterinary Institutions such as Computerised X rays, Ultrasound, Diathermy etc.	Nos	30	All Blocks	3	90.00	2	60.00	2	60.00	3	90.00	3	90.00	13	390.00
21	Establishment of Ambulance facility for animals	Nos	80	B8	1	80.00	1	80.00	0	0.00	0	0.00	0	0.00	2	160.00
	Livestock Management															
22	Animal Identification and Traceability	Unit of 1000 animals	0.1	All Blocks	300	30.00	30	3.00	30	3.00	30	3.00	30	3.00	420	42.00
23	Conservation of Indigenous breeds	Pack	10	All Blocks	1	10.00	1	10.00	1	10.00	1	10.00	1	10.00	5	50.00

Sl. No	Interventions	Unit	Unit cost	Blocks covered	2017-18		2018-19		2019-20		2020-21		2021-22		Total	
					Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin
	Capacity Building															
24	Establishment of Farmers training Centre	Nos	200	B8	0	0.00	1	200.00	0	0.00	0	0.00	0	0.00	1	200.00
25	Conducting Demonstrations, Camps and Campaigns	Nos	0.1	All Blocks	26	2.60	26	2.60	26	2.60	26	2.60	26	2.60	130	13.00
26	Creating awarness of livestock management to the farmers through Training Programmes	Nos	0.1	All Blocks	13	1.30	13	1.30	13	1.30	13	1.30	13	1.30	65	6.50
	Grand Total					**963.79**		**1075.04**		**665.04**		**726.79**		**515.04**		**3945.70**

Avinashi - B1, Dharapuram - B2, Gudimangalam - B3, Kangayam - B4, Kundadam - B5, Madathukulam - B6, Mulanur - B7, Palladam - B8, Pongalur - B9, Tiruppur - B10, Udmalpet - B11, Uthukuli - B12, Vellakoil - B13

4.6. Dairy development

The importance of dairying in a country like India hardly needs emphasize. India has vast resources of livestock, which play an important role in the national economy and also in the socioeconomic development of millions of rural households. India has one of the largest stocks of cattle and buffaloes: more than 50 per cent of the world's buffaloes and 20 per cent of its cattle.

Dairy sector acts as an important source of income for rural families, plays a vital role in providing gainful employment and income generating opportunities in the district. Dairy industry in the country is expected to witness spectacular growth in 2017, according to experts.

During the last 10 years, the annual growth rate in Indian dairy industry is 4.6 per cent as compared to the global growth rate of 2.2 per cent. During this period, per capita consumption of milk in the country was 340 g a day as against 299 g globally. “India’s milk production has touched 155.4 metric tonnes during 2015-16. Consumption is increasing at a faster rate. However in the country more than 90 per cent of the dairying is at the subsistence level so the emerging trends have to increase the county’s milk production moreover. To fulfill the shortage in dairy sector the following interventions have been suggested.

Strengthening of milk storages and processing units

Clean milk production is a concept being used everywhere, where quality of milk has become prime importance. It has to be maintained throughout the milk supply chain right from the dairy farm environment to cooling & storage to its packaging. The machinery and equipment required depends on the level of mechanization desired and the scale of operation. However, some machinery and equipment are essentially required such as storage tanks, washer, coolers, pumps and processing equipment’s. Except for this some electrical installation also required to provide proper storage facilities.

The major interventions are,

1. Milk storage tanks of various capacities in all the blocks
2. Milk tankers and milk pumps in all the blocks
3. Processing equipment’s in all the blocks
4. Pasteurizers in all the blocks
5. Heaters and chillers in all the blocks
6. Washer and conveyors in all the blocks
7. Pipes and fittings in all the blocks
8. Cleaning equipment’s in all the blocks
9. Electrical installations (UPS, generators, stabilizers, control panel) in all the blocks

Enhancing milk production and milk processing units

The quality of animals is critical in determining its milk productivity and hence overall production. Currently, low productivity per animal hinders development of the dairy sector. Despite being the world's largest milk producer, India's productivity per animal is very low, at 987 kg per lactation, compared with the global average of 2038 kg per lactation.

The low productivity is a result of ineffective cattle and buffalo breeding programmes, limited extension and management on dairy enterprise development, traditional feeding practices that are not based on scientific feeding methods, and limited availability and affordability of quality feed and fodder. Animal health and breeding services provision, veterinary infrastructure development and vaccinations are the responsibility of the state government. These services have traditionally been provided for free or at a very subsidized rate but in the past few years it has been payable. state livestock development agencies are being set up as autonomous bodies to offer services in animal breeding in the form of procurement, production and distribution of breeding inputs (such as semen and liquid nitrogen), training and promotional activities. Despite these initiatives, the availability of services remains limited and extension activities in dairy management are woefully lacking. In order to get a better improvement in milk production than before the following inputs have been suggested.

1. Provision of veterinary medicine in all the blocks
2. Fodder development equipment and seed material in all the blocks
3. Milk testing equipment's in all the blocks
4. Equipment's for artificial insemination in all the blocks
5. Milk society buildings and cow shed in all the blocks
6. Cryogenic containers in all the blocks
7. Weighing machines in all the blocks
8. Computer accessories in all the blocks

Capacity building

India is the largest milk producer in the world with an annual production of over 155.4 metric tonnes of milk, yet the sector faces numerous issues. One of the major challenges facing the dairy sector is the growing gap between milk supply and demand. Another major challenge arises from the fact that more than 92 per cent of the animals are owned by small holders who had little ownership of land to manage them. The small farmers do not have sufficient resources and lack training in dairy sector that leads to poor animal health and low milk yield. Furthermore, the small farmers lack knowledge of modern breeding practices. To educate the farmers, trainings and camps has to be conducted. Therefore the following intervention has been proposed.

1. Training of personnel of MPCS, Union and federation in all the blocks
2. Infertility camps in all the blocks

Marketing structures

Marketing is generally defined as the process of planning and executing the conception, pricing, promotion, and distribution of ideas, goods, and services to create exchanges that satisfy individual and organizational objectives. The word 'Dairy marketing' means where the milk is kept and marketed. Dairy marketing truly came into the public consciousness with the introduction of the "Got milk" campaign in 1993. Marketing plays a vital role not only in stimulating production and consumption, but also in accelerating the pace of economic development. An efficient marketing system minimizes costs, increases returns to farmers by reducing the number of middlemen or by restricting the commission of marketing system. To increase the income in dairy sector, a suitable marketing structure is vital. To ensure that the following structures have been suggested

1. Parlour structure in all the blocks
2. Milk product storage cabinets in all the blocks
3. Product billing system in all the blocks

Quality control

Quality is a vital ingredient of a good brand. Remember the "core benefits" – the things consumers expect. These must be delivered well. To ensure the quality of the following interventions have been suggested

1. Adulteration detection equipment's in all the blocks
2. Milk testing equipment and laboratory in all the blocks

Processing and value addition

While adding value to farm and livestock products before they reach the local and international market is one of the key aims of Vision 2030. Product diversification has become an important aspect of business strategy with reasons for this increased focus being increased profitability, reduction in risk, increasing competition, higher growth and more efficient resource allocation. Value addition in the dairy value chain is still a challenge in our country. Value addition has been hailed as one of the solutions to the perishability challenge of milk by converting it to a more durable form and hence reducing farm losses. But only few of them undertake the value addition In India. To maximize the value addition in rural areas the following interventions have been suggested

1. Skim milk powder plant
2. Dairy processing plants
3. Water and effluent treatment plants

4. Steam raisning plant
5. Fat handling and other dairy equipment's

Development for dairy sector

Though the milk production has reached an all-time high in the district, the producers are not able to market the milk produced. This is mainly due to inadequate infrastructure available for procurement, processing of milk and marketing network. Providing proper infrastructure to the veterinary health care institutions is necessary for the timely diagnosis and treatment of animal diseases. An efficient management of cattle will be incomplete without a well-planned and adequate housing of cattle. Good quality milk is essential for production of good quality dairy products, taste and flavor, free from pathogens and long keeping quality. Immediately after milking, the milk must be cooled preferably to 4° C. This requires mechanical refrigeration or milk cooling tanks. These are expensive and can usually be afforded by large scale commercial farms. For small scale dairy farmers, setting up a milk cooling centre centrally may be the ideal solution. The following buildings have been proposed for better storage and improvement

1. Construction of dairy farm and skim milk powder plant in all the blocks
2. BMC building in all the blocks
3. Cattle feed plants in all the blocks
4. Ware house for dairy products in all the blocks
5. Ice cream manufacturing buildings in all the blocks

Budget allocation

An outlay of Rs.**17,670.00** lakhs is proposed to fulfill the aforementioned interventions for five years.

