NATIONAL AGRICULTURE DEVELOPMENT PROGRAMME (NADP)

DISTRICT AGRICULTURE PLAN

COIMBATORE

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

NATIONAL AGRICULTURE DEVELOPMENT PROGRAMME (NADP / RKVY)

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COIMBATORE - 641 003

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EXECUTIVE SUMMARY

The District Agriculture Plan aims at achieving and sustaining the desired annual growth by ensuring holistic development of agriculture and allied sectors such as agriculture, horticulture, sericulture, forestry, water resources, agricultural engineering, agri-business, animal husbandry and fisheries. It has to be ensured that the local needs/resources/priorities are better reflected in the agricultural plan.

In order to make the development of agricultural and allied activities more inclusive and also to emphasize bottom up approach in the planning process, block level stakeholders' meetings were conducted by involving all the block level officials, agricultural scientists, farmers, peoples' representatives and so on. The interventions suggested in the block level meetings were incorporated in the District Agriculture Plan. For each block, one scientist from TNAU was nominated to gather the physical and financial aspects of interventions and to prepare the block level plan.

Coimbatore district is situated in the North Western part of Tamil Nadu, covering an area of 4723 sq.km. It falls between 10°13'4" North to 11° 24'5" North latitude and 76° 39' 25" East to 77° 18' 26" East longitude. Administratively, the district is divided into twelve blocks. The normal rainfall of the district is around 689 mm and the highest percentage of total rainfall of 48 per cent is received during north-east monsoon, while the south west monsoon contributes only 28 per cent. Well irrigation is the major source irrigation contributing to 80 per cent of the net irrigated area of the district. Coconut is the major crop grown in the district accounting for 44 per cent of the gross cropped area followed by sorghum (16 per cent), banana (5 per cent) and groundnut (4 per cent).

The total budget requirement for the implementation of various interventions by different departments in Coimbatore district is **₹. 255098.47** Lakhs**.**

Budget Requirement for Development of Agriculture and Allied Activities in Coimbatore District

(₹. in lakhs)

Sl. No.	Components	2017-18	2018-19	2019-20	2020-21	2021-22	Total
1	Agriculture	1704.10	4087.22	2764.36	2843.09	2067.78	13466.56
2	Agricultural Research	2390.00	2676.92	2891.92	1060.88	1501.00	10520.72
3	Horticulture	3628.28	4565.15	5606.99	6643.05	7698.21	28141.70
4	Agricultural Engineering	2878.55	3007.29	2737.77	2664.75	2587.88	13876.20
5	Agricultural Marketing	1286.89	710.47	676.19	464.50	466.69	3604.75
6	Seed Certification & Organic Certification	23.36	13.36	0.00	0.00	0.00	36.72
7	Animal Husbandry	978.80	1363.80	1143.80	786.80	786.80	5060.00
8	Animal Science Research (TANUVAS)	0.00	0.00	0.00	0.00	0.00	0.00
9	Dariy Development	997.25	894.25	1366.00	1452.50	1669.00	6379.00
10	Fisheries	23.00	26.00	119.00	25.00	20.00	214.15
11	Fisheries Research (TNFU)	100.26	90.56	50.26	0.26	0.26	241.60
12	Public Works Department (WRO)	41800.20	45064.60	59056.30	10902.50	14459.00	171282.00
13	Civil Supplies & Co-Operation	597.60	391.15	479.21	397.55	409.56	2275.07
	Grand total	**56408.29**	**62890.77**	**76891.80**	**27240.88**	**31666.18**	**255098.47**

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 enable 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 were 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 plans 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 Coimbatore 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

2.1 Coimbatore District at a Glance

The third largest city of the state, Coimbatore, is one of the most industrialized cities in Tamil Nadu, known as the textile capital of South India or the Manchester of the South. Originally Coimbatore district formed part of the Kongu country, the history of which dates back to the Sangam age. It is found that in early days the area was inhabited by tribes, the most predominant among them being the Kosars who are reported to have had their headquarters at Kosampathur which probably later became the present Coimbatore. As per G.O.Ms. No. 617, 618 Revenue dt 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 bifurcated and formed another new District as Tiruppur District. This bifurcation considerably reduced the size of the present Coimbatore district during that time Coimbatore District has only two revenue divisions of Coimbatore and Pollachi and contains eight taluks namely Coimbatore (North), Coimbatore(South), Mettupalayam, Annur, Sulur, Kinathukadavu, Pollachi and Valparai.On 12-02-2014 Coimbatore (South) taluk was bifurcated in to three taluks and formed two new taluks of Madukkarai and Perur taluks. Now Coimbatore District contains ten taluks. The district map is given in Fig.1.

2.2 Area, Location and Geographical features

The district has a total geographical area of 4723 sq.km. It falls between 10°10' North to 11° 30' North latitude and 76° 40' East to 77°30' East longitude. The district head quarter is located in the north central part of the region. The temperature ranges between 18.32°C in the month of January and 36.42°C in the month of April. The area is bounded by Western Gates on west, Nilgiris hills in North West and Anaimalai and Palani hill in south.

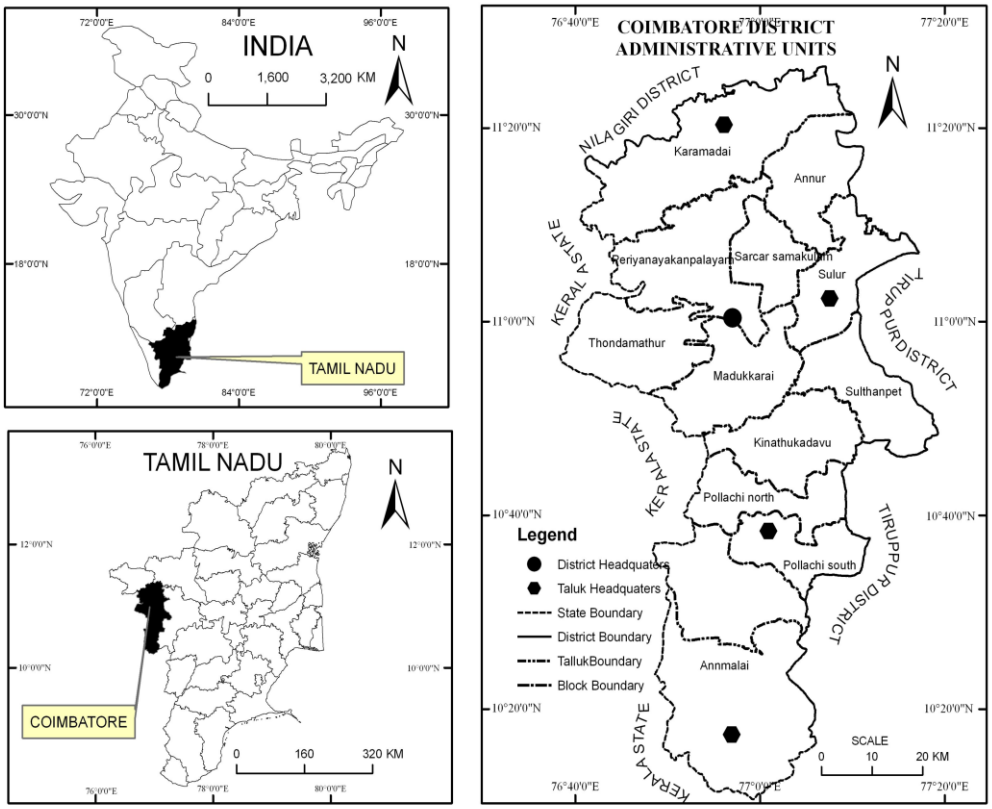
2.3 Administrative Structure

Coimbatore district is one of the 32 districts of Tamil Nadu. It is divided into two revenue divisions and twelve taluks consisting of 295 revenue villages. Out of the two revenue divisions, Coimbatore division is industrially developed while Pollachi is predominantly agriculture oriented. The Details of Revenue Divisions, Taluks, Firkas and Revenue Villages are given in Table 2.1.

Table.2.1. Administrative Division

Sl. No.	Revenue Division	No. of Taluks	No. of Zones	No. of Firkas	No. of Revenue Villages
1	Coimbatore North	3	4	10	74
2	Coimbatore South	4	4	16	89
3	Pollachi	3	3	12	132
	Total	10	11	38	295

Fig. 1 Coimbatore District Map

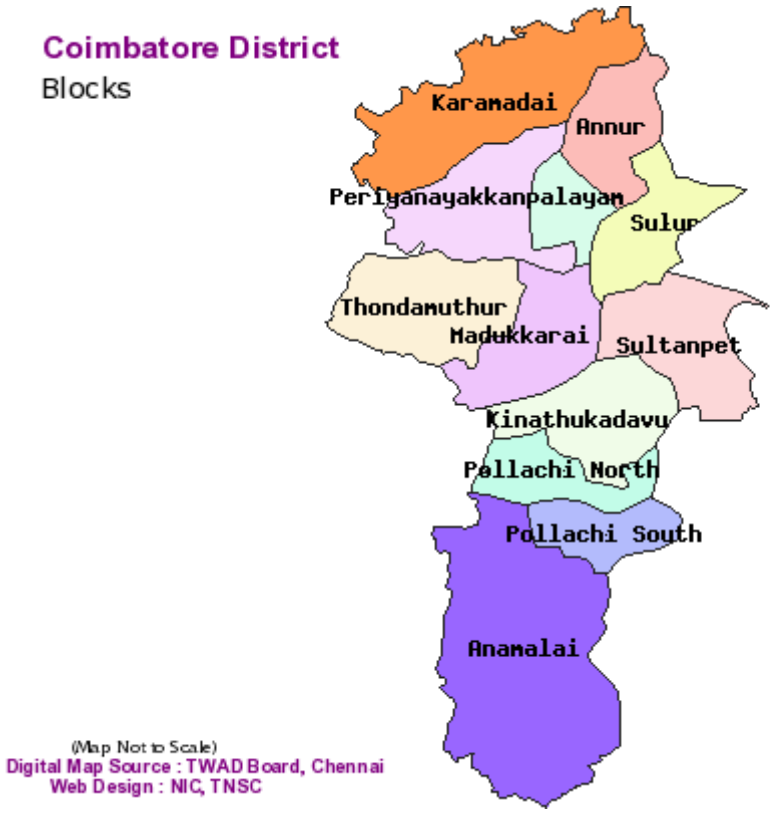


As per the administrative set up in Tamil Nadu there are corporations, municipalities, panchayat unions and panchayats. The details pertaining to the district is presented in Table 2.2. The location of different blocks is shown in Fig.2

Table 2.2 Local Administrative Units in the District

Sl. No.	Classification of Municipal and Local Bodies	Number
1.	Corporation	1
2.	Municipalities	3
3.	District Panchayat	1
4.	Panchayat Unions	12
5.	Town Panchayats	37
6.	Village Panchayats	228

Fig. 2 Blocks in Coimbatore District



2.4 Demographic Profile

The demographic details of the district are provided in Tables 2.3 through 2.7. The data were taken from the “Census 2011”. The population of Coimbatore district is 34.58 lakhs of which male and female were found to be 17.29 lakhs and 17.28 lakhs respectively. Coimbatore district being an urban district, urban population was 26.18 lakhs of which were males 1310265 and females were 1308675. The rural population of the district formed only 24.27 percent of which males and females are 419,032 and 420,073 respectively. It shows the high level of urbanization in this district.