Implementing agency

The projects will be implemented by the Department of Dairy Development.

Table.4.21 Budget requirement for Dairy development

(₹. in lakhs)

Sl. No	Interventions	Unit	Unit cost	Blocks covered	2017-18		2018-19		2019-20		2020-21		2021-22		Total	
					Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin
	Engineering section															
1	Electrical installation like Tranformemr, UPS, Stabilisers, Control Panel MCC etc.,	1	25	All blocks	1	25.00	1	25.00	1	25.00	1	25.00	1	25.00	5	125.00
2	Milk Storage Tanks of various capacities	1	15	All blocks	2	30.00	2	30.00	2	30.00	2	30.00	2	30.00	10	150.00
3	Tub washer, Canwashers, Crate conveyor systems.	1	10	All blocks	1	10.00	1	10.00	1	10.00	1	10.00	1	10.00	5	50.00
4	Point of Sale Machines and billing systems	1	0.25	All blocks	50	12.50	50	12.50	50	12.50	50	12.50	50	12.50	250	62.50
5	SS pipes and fittings	1	5	All blocks	1	5.00	1	5.00	1	5.00	1	5.00	1	5.00	5	25.00
6	Solar system for water heating	1	2	All blocks	5	10.00	5	10.00	5	10.00	5	10.00	5	10.00	25	50.00
7	Packing Machineries for milk, Butter, Ghee, SMP and Other Milk products	1	18	All blocks	1	18.00	1	18.00	1	18.00	1	18.00	1	18.00	5	90.00
8	Plate Heat type Chillers and pasteurizers	1	10	All blocks	1	10.00	1	10.00	1	10.00	1	10.00	1	10.00	5	50.00
9	Milk Pumps of Vaious capacities	1	0.5	All blocks	5	2.50	5	2.50	5	2.50	5	2.50	5	2.50	25	12.50
10	Curd processing equipments	1	50	All blocks	0	0.00	0	0.00	0	0.00	0	0.00	1	50.00	1	50.00
11	Cleaning In Place equipments with accessories	1	75	All blocks	0	0.00	0	0.00	0	0.00	0	0.00	1	75.00	1	75.00
	Procurement and Input															
12	Veterinary Medicine	1	2	All blocks	7	14.00	7	14.00	7	14.00	7	14.00	7	14.00	35	70.00
13	Two wheeler for AI technician	1	0.5	All blocks	50	25.00	50	25.00	50	25.00	50	25.00	50	25.00	250	125.00
14	Computer system with accessories	1	0.5	All blocks	50	25.00	50	25.00	50	25.00	50	25.00	50	25.00	250	125.00

Sl. No	Interventions	Unit	Unit cost	Blocks covered	2017-18		2018-19		2019-20		2020-21		2021-22		Total	
					Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin
15	Fodder seed materials	1	0.25	All blocks	50	12.50	50	12.50	50	12.50	50	12.50	50	12.50	250	62.50
16	Fodder development equipments like chaff cutter, Mower etc.,	1	0.2	All blocks	50	10.00	50	10.00	50	10.00	50	10.00	50	10.00	250	50.00
17	Bulk Milk coolers of Various capacities	1	15	All blocks	10	150.00	10	150.00	10	150.00	10	150.00	10	150.00	50	750.00
18	Milk cans	1	0.035	All blocks	1000	35.00	1000	35.00	1000	35.00	1000	35.00	1000	35.00	5000	175.00
19	Electronic weighing scales of various capacities.	1	0.3	All blocks	50	15.00	50	15.00	50	15.00	50	15.00	50	15.00	250	75.00
20	Electronic milk testing equipments	1	1.25	All blocks	50	62.50	50	62.50	50	62.50	50	62.50	50	62.50	250	312.50
21	Milking machine	1	0.8	All blocks	50	40.00	50	40.00	50	40.00	50	40.00	50	40.00	250	200.00
22	Cow shed	1	5	All blocks	50	250.00	50	250.00	50	250.00	50	250.00	50	250.00	250	1250.00
23	Society Buildings	1	20	All blocks	10	200.00	10	200.00	10	200.00	10	200.00	10	200.00	50	1000.00
24	Cryogenic containers	1	0.35	All blocks	30	10.50	30	10.50	30	10.50	30	10.50	30	10.50	150	52.50
25	Equipments for Artificial Insemination	1	0.5	All blocks	5	2.50	5	2.50	5	2.50	5	2.50	5	2.50	25	12.50
	Capacity building															
26	Training of personnel of MPCS, Union and Federation.	1	0.05	All blocks	200	10.00	200	10.00	200	10.00	200	10.00	200	10.00	1000	50.00
27	Infertility Camps	1	0.2	All blocks	150	30.00	150	30.00	150	30.00	150	30.00	150	30.00	750	150.00
	Marketing															
28	Parlour structures	1	5	All blocks	50	250.00	50	250.00	50	250.00	50	250.00	50	250.00	250	1250.00
29	Milk product storage cabinets	1	0.3	All blocks	200	60.00	200	60.00	200	60.00	200	60.00	200	60.00	1000	300.00
30	Product Billing systems	1	0.3	All blocks	50	15.00	50	15.00	50	15.00	50	15.00	50	15.00	250	75.00
	Quality control															
31	Adulteration detection equipments	1	4	All blocks	1	4.00	1	4.00	1	4.00	1	4.00	1	4.00	5	20.00

Sl. No	Interventions	Unit	Unit cost	Blocks covered	2017-18		2018-19		2019-20		2020-21		2021-22		Total	
					Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin
32	Milk testing equipment and Laboratory.	1	5	All blocks	1	5.00	1	5.00	1	5.00	1	5.00	1	5.00	5	25.00
	Processing															
33	Dairy Processing Plants	1	6000	All blocks	0	0.00	0	0.00	0	0.00	0	0.00	1	6000.00	1	6000.00
34	Refrigeration Plants	1	500	All blocks	0	0.00	0	0.00	0	0.00	0	0.00	1	500.00	1	500.00
35	Effluement treatment plant	1	100	All blocks	0	0.00	0	0.00	0	0.00	0	0.00	1	100.00	1	100.00
36	Steam raisning plant with accessories	1	100	All blocks	0	0.00	0	0.00	0	0.00	0	0.00	1	100.00	1	100.00
37	Fat handling equipments	1	200	All blocks	0	0.00	0	0.00	0	0.00	0	0.00	1	200.00	1	200.00
38	Dairy equipments	1	50	All blocks	1	50.00	1	50.00	1	50.00	1	50.00	1	50.00	5	250.00
	Civil work Infrastructure															
39	BMC buildings	1	15	All blocks	10	150.00	10	150.00	10	150.00	10	150.00	10	150.00	50	750.00
40	Ice cream and dairy product buildings	1	2500	All blocks	0	0.00	0	0.00	1	2500.00	0	0.00	0	0.00	1	2500.00
41	Ware house for Dairy products	1	200	All blocks	0	0.00	0	0.00	1	200.00	0	0.00	0	0.00	1	200.00
42	Ware house for Dairy consumables	1	200	All blocks	0	0.00	0	0.00	1	200.00	0	0.00	0	0.00	1	200.00
	Grand Total					**1549.00**		**1549.00**		**4449.00**		**1549.00**		**8574.00**		**17670.00**

Avinashi - B1, Dharapuram - B2, Gudimangalam - B3, Kangayam - B4, Kundadam - B5, Madathukulam - B6, Mulanur - B7, Palladam - B8, Pongalur - B9, Tiruppur - B10, Udmalpet - B11, Uthukuli - B12, Vellakoil - B13

4.7. Fisheries sector

Fisheries sector is one of the important food production sector in the State contributing to the livelihood as well as food security of a large section of the economically under-privileged population. In recent years, it has assumed greater significance and its contribution towards the State and the National economy in terms of livelihood and nutritional security, rural employment generation and foreign exchange earnings have been enormous. Fisheries include marine, freshwater and brackish water subsectors. The Fisheries sector over the years has transformed from subsistence-based artisanal activities to modern livelihood activities with the application of science and modern technologies in the field of capture fishing and culture fisheries. It is developing as a major industry with diversifications viz., exploring deep sea resources and eco-friendly aquaculture practices for culture of finfish and shell fish, ornamental fish culture, eco-tourism, fish processing parks, mid sea fish processing units, etc.

Enhancement of fisheries production

Fisheries sector occupies a very important place in the socio-economic development of the country. It has been recognized as a powerful income and employment generator as it stimulates growth of a number of subsidiary industries, and is a source of cheap and nutritious food besides being a foreign exchange earner. Most importantly, it is the source of livelihood for a large section of economically backward population of the country. The main challenges facing fisheries development in the country includes accurate data on assessment of fishery resources and their potential in terms of fish production, development of sustainable technologies for fin and shell fish culture, yield optimization, harvest and post-harvest operations, landing and berthing facilities for fishing vessels and welfare of fishermen.

With increasing pressure on the world's inland and coastal marine fisheries, increases in production and quality of yield are being sought through the application of a range of enhancement techniques. Which of these is applied depends on the attitude to the natural resource by societies at different levels of economic development. The range of enhancement techniques involves increasing levels of human input and control which raise productivity significantly, but which also raise costs. Introductions have raised production in many areas of the world at the price of the risk of environmental disruption. Stocking is extremely widespread but has generally been applied uncritically. A variety of models are proposed to serve as a basis for more rigorous evaluation of biological and economic effectiveness of this practice. Fertilization of water bodies is used to raise levels of production further. Elimination of unwanted species then becomes necessary to maximize benefits from the target species. Adjustments to

the habitats within the water body assist in raising general levels of productivity which culminate in the conversion of areas of the water into fish ponds or for cage culture. This process has important implications for the social, economic and policy context which necessitates shifts in ownership, finance and education among populations where these types of development occur**.**

In the inland fisheries sector, aquaculture is poised to play a pivotal role in increasing fish production, ensuring food security and enhancing growth of the State's economy. To maximize fish production from an unit area and to generate maximum income to the fish farmers, the Government has initiated innovative approaches such as stocking of fast growing fish species in the short seasonal water bodies, integrating aquaculture in the existing irrigation systems / rain water harvesting systems, brood stock development to produce quality fish fingerlings, promotion of fish culture in farm ponds and introduction of cage culture in reservoirs etc. With concerted efforts to mobilize farmers to adopt fish farming, application of appropriate technologies for sustainable fish farming and fish seed production and availability of institutional finance, it would be possible to bring in substantial hikes in the annual fish production from the aquaculture sector within a span of 5 years. Hence in this district it suggested to implement the following intervention to enhance the production and growth of fisheries

The interventions are

a) Introduction of IMC seeds in riverine check dams and weirs in Vellakoil and Madathukulam blocks
b) Increasing fishing efficiency of inland fishermen and fish farmers in vellakoil and madathukulam blocks
c) Improvement of hygenic fish handling by providing ice boxes in Vellakoil and Madathukulam blocks
d) Up gradation of fishing efficiency of inland fishermen of tamil nadu in vellakoil and madathukulam blocks

Infrastructure and assets

Fish Farming is an age old activity and in practice from ancient times. The successful fish culture requires ploughing of pond, addition of manure, stocking of fish seed; eradication of unwanted aquatic plants and animals, watering the pond; harvesting the crop and marketing of the produce. The fish culture technologies and economics are simple and understandable to the fish farmers. Hence the construction of fish ponds in this district is recommended for its commercial production

The interventions are

- Increasing seed availability by establishing seed rearing units in Madathukulam blocks

Capacity Building

Effective extension support is essential for the promotion of Aquaculture in freshwater and brackish water areas. It is necessary to establish the information centres/data dissemination centres in Fishermen villages, animation camps in fisheries villages, seminars, exhibitions and workshop, and awareness centres for linking the fishing villages, marketing centres and the district offices. Hence in this district it is necessary to give training to fish farmers with budget of cost of ₹5.60 lakhs for Vellakoil, Madathukulam and Udumalpet blocks

Budget

The budget requirement for fulfilling the above interventions is ₹ **291.70** lakhs

Implementing agency

Department of Fisheries will be implementing the project

Table 4.22 Budget requirement for fisheries

(₹. in lakhs)

Sl. No	Interventions	Unit	Unit cost	Blocks covered	2017-18		2018-19		2019-20		2020-21		2021-22		Total Amount	
					Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin
	Enhancement of fisheries															
1	Up gradation of Fishing Efficiency of Inland Fishermen of Tamil Nadu.	Nos	0.15	Madathukulam	10	1.50	10	1.50	10	1.50	10	1.50	10	1.50	50	7.50
2	Introduciton of IMC seeds in riverine check dams and weirs (ha.) (2000 AFL/ha. @Rs.2/seed- 100 per cent subsidy)	Nos	2	Vellakoil, Madathukulam	10	20.00	20	40.00	20	40.00	20	40.00	20	40.00	90	180.00
3	Increasing fishing efficiency of inland fishermen and fish farmers	Nos	0.15	Vellakoil, Madathukulam ,	110	16.50	110	16.50	110	16.50	110	16.50	110	16.50	550	82.50
4	Improvement of hygenic fish handling by providing ice boxes	Nos	0.065	Madathukulam , Udumalpet	0	0.00	10	0.65	10	0.65	10	0.65	10	0.65	40	2.60
	Section Total					**38.00**		**59.00**		**59.00**		**59.00**		**59.00**	**0**	**273.00**
	Creation of infrastructure facilities															
5	Increasing seed availability by establishing seed rearing units	Nos	4.5	Madathukulam	0	0.00	2	9.00	0	0.00	0	0.00	1	4.50	3	14.00

Sl. No	Interventions	Unit	Unit cost	Blocks covered	2017-18		2018-19		2019-20		2020-21		2021-22		Total Amount	
					Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin
	Section Total					**0.00**		**9.00**		**0.00**		**0.00**		**5.00**	**0**	**14.00**
	Capacity building programme															
6	Providing trainers training and exposure visit to Departmental staff	days	0.02	Vellakoil, Madathukulam , Udumalpet	40	0.00	60	0.00	60	0.00	60	0.00	60	0.00	280	0.00
7	Training to fish farmers	0	0	0	40	0.80	60	1.20	60	1.20	60	1.20	60	1.20	280	5.60
	Section Total					**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**6.00**
	Grand Total					**39.00**		**69.00**		**60.00**		**60.00**		**64.00**		**292.00**

4.8. FISHERIES RESEARCH

Fisheries sector occupies a very important place in the socio-economic development of the country. It has been recognized as a powerful income and employment generator as it stimulates growth of a number of subsidiary industries, and is a source of cheap and nutritious food, besides being a foreign exchange earner. Most importantly, it is the source of livelihood for a large section of economically backward population of the country. In India, fisheries have always been playing a vital role in providing gainful employment to people, besides securing their food and nutritional security, especially in rural areas. India is the third largest producer of inland capture fish in the world after China and Myanmar. Inland fish production in the country registered an impressive growth of 8 fold in the last 50 years.

Tamil Nadu with its 1076 km of coastline (13 per cent of country's coastline), 1.9 lakh sq. km of Exclusive Economic Zone (EEZ) (9.4 per cent of India's EEZ) and a continental shelf of about 41,412 sq km is one of the leading producers of both marine and inland fish. Tamil Nadu has 3.7 lakh hectare of water spread area suitable for fish culture. It comprises of major reservoirs (52,000 ha.), big/small irrigation tanks (98,000 ha.), small lakes and Rural Fishery Demonstration Tanks (1,58,000 ha.) and brackish water areas, swamps, estuaries (63,000 ha.) which are suitable for both capture and culture fisheries. Tamil Nadu is also endowed with rich cold water fishery resources. Apart from this 7,400 km length of rivers and canals offer good scope for fisheries development. The inland fisheries policy of the state focuses in maximizing the fish production utilizing available inland water resources by adopting scientific freshwater aquaculture management and quality seed production.

Tamil Nadu Fisheries University (TNFU) is the state funded, unitary professional Fisheries University in India imparting education, research and training to enhance fish production and utilization by following the State Agricultural University (SAU) pattern and syllabi. The prominent area of research in the area of aquaculture are: improving the quality of progeny by developing sperm bank, development of techniques for the culture of fin fishes in cages, enhancing the water use efficiency and productivity by bio-floc technology, developing the improved methods of ornamental fish culture and breeding techniques and inventing techniques to prevent and cure fish diseases. Stock assessment of important fishery resources, mapping the fauna and understanding the biology of commercially important and rare species, coastal area and inland waters monitoring for the major pollutants and waste water management are the focus areas of research. Value addition to fish has been a major focus area and

technologies for fish pickle, fish noodles and ready to eat products like fish curry, fish puff, fish cutlet and fish burger have been evolved. Quality control wing of fish processing has evolved several rapid techniques for detection of human pathogens. A separate laboratory for quality monitoring will be built to help the industry.