Table 2.3 Demographic Details of the Coimbatore District

Description	Number	Percentage
Total population	3458045	100.00
Male	1729297	50.00
Female	1728748	49.99
Rural population	839105	24.27
Urban population	2618940	75.73

Source: Census 2011

Table 2.4 Literacy Level in Coimbatore District

Description	Number of persons	Literacy rate (%)
Total literates	2635907	76.23
Male literates	1394790	52.91
Female literates	1241117	47.09

Source: Census 2011

Table 2.5 Workers Details in Coimbatore District

Sl. No.	Description	Number	Percentage to Total Workers (%)
I	Total Main Workers	1443252	41.74
a	Cultivators	75411	2.18
b	Agricultural Labours	201351	5.82
c	Household Industry Manufacturing, Processing, Servicing and Repairs	44582	1.30
d	Other workers	1121908	32.44
II	Marginal Workers	124698	3.60
	Total workers	1567950	45.34
	Non Workers	1890095	54.66
	Total population	**3458045**	**100.00**

Source: Census 2011

The literacy rate is 76.23% against the state figure of 71.0% indicating higher level of literacy of the people in the district. As one expects the literacy level of female is less than that of the male. Worker population is an indicator on the prosperity of the area and the total district workers population formed around 45%.

Table 2.6 Block-wise Population in Coimbatore District

Sl. No.	Name of the Block	Area in sq. km.	No. of house-holds	A. Male		B. Female		C. Total		D. SC	E. ST
				i. Adult	ii. Children	i. Adult	ii. Children	i. Adult (Ai + Bi)	ii. Children (Aii + Bii)		
1	Karamadai	382.45	39644	68,581	5841	68,867	5830	137448	11671	26320	7813
2	Madukkarai	115.79	13123	23464	2148	23298	1987	46762	4135	11071	752
3	P.N.Palayam	150.56	28411	51694	4799	50236	4567	101930	9366	14928	3854
4	S.S.Kulam	83.07	15176	27047	2531	27006	2586	54053	5117	8324	38
5	Thondamuthur	118.00	18346	33009	3072	33071	2894	66080	5966	12698	747
6	Anaimalai	203.40	21047	35798	2883	35988	2816	71786	5699	16747	3637
7	Kinathukadavu	323.66	28005	47658	3802	47917	3622	95575	7424	19788	1567
8	Pollachi(N)	258.32	29780	51249	4167	52035	4105	103284	8272	23694	876
9	Pollachi(S)	179.28	24045	40950	3336	41585	3247	82535	6583	18823	177
10	Annur	270.61	25952	46254	4133	46199	3962	92453	8095	25865	36
11	Sulur	191.52	33594	58778	6160	57546	5932	116324	12092	19732	79
12	Sultanpet	295.75	22922	38639	3022	38725	2935	77364	5957	17903	13

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

Among the blocks, Karamadai formed the largest block with an area of 382 sq. km followed by Kinathukadavu, Sulthanpet and Annur. Not in tune with the normal exception Sulur has higher population with respect to its area. Similar trend is seen in P.N. Palayam and Pollachi (South) blocks also. Karamadai with larger area, has the highest population also (1.83 lakhs). This was followed by Sulur (1.48 lakhs), P.N. Palayam (1.3 lakhs) and Pollachi (North) with around 1.3 lakhs.

Table 2.7 Block-wise Literate Population in Coimbatore District

Sl. No.	Particulars	Total literates	Male	Female	% of female literate to total literates
1	Karamadai	91146	49994	41152	45.15
2	Madukkarai	33056	17916	15140	45.80
3	P.N.Palayam	74810	40658	34152	45.65
4	S.S.Kulam	39116	20903	18213	46.56
5	Thondamuthur	46215	25044	21171	45.81
6	Anaimalai	45053	24951	20102	44.62
7	Kinathukadavu	62836	34921	27915	44.43
8	Pollachi(N)	70056	38104	31952	45.61
9	Pollachi(S)	56883	30789	26094	45.87
10	Annur	59564	33105	26459	44.42
11	Sulur	84161	45889	38272	45.47
12	Sultanpet	51363	28491	22872	44.53

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

As a developed district, Coimbatore has around 45% of women as literate. This might also be due to the well-knit educational infrastructure availability in the district.

2.5 Topography

Coimbatore is surrounded by the Western Ghats spread over west and north, with reserve forests and Nilgiri Biosphere Reserve on the northern side. The Noyyal river runs through Coimbatore and forms the southern boundary of the district. The city lies amidst Noyyal river's basin area and has an extensive tank system fed by the river and rainwater. The eastern side of Coimbatore district, including the city is predominantly dry. A western pass to Kerala, popularly known as the Palghat Gap provides its boundary on the west.

2.6 Soil Type

The soils of Coimbatore district can be broadly classified into 9 major soil series and types as given in Table 2.8. About 60 per cent of the district is covered by red soils, of which red calcareous soil is predominant. They occupy most parts of Coimbatore (North

and South) and Mettupalayam taluks. Medium to deep red calcareous soils are found mainly in Pollachi taluk. The highlands in Coimbatore North and South and Annur taluk are mostly occupied by black soils, which are dark gray to grayish brown in colour. The Alluvial soils are found in small patches along the Noyyal river mainly in the upper reaches. The Alluvial soils are found mainly in Chinnathadagam and Chitrachavadi sub-basins and as scattered patches at the foot of Anaimalai hills. The Forest soils are confined to the reserve forest area and have a surface layer of organic matter. Deep red soil and black soil are the major soil types of the district. They put together form 35.9% of the area followed by moderately deep black (15.4%) and moderately shallow red (18.6%). The soil classification of Coimbatore district along with their area is furnished inTables.2.8 and 2.9.

Table 2.8 Soil Classification of Coimbatore District

Sl.No.	Blocks	Soil series and type
1	Karamadai, Sulur, Anamalai, Pollachi (N & S), Annur (North Part)	Irugur series (Moderate sallow non-calcareous well drain, sandy loam, red soil).
2	Kinathukadavu, Sulthanpet, Pollachi(N& S)	Palladam series (shallow, calcareous, well drained, sandy clay loam, yellowish red soil)
3	Thondamuthur, SS. Kulam, Perur, Madukarai, Karamadai (patches)	Palathurai series (Moderate shallow, calcareous, well drained, sandy clay loam, reddish brown soil)
4	S.S. Kulam (central& Eastern part) Madukarai, Perur Eastern part) Pollachi (S), Western part, Sulur (Central, western part)	Pilamedu series (Deep, calcareous, moderately drained, clay loam, very dark greyish brown soil)
5	Annur	Vellalore series (Deep, moderately, well drained, clay loam, reddish brown soil
6	P.N. Palayam (North part) Karamadai, Madukkarai	Pichanur Series (Deep, Non calcareous, excessively drained, gravelly sand, dark brown soil)
7	Thondamuthur (west part) P.N. Palayam (west & north)	Somayanur series (very deep, calcareous, well drained, sandy clay loam, dark yellowish brown soil)
8	Pollachi (south, eastern part)Kinathukadavu (central & eastern part) Sulthanpet (central part) Sulur(patches, southern part)	Dhasarapatti (Deep, calcareous, gypsum rich, poorly drained, clay, very dark grey soil)
9	P.N. Palayam	P.N. Palayam (Deep, calcareous, Moderately drained, clay, very dark greyish brown soil

Source: Senior Agricultural Officer, Soil Survey and Land Use Organization, Coimbatore.

Table 2.9 Area under Different Soil Type Categories

Major Soils	Area ('000 ha)	Percent (%) of total
Deep black soil	87.6	18.1
Deep red soils	86.5	17.8
Misc./WB/Settlement soils	28.8	5.8
Moderately deep black Soils	74.6	15.4
Moderately deep red soils	35.9	7.4
Moderately shallow black soils	6.2	1.3
Moderately shallow red soils	65.7	13.6
Shallow black soils	2.9	0.6
Shallow red soils	59.4	12.3
Very deep black soils	22.9	4.7
Very deep red soils	7.5	1.6
Very shallow black soils	4.6	1.0
Very shallow red soils	1.8	0.4

Source: Commodity Potential Report, TNAU, 2015.

Table 2.10 Soil Resources and Type

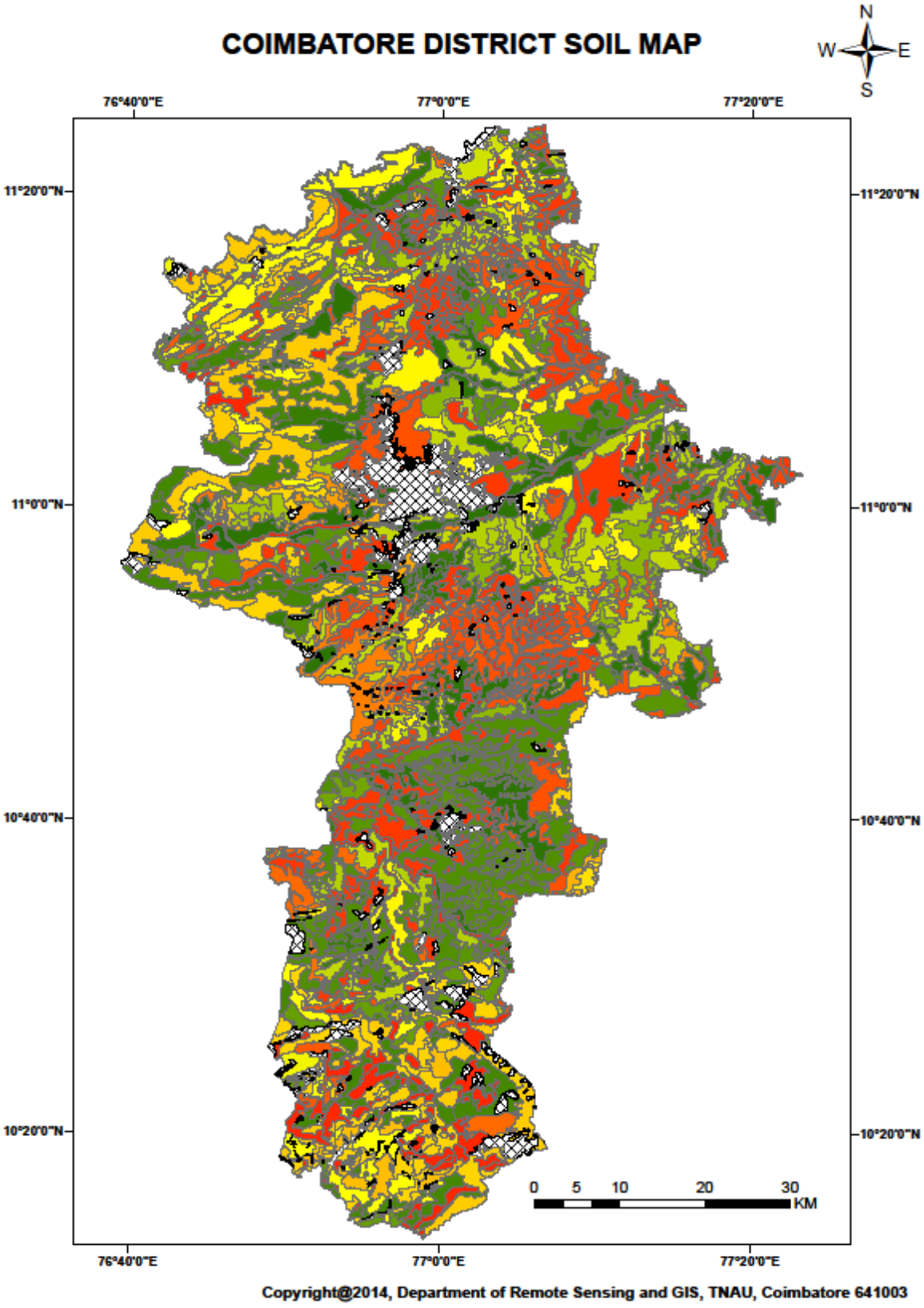
Sl. No.	Name of the Block	Soil Type	Major Nutrients which are deficient	Micro nutrients which are deficient
1	Periyanaickenpalayam	Red Loam, Black Soil, Sandy Coastal Alluviam, Red sandy soil	N	Zn, Fe, Cu
2	Sarkarsamakulam	Red loam, Black soil, Sandy Coastal Alluviam, Red sandy soil	N	Zn, Fe, Cu
3	Thondamuthur	Red loam, Black soil, Sandy Coastal Alluviam, Red sandy soil	N	Zn, Fe, Cu
4	Madukkarai	Red loam Black soil Sandy Coastal Alluviam Red sandy soil	N	Zn, Fe, Cu
5	Karamadai	Red loam Sandy Coastal Alluviam	N	Zn, Cu
6	Pollachi North	Red loam Black soil	N, P	Zn, Cu
7	Pollachi South	Red loam Black soil	N, P	Zn, Cu
8	Anaimalai	Red Loam Black Soil	N, P	Zn, Cu
9	Kinathukadavu	Red loam Black soil	N, P	Zn, Cu