Project component

- Awareness campaigns on health beneficial attributes of fish
- Production of short films on nutritive value of fish and screening in theatres and television channels.
- Supply of preserved ready to eat and ready to cook fish products through public distribution systems.
- Supply of fish and fish products in mid-day meal programme
- Establishment of KVK in Madurai district
- Supply chain management to promote consumption of framed fresh water fishes
- Stock enhancement and ranching center for indigenous fishes
- Fish genomic conservation centre

Budget

The proposed intervention will be implemented with a budget outlay of. ₹ 141.60 lakhs.

Project implementing agency

The project will be implemented by the Tamil Nadu Fisheries University. The progress of the work will be monitored by the Vice Chancellor and Nodal Officer of the concerned project.

Expected outcome

The implementation of the project will trigger the adoption of cage farming in the inland fisheries system.

Table .4.23 Budget estimate for fisheries research (TNFU)

(₹. in lakhs)

Sl. No	Interventions	Unit cost	Block Covered	2017-18		2018-19		2019-20		2020-21		2021-22		Total	
				Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin
1	**Aquaculture**														
a	**Enhancement of per capita consumption of fish**														
1	Awareness campaign on health beneficial attributes of fish	0.005	Tiruppur	52	0.26	52	0.26	52	0.26	52	0.26	52	0.26	260	1.30
2	Production of short films on nutritive value of fish and screening in theatres and television channels	50	Tiruppur	0	0.00	1	50.00	0	0.00	0	0.00	0	0.00	1	50.00
b	**Ensuring nutritional security through fish and fishery products**														
3	supply of preserved ready to eat and ready to cook fish products through public distribution sytems	12.9	Tiruppur	0	0.00	0	0.00	1	12.90	0	0.00	0	0.00	1	12.90
4	Supply of fish and fish products in mid day meal programme	12.9	Tiruppur	0	0.00	1	12.90	0	0.00	0	0.00	0	0.00	1	12.90
5	Supply chain management to promote consumption of farmed freshwater fishes	64.5	Tiruppur	1	64.50	0	0.00	0	0.00	0	0.00	0	0.00	1	64.50
	Grand total				**64.76**		**63.16**		**13.16**		**0.26**		**0.26**		**141.60**

4.9. Public Works Department

Increasing the ground water level

Water is one of the most important natural resources. A large quantity of water is used for irrigation and there is an urgent need for proper water management in irrigation sector. Adverse climate change and over use of ground water resulted with ground water depletion. It is important to recharge the ground water by rain water harvesting. Hence, it is important to create facilities for increasing water harvesting mechanism to increase the production in agriculture. There is a need for farmer's participation not only in the construction of infrastructure but also in its maintenance to reap the benefits. The farmers are to be trained and involved in the development and maintenance of these structures as a common property of the village. The livelihood of the people in this basin depends on agriculture only. Most of the canals and tanks are silted and bushes occupied major part of the tanks and canals, which are major source of flow water for tanks during the rainy period. There by storage capacity of the tank is very much reduced. Hence, to raise the water table level, construction of check dams need to be taken up in canals to increase the storage capacity of the tanks and there by crop cultivation area in tank ayacut area may be increased.

Project components

- Construction of check dams
- Improvements of tanks and channels
- Rehabilitation of channels

Budget

It is proposed to incur Rs **2,173.96 crores** over a period of five years

Expected outcome

The project will increase the Ground water table level and carrying capacity of canals during the heavy rain period and thereby increasing the crop cultivation area. This will result in the ensuring of food security for the people.

Implementing agency

Department of Public Works will be implementing the project.

Table .4.24 Budget estimate for PWD works in Tiruppur district

(₹. in lakhs)

Sl. No.	Intervention	Unit	Unit cost	Blocks covered	2017-18		2018-19		2019-20		2020-21		2021-22		Total	
					Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin
1	Construction of a pond across Upparodai in S.F.No 381 of Periyapatti village in Udumalpet Taluk of Tiruppur district	Ha	2.98	Gudimangalam	41.25	123.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	41.25	123.00
2	Construction of a checkdam in SF.No.68 Vagaithozhuvu village in Udumalpet taluk of Tiruppur District	Ha	8.85	Gudimangalam	9.69	85.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.69	85.76
3	Construction of Checkdam across Amaravathi River near Kumaralingam village in Madathukulam taluk of Tiruppur District.	Ha	8.00	Madathukulam	125.00	1000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	125.00	1000.00
4	Construction of Checkdam across Amaravathi River near Eswaran Kovil in Karatholuvu village in Madathukulam taluk of Tiruppur District.	Ha	7.14	Madathukulam	140.00	1000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	140.00	1000.00
5	Construction of Checkdam across Amaravathi River near Karatholuvu	Ha	7.14	Madathukulam	140.00	1000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	140.00	1000.00

Sl. No.	Intervention	Unit	Unit cost	Blocks covered	2017-18		2018-19		2019-20		2020-21		2021-22		Total	
					Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin
	village in Madathukulam taluk of Tiruppur District.															
6	Construction of Check Dam across Amaravathy River at L.S. 89.00 KM near Kolathu palayam village in Dharapuram Taluk of Tiruppur District.	Ha	9.09	Dharapuram	110.00	1000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	110.00	1000.00
7	Construction of Bridge near surplus weir and Protection Wall in Kongur Idachiamman Kulam and improvements to its Supply Channels in Dharapuram Taluk of Tiruppur District.	No	400.00	Dharapuram	1.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	400.00
8	Improvements to Udayar kulam supply channel in Alampalayam Village of Dharapuram Taluk of Tiruppur District.	Ha	8.48	Dharapuram	35.36	300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	35.36	300.00
9	Construction of Protection wall and Improments to its supply channel in Kathasamy palayam Tank in Dharapuram Taluk of Tiruppur Dt.	Ha	4.69	Mulanur	64.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	64.00	300.00

Sl. No.	Intervention	Unit	Unit cost	Blocks covered	2017-18		2018-19		2019-20		2020-21		2021-22		Total	
					Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin
10	Improvements to the Ramakulam old channel in Amaravathi River System in Madathukulam taluk of Tiruppur District.	Ha	1.79	Madathukulam	560.00	1000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	560.00	1000.00
11	Improvements to the Kallapuram old channel in Amaravathi River System in Udumalpet taluk of Tiruppur District.	Ha	1.70	Udumalpet	587.00	1000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	587.00	1000.00
12	Improvements to the Komaralingam old channel in Amaravathi River System in Madathukulam taluk of Tiruppur District.	Ha	1.96	Madathukulam	510.00	1000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	510.00	1000.00
13	Improvements to the Sarkar Kannadi Puthur old channel in Amaravathi River System in Madathukulam taluk of Tiruppur District.	Ha	3.73	Madathukulam	268.00	1000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	268.00	1000.00
14	Improvements to the Sholamadevi old channel in Amaravathi River System in Madathukulam taluk of Tiruppur District.	Ha	4.26	Madathukulam	235.00	1000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	235.00	1000.00

Sl. No.	Intervention	Unit	Unit cost	Blocks covered	2017-18		2018-19		2019-20		2020-21		2021-22		Total	
					Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin
15	Improvements to the Kadathur old channel in Amaravathi River System in Madathukulam taluk of Tiruppur District.	Ha	2.11	Madathukulam	474.00	1000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	474.00	1000.00
16	Improvements to the Kaniyur old channel in Amaravathi River System in Madathukulam taluk of Tiruppur District.	Ha	6.33	Madathukulam	158.00	1000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	158.00	1000.00
17	Improvements to the Karatholuvu old channel in Amaravathi River System in Madathukulam taluk of Tiruppur District.	Ha	3.95	Madathukulam	253.00	1000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	253.00	1000.00
18	Improvements to the Alangiyam old channel in Amaravathi River System in Dharapuram taluk of Tiruppur District.	Ha	2.34	Dharapuram	427.00	1000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	427.00	1000.00
19	Improvements to the Dhalavaipattinam old channel in Amaravathi River System in	Ha	2.65	Dharapuram	377.00	1000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	377.00	1000.00

Sl. No.	Intervention	Unit	Unit cost	Blocks covered	2017-18		2018-19		2019-20		2020-21		2021-22		Total	
					Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin
	Dharapuram taluk of Tiruppur District															
20	Improvements to the Dharapuram old channel in Amaravathi River System in Dharapuram taluk of Tiruppur District	Ha	1.02	Dharapuram	979.00	1000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	979.00	1000.00
21	Improvements to the Kolinjivadi old channel in Amaravathi River System in Dharapuram taluk of Tiruppur District	Ha	1.15	Dharapuram	1307.00	1500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1307.00	1500.00
22	Improvements to the Nanjaithalaiyur old channel in Amaravathi River System in Dharapuram taluk of Tiruppur District	Ha	5.00	Mulanur	200.00	1000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	200.00	1000.00
23	Improvements to the Sundakkam palayam old channel in Amaravathi River System in Dharapuram taluk of Tiruppur District	Ha	8.47	Mulanur	118.00	1000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	118.00	1000.00
24	Renovation to Ramakulam Old Channel Anicut and Its Leading Channel in Water Spread Area of Amaravathy Dam in Udumalpet Taluk of	No	90.00	Udumalpet	1.00	90.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	90.00

Sl. No.	Intervention	Unit	Unit cost	Blocks covered	2017-18		2018-19		2019-20		2020-21		2021-22		Total	
					Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin
	Tiruppur District.															
25	Special Repairs to Amaravathi main canal from L.S mile @ 27/6/200 to 28/3/000 in Madathukulam Taluk of Tiruppur District	No	5.00	Madathukulam	1.00	5.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	5.00
26	Special Repairs to damaged Parapet wall, Chutes and Reclamation of Earth Bund from LS 2050m to 3300m in Nallathangal Odai Reservoir in Dharapuram Taluk of Tiruppur District	No	20.00	Dharapuram	1.00	20.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	20.00
27	Micro Irrigation and Rehabilitation of Left out reaches of Udumalpet Canal from LS. 0.000 Km to 16.500 Km and its distributories.	Ha	0.21	Madathukulam & Udumalpet	2939.00	620.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2939.00	620.00
28	Rehabilitation of Left Flank Canal and its distributories from LS. 8.000 Km to 16.700 Km of Uppar Dam.	Ha	0.34	Dharapuram & Kundadam	884.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	884.00	300.00
29	Rehabilitation of Left out reaches in Manupatti Branch Canal from LS.	Ha	0.07	Udumalpet	4673.00	350.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4673.00	350.00

Sl. No.	Intervention	Unit	Unit cost	Blocks covered	2017-18		2018-19		2019-20		2020-21		2021-22		Total	
					Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin
	0.000 Km to 10.200 Km and its distributories.															
30	Construction of Check Dam across Varappallam in S.F.No.379 of Valayapalayam Village.	No	32.45	Madathukulam	1.00	32.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	32.45
31	Construction of Check Dam across Varappallam in S.F.No.349 of Ravanapuram Village.	No	41.25	Madathukulam	1.00	41.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	41.25
32	Construction of Check Dam across Jampukal Odai in S.F.No.227 of Elayamuthur Village.	No	46.60	Madathukulam	1.00	46.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	46.60
33	Rehabilitation of Left out reaches of Contour Canal from L.S.30.100km to 49.300 km in Udumalpet Taluk of Tiruppur District	No	1985.00	Madathukulam	1.00	1985.00	1.00	1985.00	1.00	1985.00	0.00	0.00	0.00	0.00	3.00	5955.00
34	Rehabilitation and forming the foreshore bund in Karisalkulam Tank in Udumalpet Taluk of Tiruppur District	Ha	0.45	Madathukulam	88.00	40.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	88.00	40.00
35	Rehabilitation and forming the foreshore bund in Chettikulam Tank in Udumalpet Taluk	Ha	0.33	Madathukulam	105.00	35.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	105.00	35.00

Sl. No.	Intervention	Unit	Unit cost	Blocks covered	2017-18		2018-19		2019-20		2020-21		2021-22		Total	
					Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin
	of Tiruppur District															
36	Rehabilitation and forming the foreshore bund in Periyakulam Tank in Udumalpet Taluk of Tiruppur District	Ha	0.08	Madathukulam	472.00	40.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	472.00	40.00
37	Rehabilitation and forming the foreshore bund in Sengulam Tank in Udumalpet Taluk of Tiruppur District	Ha	0.22	Madathukulam	115.00	25.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	115.00	25.00
38	Rehabilitation and forming the foreshore bund in Valayapalayam Tank in Udumalpet Taluk of Tiruppur District	Ha	0.43	Madathukulam	58.00	25.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	58.00	25.00
39	Renovation of Distributory off taking at 3.37 Km of Parambikulam Main Canal	Ha	0.07	Madathukulam	1349.00	91.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1349.00	91.60
40	Rehabilitation of Left out Reaches in distributories offtaking in between LS. 0.000 Km to 7.270 Km of Vellakovil Branch Canal.	Ha	0.07	Kangayam	4895.00	356.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4895.00	356.00
41	Rehabilitation and Restoration of Samalapuram Anicut and its system tank in	Ha	13.27	Somanur	48.99	650.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	48.99	650.05

Sl. No.	Intervention	Unit	Unit cost	Blocks covered	2017-18		2018-19		2019-20		2020-21		2021-22		Total	
					Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin
	Noyyal River System in Tiruppur District															
42	Rehabilitation and Restoration of MangalamAnicut and its system tank in Noyyal River System in Tiruppur District	Ha	0.69	Palladam	33.20	23.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.20	23.00
43	Construction of New Check Dam at Vettuvapalayam across Noyyal River	No	400.00	Palladam	1.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	400.00
44	Formation of Supply Channel from Vettuvapalayam Check Dam to Senkarai Odai Anicut	No	600.00	Palladam	1.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	600.00
45	Repairs and restoration of Kilankulam tank bund, sluice and supply channel of Avinashi Taluk of Tiruppur District.	Ha	0.40	Avinashi	25.50	10.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25.50	10.20
46	Repairs and restoration of Avinashilingampalayam tank bund, sluice and supply channel of Avinashi Taluk of Tiruppur District.	Ha	0.40	Avinashi	21.86	8.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	21.86	8.74
47	Repairs and restoration of	Ha	0.40	Avinashi	31.98	12.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	31.98	12.79

Sl. No.	Intervention	Unit	Unit cost	Blocks covered	2017-18		2018-19		2019-20		2020-21		2021-22		Total	
					Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin
	Kannur tank bund, sluice and supply channel of Avinashi Taluk of Tiruppur District.															
48	Rehabilitation of Parambikulam main canal from Ls 1.200 km to 14.000Km	No	5000.00	Udumalpet	1.00	5000.00	1.00	5000.00	1.00	5000.00	0.00	0.00	0.00	0.00	3.00	15000.00
49	Rehabilitation of Arthanaripalayam branch canal and distributories taking off at Ls 5.600 km of PMC	Ha	0.34	Udumalpet	2067.18	700.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2067.18	700.00
50	Rehabilitation of Direct distributories off taking at Ls 4.400 km, 8.600 km and 15.400 km of PMC	Ha	0.18	Udumalpet	1405.10	250.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1405.10	250.00
51	Rehabilitation of Parambikulam main canal from Ls 39/500 km to 46/000 km.	No	400.00	Gudimangalam	1.00	400.00	1.00	400.00	1.00	400.00	0.00	0.00	0.00	0.00	3.00	1200.00
52	Rehabilitation of Distributories and Direct Sluices at Ls 38/370km, 41/030km, 44/400km, 46/360km and 46/510km of PMC.	Ha	0.12	Gudimangalam	815.79	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	815.79	100.00
53	Rehabilitation of J.Krishnapuram branch canal at Ls 47/200km of PMC.	Ha	0.08	Gudimangalam	5295.14	420.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5295.14	420.00

Sl. No.	Intervention	Unit	Unit cost	Blocks covered	2017-18		2018-19		2019-20		2020-21		2021-22		Total	
					Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin
54	Rehabilitation of Parambikulam main canal from Ls 73/000 km to 78/000 km.	No	800.00	Pongalur	1.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	800.00
55	Rehabilitation of Periyakumarapalayam branch canal at Ls 75/400 km of PMC.	Ha	0.27	Kundadam	5655.87	1500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5655.87	1500.00
56	Construction of a Checkdam across at a junction of Senjeripudur Odai and Salaipudur Odai in SF No. 1272 of Manurpalayam Village in Dharapuram Taluk, Tiruppur District.	Ha	2.47	Kundadam	101.21	250.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	101.21	250.00
57	Rehabilitation of Parambikulam main canal from Ls 78/00 km to 87/400 km.	No	666.67	Pongalur	1.00	666.67	1.00	666.67	1.00	666.67	0.00	0.00	0.00	0.00	3.00	2000.00
58	Rehabilitation of Palladam Extension Canal from Ls 0/000 km to 17/500 km.	Ha	0.28	Pongalur	5356.68	1500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5356.68	1500.00
59	Rehabilitation of Kundadam branch canal at Ls 87/200 km of PMC.	Ha	0.17	Pongalur	11505.26	2000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11505.26	2000.00
60	Construction of a Checkdam across Uppar Odai in SF No. 382 of Periyakumarapalay	Ha	1.98	Kundadam	101.21	200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	101.21	200.00