Sl. No.	Name of the Block	Soil Type	Major Nutrients which are deficient	Micro nutrients which are deficient
10	Annur	Red loam Black soil Red sandy soil Calcareous soil	N, P	Zn, Cu
11	Sultanpet	Red loam Sandy Coastal Alluviam Red sandy soil Calcareous soil	N	Fe, Zn, Mn
12	Sulur	Red loam Black soil Sandy coastal Alluviam Red sandy soil	N	Fe, Zn, Mn

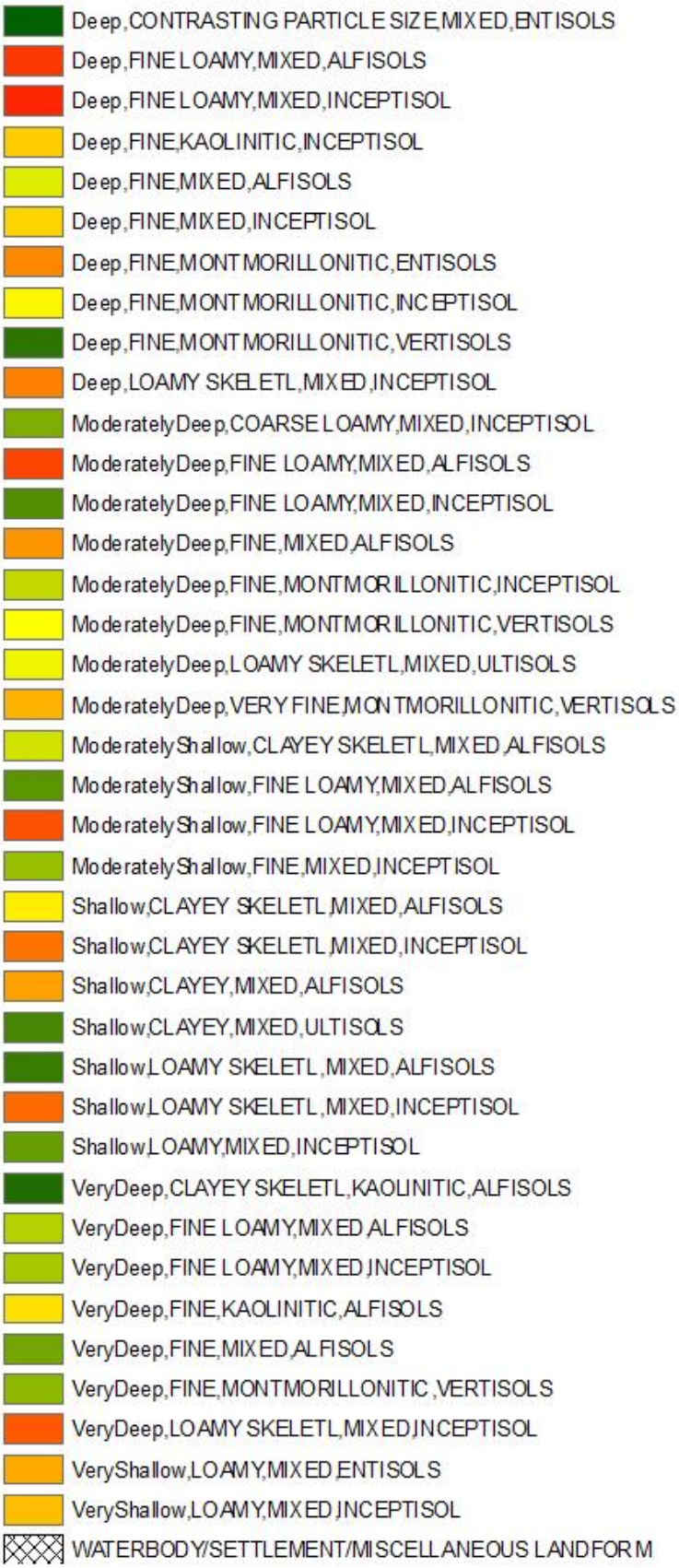
Source: Coimbatore District Profile, Sri Avinashilingam KVK, 2015.

The data in Table 2.10 showed that soils in all the 12 blocks are deficient in Nitrogen while the soil in Pollachi (North), Pollachi (South), Anamalai, Kinathukaduvu and Annur blocks are deficient in phosphorous also. Among the micro nutrients, the soil of all blocks are deficient is zinc. This is most important in planning for agricultural development. The district soil map is depicted in Fig. 3.

Fig. 3 Soil Map of Coimbatore District



Coimbatore District Soil Legend



2.7 Climate and Rainfall

Coimbatore district is bounded by Western Ghats, in the west and north by Nilgiris hills and in the south by Anaimalai and Palani hills, and the district stretches in the rain shadow region of Western Ghats. The normal rainfall of the district is around 650 to 700 mm. The average rainfall in the district over the last 20 year period was about 800 mm with wide fluctuation over the years as indicated by the coefficient of variation of 32.02 per cent. The highest percentage of rainfall of 44 per cent of the total rainfall is received during north-east monsoon, while the south west monsoon contributes 37 per cent and the summer season rains account for about 17 per cent. Though the south west monsoon helps in the filling of a number of dams in the Western Ghats that benefit the district, the south west monsoon contributes only about one third of the total rainfall of the district as a whole.The rainfall during the south west monsoon in the plains would be much lower. The rainfall during winter season is negligible. The details are given in Tables 2.11 and 2.12 and in Fig.4

Table 2.11. Month- wise / Season-wise Rainfall Distribution in Coimbatore District (Actual and Normal)

Sl. No.	Season / Month	2012-2013		2014-15	
		Normal	Actual	Normal	Actual
	South West Monsoon				
1.	June	32.9	41.8	112.5	62.9
2.	July	47.2	48.3	229.8	47.2
3.	August	40.6	44.1	249	40.6
4.	September	69.1	28.2	172.9	69.1
	Total	**189.8**	**162.4**	**764.2**	**219.8**
	North East Monsoon				
5.	October	151.9	229.6	258.7	151.9
6.	November	129.6	42.5	16.5	129.6
7.	December	47.4	6.4	36.4	47.4
	Total	**328.9**	**278.5**	**311.6**	**328.9**
	Winter Season				
8.	January	8.1	0	0	8.1
9.	February	12.2	57.8	0	12.2
	Total	**20.3**	**57.8**	**0**	**20.3**
	Hot Weather				
10.	March	17.2	19.1	27.3	17.2
11.	April	54.3	54.3	129.8	53.4
12.	May	79.7	47.8	185.2	79.7
	Total	**151.2**	**121.2**	**342.3**	**150.3**
	Annual rainfall	**689.3**	**619.9**	**1418.1**	**689.3**

Source: Season crop report,2014-2015.

Table 2.12. Time Series Data on Rainfall by Seasons (Last 20 Years)

Year	Hot Weather		South West Monsoon		North East Monsoon		Winter Season		Total		Deviation of Percentage
	Normal	Actual	Normal	Actual	Normal	Actual	Normal	Actual	Normal	Actual	
1996-97	135.1	126.6	158.2	181.4	328.2	340.5	25.6	1.2	647.2	649.7	+2.5
1997-98	135.1	75.0	158.2	167.7	328.2	571.9	25.6	0.6	647.2	890.2	+243.0
1998-99	135.1	69.8	158.2	229.7	328.2	434.8	25.6	16.0	647.2	750.3	+103.1
1999-00	135.1	92.3	158.2	87.1	328.2	504.7	25.6	68.7	647.2	752.6	+105.4
2000-01	135.1	141.9	158.2	339.0	328.2	179.8	25.6	5.0	647.2	665.7	+18.5
2001-02	135.1	66.20	158.3	152.4	328.2	327.0	25.6	6.1	647.2	551.8	-14.74
2002-03	135.1	69.6	158.3	78.6	328.2	62.8	25.6	17.6	647.2	228.6	-64.67
2003-04	148.4	202	192.9	90.1	327.0	205.4	26.1	16.7	694.4	514..2	-25.9
2004-05	148.4	294.7	192.9	233.3	327.0	260.2	26.1	26.6	694.4	814.8	17.3
2005-06	148.4	162.1	192.9	177.6	327.0	505.7	26.1	17.7	694.4	863.1	24.3
2006-07	148.4	128.4	192.9	141.5	327.0	444.3	26.1	11.1	694.4	725.3	4.4
2007-08	148.4	190.8	192.9	204.3	327.0	378.0	26.1	25.0	694.4	798.1	14.9
2008-09	148.4	157.3	192.9	695	327.0	312.2	26.1	1.3	694.4	1165.8	67.89
2009-10	150.2	101.5	192.9	765.4	327	306.1	26.1	4.8	696.2	1177.8	69.2
2010-11	150.3	194.6	233.1	188.0	341.9	437.0	20.3	82.9	745.6	902.5	21.0
2011-12	168.0	140.4	189.8	252.9	328.9	410.7	20.3	2.6	707.0	782.2	14.1
2012-13	150.3	121.2	189.8	162.4	320.9	278.5	20.3	57.8	689.3	619.9	-11.2
2013-14	150.3	141.0	189.8	596.7	328.9	257.9	20.3	5.1	689.3	1000.7	45.2
2014-15	150.3	342.3	189.8	764.2	328.9	311.6	20.3	0	689.3	1418.1	105.7
2015-16	150.3	118.0	189.8	309.4	328.9	341.1	20.3	23	689.3	791.5	15.0