Sl. No.	Intervention	Unit	Unit cost	Blocks covered	2017-18		2018-19		2019-20		2020-21		2021-22		Total	
					Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin
	am Village in Dharapuram Taluk, Tiruppur District.															
61	Construction of a Checkdam across Uppar Odai in SF No. 95 of Periyapatti Village in Udumalaipettai Taluk, Tiruppur District.	Ha	1.24	Gudimangalam	161.94	200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	161.94	200.00
62	Rehabilitation of Parambikulam main canal from Ls 87/400 km to 103.765 km.	No	733.33	Pongalur	1.00	733.33	1.00	733.33	1.00	733.33	0.00	0.00	0.00	0.00	3.00	2200.00
63	Rehabilitation of Distributories and Direct Sluices From Ls 87.400 KM to 103.765KM of PMC.	Ha	0.26	Pongalur	2909.35	750.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2909.35	750.00
64	Rehabilitation of Tiruppur Branch canals from L.S. 0.00 Km to 16.400 Km and its Distributories , Direct Sluices.	Ha	0.15	Pongalur Palladam Tiruppur (South)	3437.88	500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3437.88	500.00
65	Rehabilitation of Muthanampalayam Branch canal from L.S.0.00 Km to 8.000 Km and its Distributories ,Direct Sluices.	Ha	0.11	Pongalur Tiruppur (South)	2225.82	250.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2225.82	250.00
66	Rehabilitation of Vadasinaripalayam Branch canals from	Ha	0.11	Pongalur Kundadam	3302.31	350.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3302.31	350.00

Sl. No.	Intervention	Unit	Unit cost	Blocks covered	2017-18		2018-19		2019-20		2020-21		2021-22		Total	
					Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin
	L.S. 0.00 Km to 9.300 Km and its Distributories ,Direct Sluices.															
67	Construction of a Checkdam across Nelali Karai Odai in SF No. 508,509 & 510 of vadasinnaripalaya m Village in Kangayam Taluk, Tiruppur District.	Ha	2.30	Kundadam	100.00	230.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	230.00
68	Rehabilitation of Parambikulam main canal from Ls 103.765 km to 113.000 km.	No	373.33	Pongalur	1.00	373.33	1.00	373.33	1.00	373.33	0.00	0.00	0.00	0.00	3.00	1120.00
69	Rehabilitation of Distributories and Direct Sluices From LS 103.765 km to 113.000 km.	Ha	0.32	Pongalur	1398.62	450.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1398.62	450.00
70	Rehabilitation of Koduvai Branch canals from L.S. 0.00 Km to 9.280 Km and its Distributories , Direct Sluices	Ha	0.16	Pongalur Kundadam	2254.55	350.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2254.55	350.00
71	Rehabilitation of Alagumalai Branch canal from L.S.0.00 Km to 8.000 Km and its Distributories ,Direct Sluices	Ha	0.17	Pongalur Kangayam	2026.71	350.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2026.71	350.00
72	Rehabilitation of Nagalingapuram	Ha	0.23	Pongalur Kundada	1100.77	250.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1100.77	250.00

Sl. No.	Intervention	Unit	Unit cost	Blocks covered	2017-18		2018-19		2019-20		2020-21		2021-22		Total	
					Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin
	Branch canals from L.S. 0.00 Km to 6.615 Km and its Distributories ,Direct Sluices.			m												
73	Construction of a Checkdam 2 across Nelali Karai Odai in of ellapalayam pudur Village in Kangayam Taluk, Tiruppur District.	Ha	3.50	Kundadam	100.00	350.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	350.00
74	Construction of a Checkdam 3 across Nelali Karai Odai in of Ellapalayam pudur Village in Kangayam Taluk, Tiruppur District.	Ha	3.33	Kundadam	150.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	150.00	500.00
75	Rehabilitation of Parambikulam main canal from Ls 113.000 km to 124.000 km.	No	400.00	Pongalur Kangayam	1.00	400.00	1.00	400.00	1.00	400.00	0.00	0.00	0.00	0.00	3.00	1200.00
76	Rehabilitation of Distributories and Direct Sluices From Ls 113.000 km to 124.000 km of PMC.	Ha	0.14	Pongalur Kangayam	4958.32	700.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4958.32	700.00
77	Rehabilitation of Perutholuvu Branch canal from Ls.00.00Km to 11.000 Km and its Distributories, Direct sluices.	Ha	0.14	Pongalur Kangayam	3171.59	450.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3171.59	450.00
78	Providing Micro Irrigation facilities to	Ha	1.48	Udumalpet,	63722.57	94476.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	63722.57	94476.00

Sl. No.	Intervention	Unit	Unit cost	Blocks covered	2017-18		2018-19		2019-20		2020-21		2021-22		Total	
					Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin
	the command area of Parambikulam Aliyar Project in Tiruppur District.			Gudimangalam, Kundadam, Palladam, Pongalur, Kangayam												
79	Water shed development programme in command area of Parambikulam Aliyar Project system	Ha	0.02	Udumalpet, Gudimangalam, Kundadam, Palladam, Pongalur, Kangayam	63722.57	1500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	63722.57	1500.00
80	Construction of Check Dam across Amaravathy River at L.S.102.00 K.M. near Anipudur village in Dharapuram Taluk of Tiruppur District.	Ha	11.76	Dharapuram	0.00	0.00	85.00	1000.00	0.00	0.00	0.00	0.00	0.00	0.00	85.00	1000.00
81	Construction of Check Dam across Amaravathy River at L.S.75.00 K.M. near Padugai in Dharapuram Taluk of Tiruppur District	Ha	14.29	Dharapuram	0.00	0.00	70.00	1000.00	0.00	0.00	0.00	0.00	0.00	0.00	70.00	1000.00
82	Construction of Check Dam across Amaravathy River at L.S.137.00 K.M. near Mulappalayam in Dharapuram Taluk of Tiruppur District	Ha	6.67	Mulanur	0.00	0.00	150.00	1000.00	0.00	0.00	0.00	0.00	0.00	0.00	150.00	1000.00

Sl. No.	Intervention	Unit	Unit cost	Blocks covered	2017-18		2018-19		2019-20		2020-21		2021-22		Total	
					Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin
83	Construction of Check Dam across Amaravathy River at L.S.160.00 K.M. near Velampoondi in Dharapuram Taluk of Tiruppur District	Ha	6.06	Mulanur	0.00	0.00	165.00	1000.00	0.00	0.00	0.00	0.00	0.00	0.00	165.00	1000.00
84	Diversion of Flood Water from Amaravathy River to Vattamalaikkarai Dam by improving the existing Dharapuram Channel and forming of new Channel and pickup Anicut from Uppar Odai to Vattamalaikkarai Odai Dam in Kangayam and Dharapuram Taluks of Tiruppur District.	Ha	12.26	Vellakovil	0.00	0.00	2447.00	30000.00	0.00	0.00	0.00	0.00	0.00	0.00	2447.00	30000.00
85	Improvements to the Amaravathy Main Canal at 0/0 KM to 63/200 KM in Udumalpet, Madathukulam and Dharapuram taluks of Tiruppur District.	Ha	0.49	Udumalpet, Dharapuram	0.00	0.00	10223.0	5000.00	0.00	0.00	0.00	0.00	0.00	0.00	10223.00	5000.00
86	Rehabilitation of Puthur Pallapalayam Tank of Puthur Pallapalayam Village in Uthukuli	Ha	3.09	Uthukuli	0.00	0.00	32.38	100.00	0.00	0.00	0.00	0.00	0.00	0.00	32.38	100.00

Sl. No.	Intervention	Unit	Unit cost	Blocks covered	2017-18		2018-19		2019-20		2020-21		2021-22		Total	
					Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin
	Taluk of Tiruppur District.															
87	Rehabilitation of Dhalavaipalayam Tank of Dhalavaipalayam Village in Uthukuli Taluk of Tiruppur District.	Ha	4.60	Uthukuli	0.00	0.00	17.40	80.00	0.00	0.00	0.00	0.00	0.00	0.00	17.40	80.00
88	Rehabilitation of Mudhalipalayam Tank of Mudalipalayam Village in Tiruppur Taluk of Tiruppur District.	Ha	3.93	Mudalipalayam	0.00	0.00	43.30	170.00	0.00	0.00	0.00	0.00	0.00	0.00	43.30	170.00
89	Rehabilitation of Mudhalipalayam Anicut of Mudalipalayam Village in Tiruppur Taluk of Tiruppur District.	No	220.00	Mudalipalayam	0.00	0.00	1.00	220.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	220.00
90	Rehabilitation of Anaipalayam Tank of Anaipalayam Village in Tiruppur Taluk of Tiruppur District.	Ha	3.77	Anaipalayam	0.00	0.00	29.14	110.00	0.00	0.00	0.00	0.00	0.00	0.00	29.14	110.00
91	Rehabilitation of Anaipalayam Anicut of Anaipalayam Village in Tiruppur Taluk of Tiruppur District.	No	150.00	Anaipalayam	0.00	0.00	1.00	150.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	150.00
92	Rehabilitation of Kathankanni Tank of Kathankanni	Ha	3.99	Kangayam	0.00	0.00	40.06	160.00	0.00	0.00	0.00	0.00	0.00	0.00	40.06	160.00