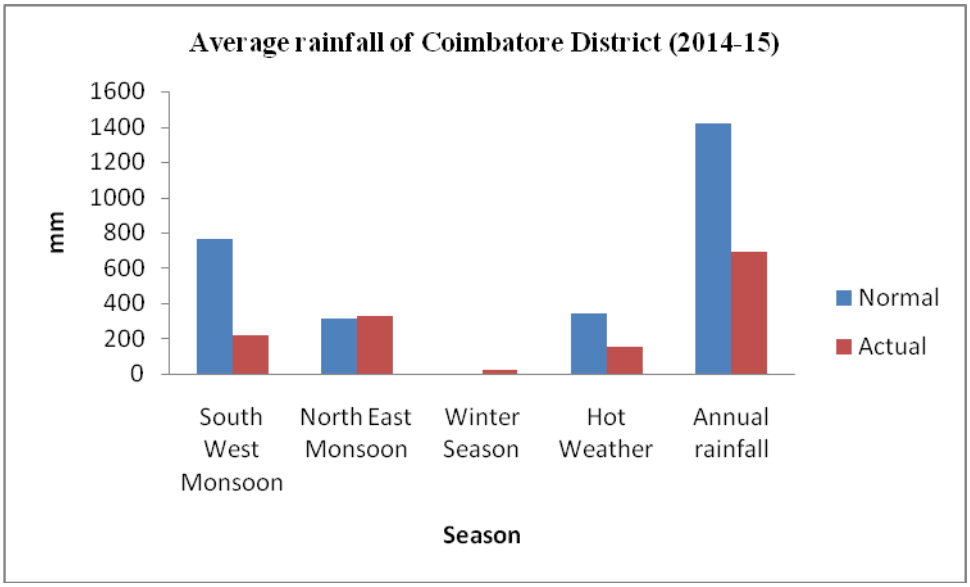
Source: Directorate of Economics and Statistics, Chennai.

The data in Table 2.12 showed that in past 20 years only 3 years received less actual rainfall compared to that of normal. However, it was 7 years in south west monsoon and 8 years in north east monsoon. The coefficient of variation of 32.02% indicates the undependable nature of rainfall. This again plays a major role in planning for agriculture.

Based on the total annual rainfall, the district can be classified into five different rainfall regions as given below:

1. **High rainfall zone:** (above 1000 mm): In the southern part Upper Niradam, Soliyar Nagar, Anaimalai, Valaparai, Topslip, Attakatti, in the north western part Anaikatti, and Sudakapalayam in the north eastern part.
2. **Moderate rainfall zone (800-999 mm):** Pollachi, P.N.Palayam, Aliyar Nagar, Negamam
3. **Normal rainfall zone (700-799 mm):** Mettupalayam Tirumoorthy Nagar, Nallar colony.
4. L**ow rainfall zones (600-699mm):** Vettaikaranpudur, Podanur, Chitrachavadi,
5. **Very low rainfall zones (Less than 600 mm):** Annur, Pethappampatti, Coimbatore town, Peelamedu, Krishanpuram, Poolankinar, and Sulur.

Fig. 4 Average Rainfall of Coimbatore District during 2014-2015



2.8 Land

The total geographical area of the district is 472322 ha, of which net sown area accounts for 173437 ha and Gross area sown accounts for 176496 ha as an average of 3 years. The area under forest accounted for 23.7 per cent. Fallow and current fallow lands account for less than 5.4 per cent in the district.

Table 2.13 Changes in Land Use Pattern of Coimbatore District

Year	Net sown area	Gross cropped area	Irrigation Intensity	Cropping Intensity
2011-12	176077	185072	1.05	1.05
2012-13	168769	173024	1.05	1.02
2013-14	172409	176811	1.00	1.02
2014-15	173437	176496	1.09	1.01

Source: Commodity Potential Report, TNAU, 2015.

The change in land use pattern over the years is a serious concern among the agricultural planners to evolve suitable development strategies. The increasing trend in fallow lands (both current and other fallows) and land put to non-agricultural use needs greater attention. Because of uncertainty of rainfall and falling irrigation trend the cropping intensity is around 105%.

Table 2.14 Land Use Pattern (2014-2015)

Sl.No.	Particulars	Area	%
1	Geographical Area	472322	100.00
2	Forest	111871	23.68
3	Barren & Un culturable Area	4793	1.01
4	Land Put to Non-agricultural Uses	76343	16.16
5	Permanent Pastures & Other grazing lands	77	0.01
6	Misc.tree crops & groves not incl. in the net area sown	3446	0.72
7	Current Fallow	28986	6.13
8	Other Fallow	64906	13.74
9	Net area sown	173437	36.72
10	Area sown more than once	3059	0.64
11	Gross area sown	176496	37.37
	Total	**1115736**	

Source: Season crop report,2014-2015.

It could be seen from Table 2.14 that the district has only 23.68 % of the geographical area under forest as against the ecological norms of 33.33 %. Being an urbanized district with a strong industrial and educational infrastructure area under non-agricultural use is 16.16 %. Another area of concern is the area under current fallows 6.13% and other fallow land is 13.74 %. Net area sown formed 36.72% and hence aim should be to increase the land use intensity.

Table 2.15 Block-wise Land Use Pattern in Coimbatore District

Sl. No.	Blocks	Forest	Uncultivable Waste	Non Agri. Uses	Cultivable Waste Land	Permanent Pasture & Grass Land	Misc. Tree Crops & Groves	Current Fallow	Other Fallow	Net Cultivated Area	Total
1	Anamalai	4254 (7.1)	687.61	6633.84	98.97	33.57	2253.69	3500.88	2039.23	40116.23	59618.01
2	Annur	0	43.475	4207.87	35.17	6.07	38.285	7186.61	4120.73	13421.77	29059.96 (24.0)
3	Karamadai	279.165	2704.06	6802.42	1201.08	36.445	250.09	3532.28	7875.78	13245.08	35926.39
4	Kinathukadavu	0	113.77	3458.54	344.39	0.675	2.335	10409.89	1721.81	16523.73	32575.13 (33)
5	Madukarai	37.22	472.365	10493.21	587.59	0	130.42	4945.20	5143.97	10557.85	32367.82 (32.4)
6	P.N.Palayam	1779.41 (4.7)	418.865	9051.69	90.32	0	124.715	6790.78	1164.58	5390.68	24811.04 (35.0)
7	Pollachi (N)	0	52.45	3775.70	16.82	0.195	48.705	1764.20	2220.88	20677.55	28556.49
8	Pollachi (S)	0	59.79	3529.61	174.31	0	21.155	2976.21	355.79	13519.01	20635.87
9	S.S.Kulam	0	43.77	7574.58	475.07	0	27.47	4794.29	711.55	6209.915	19836.63 (38.1)
10	Sulthanpet	0	70.81	4250.34	2496.73	0	29.315	2768.91	6395.04	13563.54	29574.67
11	Sulur	0	12.445	7941.08	2830.59	0	20.02	3153.49	6296.60	8667.17	28921.39
12	Thondamuthur	297.33	113.16	7075.65	380.25	0	236.68	2543.52	3269.59	11298.4	25214.57
	Total	**6647.13**	**4792.57**	**74794.48**	**8731.26**	**76.955**	**3182.88**	**54366.23**	**41315.52**	**173190.9**	**367097.9**

Source: Joint Director of Agriculture, Coimbatore 2015
Figures in parentheses indicate percentages to total.

The land use pattern among the blocks (Table 2.15) showed that area under non agricultural use was maximum in S.S.Kulam (38.1%) followed by P.N.Palayam (35%) and Kinathukadavu (33%). Share of waste land is high in P.N.Palayam (37%) and it is 33% in Kinathukadavu. These should be kept in mind while planning for strategies for agri development

2.8.1. Land Holding Pattern

The land holding pattern in the district is given in Tables 2.16 and 2.17.

Table 2.16 Number and Area of Operational Land Holdings (Year: 2014-2015)

Size class of holding(Ha)	Number				
	S.C.	S.T.	Others	Institution	Total
Up to 0.5	1119	176	28418	233	29946
0.5-1.0	551	128	30082	178	30939
1.0-2.0	227	143	35782	236	36388
2.0-3.0	76	33	15287	138	15534
3.0-4.0	13	19	7344	95	7471
4.0-5.0	7	10	3974	52	4043
5.0-7.5	5	1	4071	111	4188
7.5-10.0	1	1	1462	41	1505
10.0-20.0	0	0	1061	77	1138
20.0 & Above	0	0	109	80	189
Total	**1999**	**511**	**127590**	**1241**	**131341**

Size class of holding (Ha)	Area (Ha.)			
	S.C.	S.T.	Others	Institution
Up to 0.5	322.05	63.31	8091.21	54.98
0.5-1.0	388.06	94.67	21931.30	127.07
1.0-2.0	306.96	197.72	50980.85	349.13
2.0-3.0	179.75	80.39	36837.07	338.40
3.0-4.0	43.12	64.92	25328.60	328.60
4.0-5.0	29.99	45.14	17669.82	233.48
5.0-7.5	28.23	5.64	24289.47	685.84
7.5-10.0	8.96	9.70	12480.89	355.88
10.0-20.0	0	0	13637.61	1051.68
20.0 & Above	0	0	2889.62	17774.54
Total	**1307.65**	**561.50**	**214136.44**	**21299.63**

Source: Commodity Potential Report, TNAU, 2014.

The district has 1.31 lakhs holding with an area of 2.37 lakhs ha giving the average size of holding as 1.81 ha. The data in Table 2.17 revealed that 46.36% of the holdings are marginal and another 27.70% are small. The holdings less than 2 ha formed 74.06% of the total indicating that majority of the farmers belong to small farmer category.

Table 2.17 Details of Operational Land Holdings

Sl. No.	Classification category	Category Area	Operational area in ha	Number of holdings
1	Marginal	<1 ha	31072.65	60885 (46.36)
2	Small	1-2 ha	51834.66	36388 (27.70)
3	Small – medium	2-5 ha	81179.28	27048 (20.59)
4	Medium	5-10 ha	37864.61	5693 (4.33)
5	Large	>10 ha	35353.45	1327 (1.01)
	Total		**237304.7**	**131341 (100.00)**

Source: District Profile. Sri Avinashilingam KVK, 2015.
Figures in parentheses indicate percentages to total.

2.9 Sources of Irrigation

Water is a crucial input in the production of crops in the agricultural sector. Intensive and extensive cultivation of land depend mainly on the availability of water. Medium and minor irrigation projects are developed in the state for augmenting the irrigation for agriculture. The various sources of irrigation are canals, tanks, tube wells, open wells and springs. Wells and tanks play an important role in the irrigation in Coimbatore district. The details are given in Tables 2.18 and 2.19.