Sl. No.	Intervention	Unit	Unit cost	Blocks covered	2017-18		2018-19		2019-20		2020-21		2021-22		Total	
					Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin
	Village in Kangayam Taluk of Tiruppur District.															
93	Rehabilitation of Kathankanni Anicut of Kathankanni Village in Kangayam Taluk of Tiruppur District.	No	180.00	Kangayam	0.00	0.00	1.00	180.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	180.00
94	Rehabilitation of right bund in Noyyal Orathupalayam Reservoir Thammrettipalayam , Maravapalayam and Kathankanni Villages in Kangayam Taluk of Tiruppur District.	No	150.00	Kangayam	0.00	0.00	1.00	150.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	150.00
95	Micro Irrigation and Rehabilitation of Udumalpet Main Canal and its distributories from LS. 23.170 Km to 38.120 Km .	Ha	0.08	Madathukulam & Gudimangalam	0.00	0.00	6688.00	560.00	0.00	0.00	0.00	0.00	0.00	0.00	6688.00	560.00
96	Rehabilitation of Thangammal Odai in Udumalpet Taluk of Tiruppur District.	No	1500.00	Udumalpet	0.00	0.00	1.00	1500.00	1.00	1500.00	0.00	0.00	0.00	0.00	2.00	3000.00
97	Rehabilitation of Pudupalayam Branch Canal from LS. 0.000 Km to 4.500 Km.	Ha	0.60	Gudimangalam	0.00	0.00	834.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00	834.00	500.00
98	Rehabilitation of Right Flank Canal and its distributories from	Ha	0.25	Dharapuram & Kundadam	0.00	0.00	801.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00	801.00	200.00

Sl. No.	Intervention	Unit	Unit cost	Blocks covered	2017-18		2018-19		2019-20		2020-21		2021-22		Total	
					Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin
	LS. 4.500 Km to 11.500 Km of Uppar Dam.															
99	Rehabilitation of Left out Reaches in distributories offtaking in between LS. 7.270 Km to 14.050 Km of Vellakovil Branch Canal.	Ha	0.06	Kangayam	0.00	0.00	4895.00	301.00	0.00	0.00	0.00	0.00	0.00	0.00	4895.00	301.00
100	Rehabilitation and Restoration of Andipalayam Anicut and its system tank in Noyyal River System in Tiruppur District	Ha	35.00	Palladam	0.00	0.00	1.00	35.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	35.00
101	Rehabilitation and Restoration of Manarai Anicut and its system tank in Noyyal River System in Tiruppur District	Ha	5.73	Tiruppur	0.00	0.00	8.90	51.00	0.00	0.00	0.00	0.00	0.00	0.00	8.90	51.00
102	Restoration and Rejuvenation of Noyyal River from L.S. 67.70 KM to 80.35 KM in Tirupur District	Ha	1800.00	Palladam	0.00	0.00	1.00	1800.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	1800.00
103	Repairs and restoration of Punjaithamaraikulam tank bund, sluice and supply channel of Avinashi Taluk of Tiruppur District.	Ha	0.40	Avinashi	0.00	0.00	8.09	3.24	0.00	0.00	0.00	0.00	0.00	0.00	8.09	3.24

Sl. No.	Intervention	Unit	Unit cost	Blocks covered	2017-18		2018-19		2019-20		2020-21		2021-22		Total	
					Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin
104	Rehabilitation of Pallapalayam Tank of Chengappalli Village in Uthukuli Taluk of Tiruppur District.	Ha	0.98	Uthukuli	0.00	0.00	0.00	0.00	71.23	70.00	0.00	0.00	0.00	0.00	71.23	70.00
105	Rehabilitation of LBP Main canal from mile 93/0 to 97/1-200 of Maravapalayam Village in Kangayam Taluk of Tiruppur District.	Ha	0.50	Kangayam	0.00	0.00	0.00	0.00	227.60	113.00	0.00	0.00	0.00	0.00	227.60	113.00
106	Rehabilitation of LBP mail canal from mile 97/2-170 to 113/2 of Paranjervali, Maruthurai, Mullipuram, Nathakadayur, Palayakottai, Kuttapalayam, Rasathavalasu, Velampalayam and Muthur Villages in Kangayam Taluk of Tiruppur District.	Ha	1.69	Kangayam	0.00	0.00	0.00	0.00	1455.55	2457.00	0.00	0.00	0.00	0.00	1455.55	2457.00
107	Rehabilitation of Distributories from mile109/6-135 of LBP main canal of Palayakottai Village in Kangayam Taluk of Tiruppur District.	Ha	0.70	Kangayam	0.00	0.00	0.00	0.00	980.17	686.00	0.00	0.00	0.00	0.00	980.17	686.00
108	Rehabilitation of Distributories from mile112/3-560 of	Ha	0.71	Kangayam	0.00	0.00	0.00	0.00	2204.60	1565.00	0.00	0.00	0.00	0.00	2204.60	1565.00

Sl. No.	Intervention	Unit	Unit cost	Blocks covered	2017-18		2018-19		2019-20		2020-21		2021-22		Total	
					Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin
	LBP main canal of Rasathavalasu, Velampalayam and Muthur Villages in Kangayam Taluk of Tiruppur District.															
109	Rehabilitation of LBP mail canal and Distributories from mile 113/1-200 to 124/2-560 of Valliyarachal, Mettupalayam, Poomandanvalasu, Mangalapatti and Muthur Villages in Kangayam Taluk of Tiruppur District.	Ha	0.40	Kangayam	0.00	0.00	0.00	0.00	1444.73	581.00	0.00	0.00	0.00	0.00	1444.73	581.00
110	Rehabilitation of Mangalapatti Distributory from mile 0/0 to 3/6-600 , Anjur Distributory from mile 0/0 to 3/1-380 and Monjanur Distributory form mile 0/0 to 1/2-440 of LBP main canal in Mangalapatti, Muthur and Poomandanvalasu Villages in Kangayam Taluk of Tiruppur District.	Ha	0.39	Vellakovil, K.Paramathi	0.00	0.00	0.00	0.00	1664.41	652.00	0.00	0.00	0.00	0.00	1664.41	652.00
111	Rehabilitation of Ponnapuramputhur Branch Canal and its distributories.	Ha	0.12	Dharapuram	0.00	0.00	0.00	0.00	5374.00	660.00	0.00	0.00	0.00	0.00	5374.00	660.00

Sl. No.	Intervention	Unit	Unit cost	Blocks covered	2017-18		2018-19		2019-20		2020-21		2021-22		Total	
					Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin
112	Rehabilitation of Poolankinar Branch Canal, Gomangalam Distributory and its distributories.	Ha	0.12	Udumalpet & Gudimangalam	0.00	0.00	0.00	0.00	8112.00	1000.00	0.00	0.00	0.00	0.00	8112.00	1000.00
113	Construction of Check Dam across Uppar Odai in Thoppampatti Village in Udumalpet Taluk of Tiruppur District.	No	200.00	Dharapuram	0.00	0.00	0.00	0.00	1.00	200.00	0.00	0.00	0.00	0.00	1.00	200.00
114	Rehabilitation of Left out Reaches in distributories offtaking in between LS. 14.050 Km to 21.115 Km of Vellakovil Branch Canal.	Ha	0.06	Vellakovil	0.00	0.00	0.00	0.00	4895.00	303.00	0.00	0.00	0.00	0.00	4895.00	303.00
115	Repairs and restoration of Pappankulam tank bund, sluice and supply channel of Avinashi Taluk of Tiruppur District.	Ha	0.40	Avinashi	0.00	0.00	0.00	0.00	6.48	2.59	0.00	0.00	0.00	0.00	6.48	2.59
116	Repairs and restoration of Naduvachery tank bund, sluice and supply channel of Avinashi Taluk of Tiruppur District.	Ha	0.40	Avinashi	0.00	0.00	0.00	0.00	8.50	3.40	0.00	0.00	0.00	0.00	8.50	3.40
117	Rehabilitation of Vallakkundapuram west Distributories	Ha	0.30	Gudimangalam	0.00	0.00	0.00	0.00	0.00	0.00	833.00	250.00	0.00	0.00	833.00	250.00