Table 2.18 Irrigation Resources in Coimbatore District during 2014-2015

Sl.No.	Particularls		Numbers	Area (in ha)
1	Canals	Gross	27	21103
		Net		20763
2	Tanks	Gross	48	0
		Net		0
3	Tube wells / Bore wells	Gross	19431	31228
		Net		30785
4	Open wells	Gross		62549
		Net		61357
5	Supplementary wells	Gross		0
		Net		0
6	Other Sources	Gross		785
		Net		785
	Total			**229355**

Source: Season and Crop report 2014-2015

Table 2.19. Source of Irrigation

(in hectare)

Sl.No.	Particularls		2012-13	2013-14	2014-15	Average
1	Canals	Gross	16678	16554	21103	18111.67
		Net	16439	15597	20763	17599.67
2	Tanks	Gross	0	0	0	0.00
		Net	0	0	0	0.00
3	Tube wells / Bore wells	Gross	20575	28875	31228	26892.67
		Net	20217	28658	30785	26553.33
4	Open wells	Gross	80391	71420	62549	71453.33
		Net	77732	70739	61357	69942.67
5	Supplementary wells	Gross	0	0	0	0.00
		Net	0	0	0	0.00
6	Other Sources	Gross	335	0	785	373.33
		Net	335	0	785	373.33

Source: Season crop report, 2014-2015.

Figures in parentheses indicate percentages to total.

Coimbatore district has a net area irrigated of 1.14 lakh ha. Of the net area irrigated, by the major source of irrigation, open wells contributed to 0.69 lakh ha followed by 0.26 lakh ha by Tube/bore wells and 0.17 lakh ha by canals. Among the wells open wells with pumpsets dominated. These results would reveal that there was a decline in the ground water in all the 12 blocks of the district due to over exploitation and hence water management is more important while planning for agriculture.

2.10. Cropping Pattern

The major crops cultivated in the district along with area are given in Table 2.20 and 2.21. Cholam occupied the first place followed by banana and groundnut. Predominant varieties cultivated in Banana were Grand Naine, Rasthali, Nendran, Red Banana, Karpooravalli and Ney poovan. In the case of Groundnut, TMV 7 and VRI 2 were the ruling varieties in the district. In coconut, VHC1, VHC2 and VHC3 hybrids were used widely. While VPM3, ALR 1, ALR 2 and West Coast Tall were the predominant tall varieties used in coconut, COD, CYD, CGD and MYD were the dwarf varieties used particularly for tender coconut.

Table 2.20 Area under Major Crops (2014-15) and Triennium Average ending (2014-15) (ha)

		Area (ha)					Production (in tonnes)					Productivity (in kg / ha)				
Sl.No	Particulars	2012-13	2013-2014	2014-2015	Total	Average	2012-13	2013-2014	2014-2015	Total	Average	2012-13	2013-2014	2014-2015	Total	Average
1	Paddy	2156	2158	2166	6480	2160.00	7890	10139	9969	27998	9332.67	3659	4698	4602	12959	4319.67
2	Maize	4601	5443	4473	14517	4839.00	16919	35797	37337	90053	30017.67	3677	6577	8347	18601	6200.33
3	Cholam	22088	25001	28457	75546	25182.00	12134	23105	37454	72693	24231.00	549	924	1316	2789	929.67
4	Cumbu	60	74	101	235	78.33	89	164	305	558	186.00	1489	2214	3027	6730	2243.33
5	Ragi	1	10	11	22	7.33	47	30	34	111	37.00	1876	2982	3112	7970	2656.67
6	Total Cereals	28932	32688	35217	96837	32279.00	37081	69235	85108	191424	63808.00				0	0.00
	Total	**57838**	**65374**	**70425**	**193637**	**64545.67**	**74160**	**138470**	**170207**	**382837**	**127612.33**	**11250**	**17395**	**20404**	**49049**	**16349.67**

Source: Season and crop report 2014-2015

Table 2.21 Area under Major Vegetable Crops Triennium Average ending (2014-15) (ha)

		Area (ha)					Production (in tonnes)					Productivity (in kg / ha)				
Sl.No	Particulars	2012-13	2013-2014	2014-2015	Total	Average	2012-13	2013-2014	2014-2015	Total	Average	2012-13	2013-2014	2014-2015	Total	Average
1	Onion	907	786	1088	2781	927.00	10239	12697	11996	34932	11644.00	11289	16153	11025	38467	12822.33
2	Brinjal	320	395	398	1113	371.00	2196	2448	3129	7773	2591.00	6864	6197	7862	20923	6974.33
3	Bhendi	316	273	336	925	308.33	2366	3100	3118	8584	2861.33	7489	11356	9281	28126	9375.33
4	Cabbage	10	4	4	18	6.00	578	188	244	1010	336.67	57784	47065	61095	165944	55314.67
5	Tomato	2215	1947	2117	6279	2093.00	19864	23171	13813	56848	18949.33	8968	11901	6525	27394	9131.33
6	Other Vegetables	5653	5179	5895	16727	5575.67				0	0.00				0	0.00
	Total	**9421**	**8584**	**9838**	**27843**	**9281.00**	**35243**	**41604**	**32300**	**109147**	**36382.33**	**92394**	**92672**	**95788**	**280854**	**93618.00**

Source: Season and crop report 2014-2015

Table 2.22 indicates the block-wise cropping pattern of Coimbatore district.It is seen that paddy is cultivated in Anaimalai mostly and to some extent in Thondamuthur. Among the cereals, unirrigated cholam topped the list and is grown in all the blocks. Similarly, maize is grown under irrigated and unirrigated conditions in all the blocks. Banana as a commercial crop is grown in Karamadai and Thondamuthur block as a major crop with 3264 ha 1215 ha respectively. But it is cultivated in all blocks. Tomato is the other crop that is grown in all blocks**.**

Unirrigated groundnut is grown mostly in Pollachi (North) though it is cultivated are of the 12 blocks. Coconut seems to be the major crop in all the blocks. This might be due to the suitability of the soil and labour problem in the cultivation of other crops.

Table 2.23 and 2.24 indicate block wise % of area under crops. Similarly, Table 2.25 shows the area, production and productivity of major crops in Coimbatore district.

The share of crops among the blocks showed that 92.31% of area under paddy is in Anamalai block. Cumbu is grown only in Karamadai (70 %) and Pollachi. Though cholam is grown in all blocks, Annur has 13.88% of the area followed by Karamadai (12.62%). 31% of the area under maize is in Sulthanpet blocks. 50% of the area under ragi is in Karamadai. Pulses like Horsegram, greengram and redgram are prominent in Annur, Karamadai and Kinnathukadavu block. One third of the area under groundnut is in Pollachi(North). Cotton is cultivated largely in Kinnathukadavu, Madukkarai and Annur blocks. Nearly 25% of the area under sugarcane is in Anamalai followed by 21% in Annur block.

Table 2.22 Block-wise Cropping Pattern in Coimbatore District (2014-15)

Sl. No.	Particulars		Karamadai	Madukkarai	P.N. Palayam	S.S.Kulam	Thonda -muthur	Anaimalai	Kinathu -kadavu	Pollachi(N)	Pollachi(S)	Sulur	Sultanpet	TOTAL
1	Paddy	Irrigated	25	1	1	1	210	2380	0	0	0	0	0	**2618**
2	Cholam	Irrigated	0	3	63	20	142	84	0	1	0	12	0	**325**
		Unirrigated	2546	1347	853	1503	561	1138	2971	2444	1233	2382	1244	**18222**
3	Cumbu	Irrigated	0	1	0	0	0	0	0	0	226	1	0	**228**
		Unirrigated	38	0	0	0	3	0	21	23	8	0	0	**93**
4	Maize	Irrigated	44	187	111	87	299	123	127	359	226	234	1054	**2851**
		Unirrigated	156	0	2	4	133	22	231	2	8	10	627	**1195**
5	Total Cereals	Irrigated	69	191	176	111	651	2587	127	361	226	246	1054	**5799**
		Unirrigated	2756	1347	856	1507	702	1160	3222	2468	1243	2392	1871	**19524**
6	Black Gram	Irrigated	1	0	2	0	85	2	0	0	0	1	0	**91**
		Unirrigated	34	35	9	21	548	44	145	320	117	1	8	**1282**
7	Green Gram	Irrigated	57	0	5	0	14	0	0	0	0	2	0	**78**
		Unirrigated	210	18	10	161	131	17	117	191	9	62	142	**1068**
8	Turmeric	Irrigated	85	73	114	110	1059	10	42	1	3	87	3	**1587**
9	Sugar Crop	Irrigated	146	114	195	146	331	162	17	12	0	30	0	**1153**
10	Banana	Irrigated	3264	642	514	326	1215	124	235	158	31	312	92	**6913**
11	Total Fresh Fruits	Irrigated	3466	901	604	390	1528	124	242	171	127	374	160	**8087**
		Unirrigated	10	90	8	0	34	1141	211	279	259	0	1	**2033**
12	Onion	Irrigated	31	7	8	2	571	1	12	14	28	14	144	**832**

Sl. No.	Particulars		Karamadai	Madukkarai	P.N. Palayam	S.S.Kulam	Thonda -muthur	Anaimalai	Kinathu -kadavu	Pollachi(N)	Pollachi(S)	Sulur	Sultanpet	TOTAL
13	Tomato	Irrigated	90	707	44	5	247	18	450	410	55	8	69	**2103**
		Unirrigated	0	141	0	0	0	0	0	0	0	0	0	**141**
14	Total Vegetable	Irrigated	313	890	139	72	1268	157	649	724	169	132	465	**4978**
		Unirrigated	0	141	0	0	0	0	0	116	0	0	1	**258**
15	Total Cotton	Irrigated	53	2	10	33	2	14	22	12	0	25	0	**173**
		Unirrigated	50	112	0	0	11	38	163	374	2	0	0	**750**
16	Groundnut	Irrigated	73	53	0	2	75	353	35	159	127	0	0	**877**
		Unirrigated	119	399	0	0	294	1807	564	2199	374	0	0	**5756**
17	Coconut	Irrigated	1700	5183	1843	1383	3671	19685	11532	14991	10162	2756	8691	**81597**
		Total	**15336**	**12585**	**5567**	**5884**	**13785**	**31191**	**21135**	**25789**	**14633**	**9081**	**15626**	**170612**

Source: Commodity Potential Report, TNAU, 2014.

Table 2.23 Percentage of Area under Major Agricultural Crops (Across Blocks) in Coimbatore District

Crop	Anamalai	Annur	Karamadai	Kinathukadavu	Madukarai	P.N.Palayam	Pollachi (N)	Pollachi (S)	S.S.Kulam	Sulthanpet	Sulur	Thondamuthur	District level Total
Paddy	92.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.69	100
Cholam	4.92	13.85	12.62	10.77	7.69	5.54	7.69	5.54	9.23	6.15	11.38	4.62	100
Cumbu	0.00	0.00	70.00	0.00	0.00	0.00	0.00	30.00	0.00	0.00	0.00	0.00	100
Maize	3.50	6.50	6.50	6.50	5.50	4.25	4.50	4.50	5.50	31.00	10.50	11.25	100
Ragi	0.00	20.00	50.00	0.00	0.00	10.00	0.00	0.00	0.00	0.00	0.00	20.00	100
Other Millet	3.33	10.00	13.33	10.00	10.00	10.00	6.67	6.67	6.67	6.67	6.67	10.00	100
Red Gram	2.18	13.07	13.07	13.07	10.89	9.80	6.54	7.63	4.36	4.14	2.18	13.07	100
Black gram	3.99	1.59	7.97	11.16	3.99	1.59	6.38	1.59	4.78	1.59	1.59	53.75	100
Green gram	2.25	19.49	14.99	11.99	1.05	0.75	4.50	2.25	17.24	9.75	8.25	7.50	100
Horse gram	1.67	10.01	37.82	16.02	2.78	3.34	1.95	4.73	0.56	8.90	2.22	10.01	100
Bengal gram	0.00	0.70	1.40	11.31	0.00	6.98	6.98	31.42	34.22	5.59	1.40	0.00	100
Cowpea and other pulses	6.99	7.25	17.99	23.29	5.69	3.11	11.90	12.42	0.39	4.92	0.36	5.69	100
Groundnut	25.70	5.25	2.25	10.15	8.51	0.00	33.53	9.28	0.00	0.00	0.00	5.32	100
Gingelly	4.42	14.81	15.19	2.88	2.11	4.23	0.00	3.27	9.42	1.35	0.00	42.31	100
Sunflower	0.00	15.00	0.00	0.00	10.00	60.00	0.00	0.00	0.00	15.00	0.00	0.00	100
Castor	0.00	20.00	30.00	0.00	10.00	0.00	0.00	0.00	0.00	30.00	10.00	0.00	100
Cotton	2.00	16.00	6.00	24.00	22.00	0.40	20.00	2.00	3.40	0.00	1.00	3.20	100
Sugarcane	24.29	21.43	8.57	1.43	7.14	7.86	1.43	0.00	12.14	0.00	3.57	12.14	100

Source: Joint Director of Agriculture, Coimbatore. 2015.

Table 2.24 Percentage of Area under Major Agricultural Crops (Within Blocks) in Coimbatore District

Crop	Anamalai	Annur	Karamadai	Kinathukadavu	Madukarai	P.N.Palayam	Pollachi (N)	Pollachi (S)	S.S.Kulam	Sulthanpet	Sulur	Thondamuthur
Paddy	44.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.43
Cholam	19.56	65.53	58.37	52.09	58.15	64.19	39.85	43.93	65.20	34.81	73.50	32.13
Cumbu	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.73	0.00	0.00	0.00	0.00
Maize	4.28	9.47	9.25	9.67	12.79	15.16	7.17	10.98	11.95	53.95	20.86	24.10
Ragi	0.00	0.29	0.71	0.00	0.00	0.36	0.00	0.00	0.00	0.00	0.00	0.43
Other Millet	0.12	0.44	0.57	0.45	0.70	1.07	0.32	0.49	0.43	0.35	0.40	0.64
Red Gram	0.12	0.87	0.85	0.89	1.16	1.60	0.48	0.85	0.43	0.33	0.20	1.29
Black gram	0.31	0.15	0.71	1.04	0.58	0.36	0.64	0.24	0.65	0.17	0.20	7.22
Green gram	0.37	3.79	2.85	2.38	0.33	0.36	0.96	0.73	5.00	2.26	2.19	2.14
Horse gram	0.37	2.62	9.68	4.29	1.16	2.14	0.56	2.07	0.22	2.78	0.79	3.86
Bengal gram	0.00	0.15	0.28	2.41	0.00	3.57	1.59	10.98	10.65	1.39	0.40	0.00
Cowpea and other pulses	3.30	4.08	9.89	13.39	5.12	4.28	7.33	11.72	0.33	3.31	0.28	4.71
Groundnut	23.03	5.61	2.35	11.07	14.52	0.00	39.18	16.60	0.00	0.00	0.00	8.35
Gingelly	0.28	1.12	1.12	0.22	0.26	0.78	0.00	0.41	1.06	0.12	0.00	4.71
Sunflower	0.00	0.22	0.00	0.00	0.23	2.14	0.00	0.00	0.00	0.26	0.00	0.00
Castor	0.00	0.15	0.21	0.00	0.12	0.00	0.00	0.00	0.00	0.26	0.10	0.00
Cotton	0.12	1.16	0.43	1.79	2.56	0.07	1.59	0.24	0.37	0.00	0.10	0.34
Sugarcane	4.16	4.37	1.71	0.30	2.33	3.92	0.32	0.00	3.69	0.00	0.99	3.64
Block level Total	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**

Source: Joint Director of Agriculture, Coimbatore. 2015.

Table 2.25 Area, Production and Productivity of Major Agricultural Crops in Coimbatore District

Sl.No.	Particulars	Area (in ha)	Production (in tonnes)	Productivity (in tonnes/ha)
1	Paddy	2355	9969	4.23
2	Maize	4562	37337	8.18
3	Cholam	25844	37454	1.45
4	Cumbu	76	305	4.01
5	Ragi	24	34	1.42
6	Bengal Gram	1306	624	0.48
7	Red Gram	420	906	2.16
8	Black Gram	957	543	0.57
9	Green Gram	1344	655	0.49
10	Horse Gram	1703	1664	0.98
11	Groundnut	5719	9920	1.73
12	Sunflower	34	5	0.15
13	Gingelly	422	175	0.41
14	Castor	807	9	0.01
15	Cotton	731	1370	1.87
16	Coconut**	83887	8598	0.10
17	Sugarcane*	1338	120459	90.03
18	Tobacco	1	24	24.00
19	Onion	914	11996	13.12
20	Brinjal	398	3129	7.86
21	Bhendi	336	3118	9.28
22	Cabbage	4	244	61.00
23	Tomato	2117	13813	6.52
24	Banana	8126	312451	38.45
25	Mango	2496	6205	2.49
26	Jack Fruit	15	164	10.93
27	Guava	116	627	5.41
28	Grapes	184	2924	15.89

Sl.No.	Particulars	Area (in ha)	Production (in tonnes)	Productivity (in tonnes/ha)
29	Orange	6	11	1.83
30	Chillies	550	306	0.56
31	Ginger	2	21	10.50
32	Pepper	128	27	0.21
33	Cloves & Cinnamon	1	1	1.00
34	Coriander	172	234	1.36
35	Turmeric	1518	6066	4.00
36	Tamarind	509	2650	5.21
37	Tapioca	474	14565	30.73
38	Sweet Potato	2	0	0.50

**-tonnes, ** lakh nuts*
Source: Season and Crop Report 2014-2015

From the above table, it could be seen that coconut is the predominant crop of the district with an area of 83887 ha. The other important crops are cholam and banana with an area of 25844 ha and 8126 ha respectively. Rice is cultivated only in 2355 ha. Among the pulses horse gram and Black gram are the important crop. Sugarcane occupied 1338 ha while cotton is 731 ha. The above pattern is an indication of lack of irrigation facilities in this district. The productivity of the crops is also low. It is only 4 tonnes/ha in paddy and around 4.68 tons/ha in pulses. Coimbatore district has a higher productivity in banana and cabbage. This indicates the importance of extension in improving the adaption of improved technologies in the cultivation of crops.

Table 2.26 Block wise Area, Production and Productivity of Major Agricultural Crops in Coimbatore District

Sl. No.	Crop	Anamalai			Annur			Karamadai			Kinathukadavu		
		Area (ha)	Prodn. (Mt)	Prodty. (Mt/ha)	Area (ha)	Prodn. (Mt)	Prodty. (Mt/ha)	Area (ha)	Prodn. (Mt)	Prodty. (Mt/ha)	Area (ha)	Prodn. (Mt)	Prodty. (Mt/ha)
1	Paddy	3600	16220.00	4.506	0	0.00	0.000	0	0.00	0.000	0	0.00	0.000
2	Cholam	1600	2104.00	1.315	4500	5973.00	1.327	4100	5225.00	1.274	3500	4621.00	1.320
3	Cumbu	0	0.00	0.000	0	0.00	0.000	70	140.00	2.000	0	0.00	0.000
4	Maize	350	2362.00	6.749	650	4388.50	6.752	650	4387.00	6.749	650	4387.00	6.749
5	Ragi	0	0.00	0.000	20	60.00	3.000	50	150.00	3.000	0	0.00	0.000
6	Other Millet	10	10.00	1.000	30	30.00	1.000	40	40.00	1.000	30	30.00	1.000
7	Red Gram	10	12.00	1.200	60	72.00	1.200	60	72.00	1.200	60	72.00	1.200
8	Black gram	25	21.50	0.860	10	8.60	0.860	50	43.75	0.875	70	61.70	0.881
9	Green gram	30	19.90	0.663	260	165.80	0.638	200	146.00	0.730	160	112.80	0.705
10	Horse gram	30	19.70	0.657	180	120.60	0.670	680	453.60	0.667	288	192.56	0.669
11	Bengal gram	0	0.00	0.000	10	6.70	0.670	20	13.40	0.670	162	108.54	0.670
12	Cowpea and other pulses	270	109.95	0.407	280	114.15	0.408	695	282.43	0.406	900	366.90	0.408
13	Groundnut	1884	4698.32	2.494	385	1168.20	3.034	165	369.60	2.240	744	1783.32	2.397
14	Gingelly	23	13.68	0.595	77	46.62	0.605	79	45.24	0.573	15	9.90	0.660
15	Sunflower	0	0.00	0.000	15	30.00	2.000	0	0.00	0.000	0	0.00	0.000
16	Castor	0	0.00	0.000	10	4.00	0.400	15	6.00	0.400	0	0.00	0.000
17	Cotton	10	26.00	2.600	80	270.00	3.375	30	78.00	2.600	120	347.00	2.892
18	Sugarcane	340	40800.00	120.000	300	36000.00	120.000	120	14400.00	120.000	20	2400.00	120.000

Source: Joint Director of Agriculture, Coimbatore. 2014-15

Sl. No.	Crop	Madukarai			P.N.Palayam			Pollachi (N)			Pollachi (S)		
		Area (ha)	Prodn. (Mt)	Prodty. (Mt/ha)	Area (ha)	Prodn. (Mt)	Prodty. (Mt/ha)	Area (ha)	Prodn. (Mt)	Prodty. (Mt/ha)	Area (ha)	Prodn. (Mt)	Prodty. (Mt/ha)
1	Paddy	0	0.00	0.000	0	0.00	0.000	0	0.00	0.000	0	0.00	0.000
2	Cholam	2500	3158.00	1.263	1800	2404.00	1.336	2500	3195.00	1.278	1800	2441.00	1.356
3	Cumbu	0	0.00	0.000	0	0.00	0.000	0	0.00	0.000	30	60.00	2.000
4	Maize	550	3710.00	6.745	425	2869.00	6.751	450	3039.00	6.753	450	3039.00	6.753
5	Ragi	0	0.00	0.000	10	30.00	3.000	0	0.00	0.000	0	0.00	0.000
6	Other Millet	30	30.00	1.000	30	30.00	1.000	20	20.00	1.000	20	20.00	1.000
7	Red Gram	50	60.00	1.200	45	54.00	1.200	30	36.00	1.200	35	42.00	1.200
8	Black gram	25	21.50	0.860	10	8.60	0.860	40	34.90	0.873	10	8.60	0.860
9	Green gram	14	9.12	0.651	10	5.80	0.580	60	42.30	0.705	30	19.90	0.663
10	Horse gram	50	33.50	0.670	60	40.20	0.670	35	23.45	0.670	85	56.95	0.670
11	Bengal gram	0	0.00	0.000	100	67.00	0.670	100	67.00	0.670	450	301.50	0.670
12	Cowpea and other pulses	220	89.90	0.409	120	48.70	0.406	460	187.30	0.407	480	195.40	0.407
13	Groundnut	624	1653.52	2.650	0	0.00	0.000	2458	6490.19	2.640	680	1703.90	2.506
14	Gingelly	10.99	6.16	0.560	21.99	12.31	0.560	0	0.00	0.000	17	9.52	0.560
15	Sunflower	10	20.00	2.000	60	120.00	2.000	0	0.00	0.000	0	0.00	0.000
16	Castor	5	2.00	0.400	0	0.00	0.000	0	0.00	0.000	0	0.00	0.000
17	Cotton	110	377.00	3.427	2	8.00	4.000	100	351.00	3.510	10	33.00	3.300
18	Sugarcane	100	12000.00	120.000	110	13200.00	120.000	20	2400.00	120.000	0	0.00	0.000