Sl. No.	Intervention	Unit	Unit cost	Blocks covered	2017-18		2018-19		2019-20		2020-21		2021-22		Total	
					Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin
	and Advalli East distributories.															
118	Rehabilitation and forming the foreshore bund in Thenaikulam Tank in Udumalpet Taluk of Tiruppur District	Ha	0.25	Madathukulam	0.00	0.00	0.00	0.00	0.00	0.00	101.00	25.00	0.00	0.00	101.00	25.00
119	Rehabilitation and forming the foreshore bund in Ammapattikulam Tank in Udumalpet Taluk of Tiruppur District	Ha	0.32	Madathukulam	0.00	0.00	0.00	0.00	0.00	0.00	79.00	25.00	0.00	0.00	79.00	25.00
120	Rehabilitation and forming the foreshore bund in Ottukulam Tank in Udumalpet Taluk of Tiruppur District	Ha	0.17	Madathukulam	0.00	0.00	0.00	0.00	0.00	0.00	174.00	30.00	0.00	0.00	174.00	30.00
121	Rehabilitation of Left out Reaches in distributories offtaking in between LS. 21.115 Km to 27.650 Km of Vellakovil Branch Canal.	Ha	0.08	Vellakovil	0.00	0.00	0.00	0.00	0.00	0.00	4895.00	393.00	0.00	0.00	4895.00	393.00
122	Repairs and restoration of Muriyandampalayam tank bund, sluice and supply channel of Avinashi Taluk of Tiruppur District.	Ha	1.75	Avinashi	0.00	0.00	0.00	0.00	0.00	0.00	2.96	5.18	0.00	0.00	2.96	5.18
123	Repairs and restoration of	Ha	0.40	Avinashi	0.00	0.00	0.00	0.00	0.00	0.00	19.43	7.77	0.00	0.00	19.43	7.77

Sl. No.	Intervention	Unit	Unit cost	Blocks covered	2017-18		2018-19		2019-20		2020-21		2021-22		Total	
					Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin
	Pudupalayam tank bund, sluice and supply channel of Avinashi Taluk of Tiruppur District.															
124	Repairs and restoration of Cheyur tank bund, sluice and supply channel of Avinashi Taluk of Tiruppur District.	Ha	0.40	Avinashi	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	36.03	14.41	36.03	14.41
	Total					**142465.77**		**54828.57**		**19351.32**		**735.95**		**14.41**		**217396.03**

4.9. Agriculture Cooperation

Cooperatives all over the world have become an effective and potential instrument of economic development. The Cooperative Movement in Tamil nadu has witnessed over the decades substantial growth in diverse areas of economy. There is not a single major sphere of economic activity which has not been touched by Cooperatives. Cooperatives are also envisaged as an instrument for implementing many important policies like agricultural credit, urban credit, market intervention, and price support for agricultural commodities through cooperative wholesale stores, public distribution system etc., from a small beginning, the cooperative movement in Tamil Nadu has grown in strength over the years. From agricultural banks to marketing societies and consumer cooperatives provide service to the people in various economic activities. Cooperatives also run the public distribution system which provides relief to each and every family in the state.

Project components

a) Creation of infrastructure through construction of office building, compound wall, office building renovation, purchase of computer and peripherals in all the blocks of Tiruppur district
b) Solar panels and R.O.Water at Avinashi block
c) Shopping complex construction n Udumalpet blocks
d) Packing mkachine supply in Dharapuram blocks
e) Godown construction in all the blocks
f) Godown renovation in all the blocks except Vellakoil blocks

Budget

It is proposed to incur **₹ 3,343.59** lakhs over a period of five years

.Expected outcome

The expected outcome for the project agricultural credit, urban credit, market intervention, and price support for agricultural commodities through Cooperative Wholesale stores, Public Distribution system. This will result in the ensuring of food security for the people.

Implementing agency

Department of Agriculture Cooperation will be implementing the project.

Table.4.24 Budget requirement for Co-operation

(₹. in lakhs)

Sl. No	Co-operation	Blocks covered	2017-18		2018-19		2019-20		2020-21		2021-22		Total	
			Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin
1	Constructiom of building for farmers input sales center	B1	1	12.40	0	0.00	0	0.00	0	0.00	0	0.00	1	12.40
2	Construction of Compound wall	All blocks	114	1082.59	6	87.58	7	71.28	12	94.07	0	0.00	139	1335.52
3	Construction of Godown	All blocks	7	168.55	0	0.00	1	6.00	0	0.00	4	43.10	12	217.65
4	Construction of Office Building	All blocks	12	139.72	5	71.33	0	0.00	1	0.80	2	30.90	20	242.75
5	Constuctuion of Drying Yard	B11	1	24.75	0	0.00	0	0.00	0	0.00	0	0.00	1	24.75
6	Establishment of Auction yard	B1	1	74.80	0	0.00	0	0.00	0	0.00	0	0.00	1	74.80
7	Establishment of Processing unit	B10,B8, B4,B6,B11	1	63.51	2	15.00	0	0.00	0	0.00	0	0.00	3	78.51
8	Renovation of Godown	All blocks except B13	45	265.05	3	22.60	3	37.90	2	25.80	1	15.50	54	366.85
9	Renovation of Office Building	All blocks	51	333.67	13	103.10	9	49.23	19	143.63	2	11.00	94	640.63
10	Shopping complex Construction	B11	1	1.50	0	0.00	0	0.00	0	0.00	0	0.00	1	1.50
11	Strengthening of Cooperation Centres (Furniture's, Solar panel, Modern counter, Xerox machine, Air Conditioner, CCTV Camera, Bore well, Generator, UPS Battery, Cash Counting Machine, Invertor, Jewel Weighing Machine, Packing Machine, Purchase of computer and peripherals, Hand Billing machine, LED	All Blocks	36	165.76	7	59.56	0	0.00	3	30.66	0	0.00	46	255.98

Sl. No	Co-operation	Blocks covered	2017-18		2018-19		2019-20		2020-21		2021-22		Total	
			Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin
	Display for tender process, Purchase of Jewel Carat Meter, Smart Card Printing Machine, Burglary Alarm, Agricultural Equipments, Safety Locker, Purchase of Display racks, Defender Door, Purchase of Paddy drying machine, Automatic Printer machine, Conveyer, E-Tender process, Fork Lifter, Gunny Bag Stitching machine, Jewel tester, Pallets, Tarpaulin, Trolley and Printing Press machineries)													
12	Amenities for Cooperative Centres (RO Water unit, Sanitation, Vehicle Parking Shed, Construction and renovation of Marriage Hall, Construction and renovation of amenity centres)	All Blocks	1	88.60	1	1.15	0	0.00	0	0.00	1	2.50	3	92.25
				2420.90		**360.32**		**164.41**		**294.96**		**103**		**3343.59**

Avinashi - B1, Dharapuram - B2, Gudimangalam - B3, Kangayam - B4, Kundadam - B5, Madathukulam - B6, Mulanur - B7, Palladam - B8, Pongalur - B9, Tiruppur - B10, Udmalpet - B11, Uthukuli - B12, Vellakoil - B13

Table 4.25 Budget Abstract for Tiruppur District

(₹. in lakhs)

Sl. No	Sectors	2017-18	2018-19	2019-20	2020-21	2021-22	Total
1	Agriculture	2580.45	4757.06	2742.75	3262.39	2875.11	16217.76
2	Horticulture	4592.48	4581.93	4855.61	5188.01	5369.24	24587.27
3	Agricultural Engineering	1135.61	1014.11	904.76	1152.06	830.26	5036.80
4	Seed Certification & Organic Certification	13.36	0.00	0.00	0.00	0.00	13.36
5	Animal Husbandry	963.79	1075.04	665.04	726.79	515.04	3945.70
6	Dairy Development	1549.00	1549.00	4449.00	1549.00	8574.00	17670.00
7	Fisheries	39.00	69.00	60.00	60.00	64.00	292.00
8	Fisheries Research (TNFU)	64.76	63.16	13.16	0.26	0.26	141.60
9	Water Resource Organization (PWD)	142465.77	54828.57	19351.32	735.95	14.41	217396.02
10	Civil Supplies & CoOperation	2420.90	360.32	164.41	294.96	103.00	3343.59
	Total	**155825.12**	**68298.19**	**33206.05**	**12969.42**	**18345.32**	**288644.10**


KARNATAKA
KERALA
SRI LANKA