Source: Joint Director of Agriculture, Coimbatore. 2014-15

Sl. No.	Crop	S.S.Kulam			Sulthanpet			Sulur			Thondamuthur		
		Area (ha)	Prodn. (Mt)	Prodty. (Mt/ha)	Area (ha)	Prodn. (Mt)	Prodty. (Mt/ha)	Area (ha)	Prodn. (Mt)	Prodty. (Mt/ha)	Area (ha)	Prodn. (Mt)	Prodty. (Mt/ha)
1	Paddy	0	0.00	0.000	0	0.00	0.000	0	0.00	0.000	300	1380.00	4.600
2	Cholam	3000	3834.00	1.278	2000	2520.00	1.260	3700	4665.00	1.261	1500	1960.00	1.307
3	Cumbu	0	0.00	0.000	0	0.00	0.000	0	0.00	0.000	0	0.00	0.000
4	Maize	550	3711.50	6.748	3100	20940.00	6.755	1050	7080.00	6.743	1125	7587.00	6.744
5	Ragi	0	0.00	0.000	0	0.00	0.000	0	0.00	0.000	20	60.00	3.000
6	Other Millet	20	20.00	1.000	20	20.00	1.000	20	20.00	1.000	30	30.00	1.000
7	Red Gram	20	24.00	1.200	19	23.00	1.211	10	12.00	1.200	60	72.00	1.200
8	Black gram	30	26.30	0.877	10	8.85	0.885	10	8.85	0.885	337	293.50	0.871
9	Green gram	230	153.40	0.667	130	95.40	0.734	110	76.30	0.694	100	68.00	0.680
10	Horse gram	10	6.70	0.670	160	107.20	0.670	40	26.80	0.670	180	120.60	0.670
11	Bengal gram	490	328.30	0.670	80	53.60	0.670	20	13.40	0.670	0	0.00	0.000
12	Cowpea and other pulses	15	6.08	0.405	190	77.70	0.409	14	5.74	0.410	220	89.60	0.407
13	Groundnut	0	0.00	0.000	0	0.00	0.000	0	0.00	0.000	390	1033.45	2.650
14	Gingelly	49	27.44	0.560	7	4.02	0.574	0	0.00	0.000	220	125.20	0.569
15	Sunflower	0	0.00	0.000	15	30.00	2.000	0	0.00	0.000	0	0.00	0.000
16	Castor	0	0.00	0.000	15	6.00	0.400	5	2.00	0.400	0	0.00	0.000
17	Cotton	17	47.00	2.765	0	0.00	0.000	5	13.00	2.600	16	50.00	3.125
18	Sugarcane	170	20400.00	120.000	0	0.00	0.000	50	6000.00	120.000	170	20400.00	120.000

Source: Joint Director of Agriculture, Coimbatore. 2014-15

The productivity of paddy in Anamalai block is 4.5 tonnes/ha which is higher than the district productivity. As regards cholam, the productivity is in the range of 1.2 to 1.3 tonnes/ha in the blocks. Among the pulses, redgram registered a higher productivity followed by blackgram in all the blocks. The productivity of groundnut was high in Annur block (3034 kg) followed by Pollachi (s) with 2500kg. P.N. Palayam registered a higher productivity of 4000 kg in cotton while the lowest 2600 kg in Anamalai, Karamadai and Sulur blocks.

The block wise area, production and yield of horticultural crops viz., fruits, vegetables, spices and condiments, plantation crops and flower crops are furnished in Table 2.27 through 2.31. Table 2.32 provides details on Percentage of Area under Major Horticultural Crops (Across Blocks). The Percentage of Area under Major Horticultural Crops with in each blocks is Table 2.33

Table.2.27. Block wise Area, Production and Productivity of Major Fruit Crops in Coimbatore District

Sl. No.	Fruits	Anamalai			Annur			Karamadai			Kinathukadavu		
		Area (ha)	Prodn. (t)	Prodty. (t/ha)	Area (ha)	Prodn. (t)	Prodty. (t/ha)	Area (ha)	Prodn. (t)	Prodty. (t/ha)	Area (ha)	Prodn. (t)	Prodty. (t/ha)
1	Banana	77.3	4173.4	54.0	1338.6	53544.6	40.0	2834.5	90703.4	32.0	88.0	2728.6	31.0
2	Mango	1046.0	6275.9	6.0	32.8	180.5	5.5	95.3	523.9	5.5	156.1	1092.6	7.0
3	Jack	1.9	25.9	13.5	0.1	2.5	25.0	2.1	0.0	0.0	0.2	0.0	0.0
4	Pineapple	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	Guava	1.2	15.4	13.0	6.7	141.5	21.0	13.7	198.2	14.5	4.1	49.2	12.0
6	Grapes	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	Pear (Berikkai)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	Sapota	8.4	166.3	19.8	20.4	510.4	25.0	5.9	110.1	18.6	9.0	89.5	10.0
9	Papaya	1.6	288.1	183.5	14.9	1192.0	80.0	4.7	854.4	183.8	6.7	469.0	70.0
10	Pomegranate	0.3	7.3	24.0	1.3	25.5	20.0	3.4	84.4	25.0	0.0	0.0	0.0
11	Dates	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	Naval	0.5	2.9	5.5	0.0	0.0	0.0	0.2	0.0	0.0	0.4	0.0	0.0
13	Peach	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	Amla	22.8	341.7	15.0	42.8	771.2	18.0	45.0	652.1	14.5	17.3	86.6	5.0
15	Other Fresh Fruits	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	Orange	3.4	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	Lemon	8.7	0.0	0.0	2.1	0.0	0.0	3.3	0.0	0.0	1.5	30.1	20.0
18	Citrus	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	Other Citrus Fruits	0.0	0.0	2.5	0.0	0.0	20.0	0.0	0.2	20.8	0.0	0.0	0.0
	TOTAL	**1172.1**	**11297.0**		**1460.6**	**56368.2**		**3008.0**	**93126.7**		**283.3**	**4545.6**	

Source: Office of the Deputy Director of Horticulture, Coimbatore. 2014-15

Sl. No.	Fruits	Madukkarai			P.N.Palayam			Pollachi (N)			Pollachi (S)		
		Area (ha)	Prodn. (t)	Prodty. (t/ha)	Area (ha)	Prodn. (t)	Prodty. (t/ha)	Area (ha)	Prodn. (t)	Prodty. (t/ha)	Area (ha)	Prodn. (t)	Prodty. (t/ha)
1	Banana	627.9	24486.5	39.0	576.9	25962.5	45.0	118.3	4260.2	36.0	8.5	458.5	54.0
2	Mango	245.6	1326.3	5.4	58.8	352.9	6.0	259.7	1090.7	4.2	327.5	1964.9	6.0
3	Jack	1.1	21.3	20.0	0.8	9.6	12.0	0.1	1.1	12.5	0.1	0.0	0.0
4	Pineapple	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	Guava	23.0	471.6	20.5	17.6	185.0	10.5	16.3	170.8	10.5	0.3	0.0	0.0
6	Grapes	0.0	0.0	0.0	1.7	32.3	19.0	0.0	0.0	0.0	0.0	0.0	0.0
7	Pear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	Sapota	9.7	214.4	22.0	9.5	237.3	25.0	6.0	90.2	15.0	11.6	229.5	19.8
9	Papaya	1.1	82.5	75.0	1.2	200.6	170.0	0.6	0.0	0.0	0.0	0.0	0.0
10	Pomegranate	8.8	175.8	20.0	1.9	38.8	20.0	0.0	0.0	0.0	0.0	0.0	0.0
11	Dates	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	Naval	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	Peach	2.0	0.0	0.0	0.0	0.0	0.0	1.4	0.0	0.0	0.0	0.0	0.0
14	Amla	45.2	723.4	16.0	34.6	519.5	15.0	8.0	119.7	15.0	26.9	403.5	15.0
15	Other Fresh Fruits	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	Orange	0.7	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	Lemon	3.0	59.6	20.0	1.7	3.4	2.0	0.0	0.0	0.0	0.1	0.0	0.0
18	Citrus	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	Other Citrus Fruits	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Total	**968.5**	**27561.5**		**705.2**	**27541.9**		**410.4**	**5732.7**		**374.9**	**3056.4**	

Sl. No.	Name	S.S.Kulam			Sulur			Sulthanpet			Thondamuthur		
A.	Fruits	Area (ha)	Prodn. (t)	Prodty. (t/ha)	Area (ha)	Prodn. (t)	Prodty. (t/ha)	Area (ha)	Prodn. (t)	Prodty. (t/ha)	Area (ha)	Prodn. (t)	Prodty. (t/ha)
1	Banana	321.5	12860.2	40.0	278.5	11141.2	40.0	81.8	2536.0	31.0	1060.2	42407.0	40.0
2	Mango	25.1	137.8	5.5	21.0	115.5	5.5	41.0	286.7	7.0	125.1	500.4	4.0
3	Jack	1.5	0.0	0.0	1.2	0.0	0.0	0.0	0.0	0.0	3.7	91.6	25.0
4	Pineapple	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	Guava	6.8	142.6	21.0	6.4	133.9	21.0	4.9	0.0	0.0	15.5	310.0	20.0
6	Grapes	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	185.1	9255.8	50.0
7	Pear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	Sapota	23.3	582.0	25.0	11.6	289.9	25.0	15.1	181.2	12.0	9.1	200.5	22.0
9	Papaya	11.9	954.0	80.0	17.4	1394.8	80.0	3.8	0.0	0.0	11.9	594.3	50.0
10	Pomegranate	1.8	35.3	20.0	2.3	46.2	20.0	0.4	0.0	0.0	4.3	64.7	15.0
11	Dates	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	Naval	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.5	0.0	0.0
13	Peach	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	Amla	13.2	237.8	18.0	41.8	752.6	18.0	48.2	722.9	15.0	9.7	145.5	15.0
15	Other Fresh Fruits	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	Orange	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0
17	Lemon	1.9	0.0	0.0	1.8	0.0	0.0	4.7	0.0	0.0	9.5	142.7	15.0
18	Citrus	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.0
19	Other Citrus Fruits	0.0	0.0	20.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0
	Total	**407.4**	**11332.2**		**382.0**	**13874.0**		**201.1**	**3726.7**		**1435.7**	**53712.4**	

Source: Office of the Deputy Director of Horticulture, Coimbatore, 2014-15

Table 2.28 Block wise Area, Production and Productivity of Major Vegetable Crops in Coimbatore District

Sl. No.	Vegetables	Anamalai			Annur			Karamadai			Kinathukadavu		
		Area (ha)	Prodn. (t)	Prodty. (t/ha)	Area (ha)	Prodn. (t)	Prodty. (t/ha)	Area (ha)	Prodn. (t)	Prodty. (t/ha)	Area (ha)	Prodn. (t)	Prodty. (t/ha)
1	Potato	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	Tapioca	10.5	408.5	39.0	185.9	5577.8	30.0	9.4	282.6	30.0	6.4	160.0	25.0
3	Sweet potato	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	Yam	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	Carrot	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	Beet root	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.0
7	Onion	0.0	0.0	9.0	56.4	677.3	12.0	41.3	619.7	15.0	9.8	98.4	10.0
8	Turnip	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	Brinjal	4.9	59.3	12.0	51.6	1599.9	31.0	77.3	2397.5	31.0	17.8	356.0	20.0
10	Lablab	0.2	2.3	15.0	0.0	0.0	10.0	0.0	0.0	14.0	0.0	0.0	8.0
11	Cabbage	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.0
12	Tomato	11.9	131.1	11.0	87.3	2619.6	30.0	77.5	2325.6	30.0	453.6	14516.0	32.0
13	Pumpkin	3.7	92.5	25.0	49.4	889.2	18.0	25.0	449.8	18.0	4.6	64.4	14.0
14	Snake Guard	17.8	275.7	15.5	0.5	8.1	18.0	7.2	0.0	0.0	20.6	308.8	15.0
15	Ribbed Guard	11.1	127.1	11.5	0.7	0.0	0.0	0.3	0.0	0.0	9.8	126.9	13.0
16	Bottle Guard	0.0	0.0	14.5	0.1	0.0	0.0	0.3	5.1	16.0	0.8	0.0	0.0
17	Bitter Guard	32.4	388.3	12.0	1.7	0.0	0.0	13.4	0.0	0.0	27.1	380.0	14.0
18	Ash Guard	1.5	37.5	25.0	0.0	0.0	16.0	7.4	118.4	16.0	0.3	5.4	18.0
19	Cucumber	1.0	8.0	8.0	0.8	13.5	18.0	0.9	0.0	0.0	0.0	0.0	0.0
20	Beans	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Sl. No.	Vegetables	Anamalai			Annur			Karamadai			Kinathukadavu		
		Area (ha)	Prodn. (t)	Prodty. (t/ha)	Area (ha)	Prodn. (t)	Prodty. (t/ha)	Area (ha)	Prodn. (t)	Prodty. (t/ha)	Area (ha)	Prodn. (t)	Prodty. (t/ha)
21	Karamani	0.0	0.0	0.0	58.0	174.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0
22	Drumstick	0.5	25.2	51.5	2.5	42.5	17.0	1.1	0.0	0.0	0.4	20.0	50.0
23	Cauliflower	0.0	0.0	0.0	3.5	0.0	0.0	2.3	39.1	17.0	0.0	0.0	0.0
24	Radish	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	22.0
25	Cola cassia	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	Greens	0.0	0.0	6.0	3.9	46.6	12.0	3.9	0.0	0.0	0.0	0.0	0.0
27	Water melon	0.0	0.0	0.0	5.3	79.5	15.0	37.3	1118.4	30.0	0.0	0.0	0.0
28	Musk melon	0.0	0.0	0.0	0.0	0.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0
29	Other Vegetables (Bhendi, Kovakai & Kothavarai)	5.3	45.1	8.5	45.2	723.8	16.0	67.1	1073.3	16.0	30.5	305.3	10.0
	Total	**102.0**	**1600.5**		**553.2**	**12451.7**		**376.7**	**8429.5**		**581.8**	**16341.2**	

Source: Office of the Deputy Director of Horticulture, Coimbatore. 2014-15

Sl. No.	Vegetables	Madukkarai			P.N.Palayam			Pollachi (N)			Pollachi (S)		
		Area (ha)	Prodn. (t)	Prodty. (t/ha)	Area (ha)	Prodn. (t)	Prodty. (t/ha)	Area (ha)	Prodn. (t)	Prodty. (t/ha)	Area (ha)	Prodn. (t)	Prodty. (t/ha)
1	Potato	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	Tapioca	10.5	315.9	30.0	7.5	321.6	43.0	60.9	2619.3	43.0	9.7	377.9	39.0
3	Sweet potato	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	Yam	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	Carrot	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0
6	Beet root	2.4	0.0	0.0	0.6	12.3	22.0	0.8	0.0	0.0	21.6	356.2	16.5
7	Onion	15.9	238.1	15.0	6.0	42.0	7.0	3.5	42.0	12.0	11.0	98.9	9.0
8	Turnip	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	Brinjal	32.3	968.3	30.0	24.6	282.9	11.5	35.0	437.1	12.5	2.1	24.6	12.0
10	Lablab	2.5	0.0	0.0	32.6	358.1	11.0	0.0	0.0	0.0	1.0	15.0	15.0
11	Cabbage	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	Tomato	739.8	22193.1	30.0	39.0	973.9	25.0	75.0	1874.8	25.0	40.6	446.2	11.0
13	Pumpkin	0.7	0.0	0.0	1.6	32.6	21.0	58.5	1227.9	21.0	15.5	386.9	25.0
14	Snake Guard	19.5	292.6	15.0	4.8	72.5	15.0	5.7	85.0	15.0	3.2	50.1	15.5
15	Ribbed Guard	16.1	482.9	30.0	1.3	18.4	14.0	9.4	140.9	15.0	2.8	31.6	11.5
16	Bottle Guard	0.2	0.0	0.0	2.2	28.6	13.0	0.6	8.3	13.8	0.0	0.0	0.0
17	Bitter Guard	3.3	81.3	25.0	4.5	156.8	35.0	52.0	780.2	15.0	13.5	162.1	12.0
18	Ash Guard	0.0	0.0	0.0	0.0	0.0	0.0	6.9	0.0	0.0	1.2	30.0	25.0
19	Cucumber	0.0	0.0	0.0	0.1	0.5	5.0	0.5	3.3	6.5	8.0	120.6	15.0
20	Beans	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	Karamani	0.5	0.0	0.0	4.0	10.0	2.5	0.0	0.0	0.0	0.0	0.0	0.0
22	Drumstick	7.8	116.9	15.0	4.3	193.1	45.0	0.8	12.0	15.0	0.0	0.0	0.0

Sl. No.	Vegetables	Madukkarai			P.N.Palayam			Pollachi (N)			Pollachi (S)		
		Area (ha)	Prodn. (t)	Prodty. (t/ha)	Area (ha)	Prodn. (t)	Prodty. (t/ha)	Area (ha)	Prodn. (t)	Prodty. (t/ha)	Area (ha)	Prodn. (t)	Prodty. (t/ha)
23	Cauliflower	1.6	0.0	0.0	0.8	13.0	16.0	0.0	0.0	0.0	0.7	14.7	21.0
24	Radish	0.0	0.0	0.0	0.4	8.4	24.0	0.4	0.0	0.0	6.0	36.0	6.0
25	Cola cassia	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	Greens	6.9	82.7	12.0	3.2	31.8	10.0	0.0	0.0	16.0	0.0	0.0	0.0
27	Water melon	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	0.0	0.0
28	Musk melon	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29	Other Vegetables (Bhendi, Kovakai & Kothavarai)	27.7	415.7	15.0	7.6	128.7	17.0	11.7	87.5	7.5	3.3	27.8	8.5
	Total	**888.1**	**25187.3**		**144.8**	**2685.1**		**321.6**	**7318.1**		**142.9**	**2178.5**	

Source: Office of the Deputy Director of Horticulture, Coimbatore. 2014-15

Continued (Vegetable Crops)

Sl. No.	Vegetables	S.S.Kulam			Sulur			Sulthanpet			Thondamuthur		
		Area (ha)	Prodn. (t)	Prodty. (t/ha)	Area (ha)	Prodn. (t)	Prodty. (t/ha)	Area (ha)	Prodn. (t)	Prodty. (t/ha)	Area (ha)	Prodn. (t)	Prodty. (t/ha)
1	Potato	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	Tapioca	23.2	694.8	30.0	15.2	455.3	30.0	0.0	0.0	0.0	1.0	0.0	0.0
3	Sweet potato	0.0	0.0	0.0	1.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	Yam	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0
5	Carrot	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	Beet root	0.9	0.0	0.0	4.5	0.0	0.0	98.9	1780.3	18.0	3.5	69.0	20.0
7	Onion	2.4	28.2	12.0	25.1	300.8	12.0	61.1	610.7	10.0	553.6	6642.7	12.0
8	Turnip	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	Brinjal	20.7	621.8	30.0	25.1	778.7	31.0	17.6	352.9	20.0	86.0	2148.8	25.0
10	Lablab	0.0	0.0	10.0	0.0	0.0	0.0	0.0	0.0	0.0	32.5	325.1	10.0
11	Cabbage	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5	103.5	30.0
12	Tomato	8.1	243.2	30.0	27.3	819.3	30.0	72.1	2307.4	32.0	314.3	9428.9	30.0
13	Pumpkin	1.4	0.0	0.0	4.8	0.0	0.0	5.7	0.0	0.0	35.8	716.6	20.0
14	Snake Gourd	1.7	0.0	0.0	6.8	121.9	18.0	17.6	211.5	12.0	14.1	211.7	15.0
15	Ribbed Gourd	0.3	0.0	0.0	7.4	111.2	15.0	10.6	148.2	14.0	7.9	94.4	12.0
16	Bottle Gourd	0.0	0.0	0.0	0.0	0.0	16.0	3.6	0.0	0.0	4.7	60.5	13.0
17	Bitter Gourd	0.9	0.0	0.0	13.4	240.5	18.0	62.5	874.8	14.0	12.8	153.5	12.0
18	Ash Gourd	0.0	0.0	0.0	0.2	0.0	0.0	2.2	0.0	0.0	0.0	0.0	15.0
19	Cucumber	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.1	0.0	0.0
20	Beans	0.0	0.0	0.0	2.2	8.8	4.0	9.0	0.0	0.0	0.0	0.0	0.0

Sl. No.	Vegetables	S.S.Kulam			Sulur			Sulthanpet			Thondamuthur		
		Area (ha)	Prodn. (t)	Prodty. (t/ha)	Area (ha)	Prodn. (t)	Prodty. (t/ha)	Area (ha)	Prodn. (t)	Prodty. (t/ha)	Area (ha)	Prodn. (t)	Prodty. (t/ha)
21	Karamani	0.0	0.0	0.0	0.0	0.0	0.0	209.3	0.0	0.0	1.9	0.0	0.0
22	Drumstick	1.4	23.9	17.0	2.0	33.2	17.0	1.8	0.0	0.0	5.7	0.0	0.0
23	Cauliflower	0.1	0.0	0.0	1.6	32.1	20.0	28.5	0.0	0.0	82.8	1241.8	15.0
24	Radish	0.2	0.0	0.0	0.8	11.2	14.0	0.6	0.0	0.0	0.6	0.0	0.0
25	Cola cassia	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	Greens	4.4	52.3	12.0	18.3	220.1	12.0	25.3	0.0	0.0	8.9	89.3	10.0
27	Water melon	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28	Musk melon	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29	Other Vegetables (Bhendi, Kovakai & Kothavarai)	9.8	156.5	16.0	33.9	542.9	16.0	10.9	108.9	10.0	39.5	592.3	15.0
	Total	**75.4**	**1401.7**		**190.3**	**3675.9**		**637.3**	**6394.6**		**1214.2**	**21878.0**	

Source: Office of the Deputy Director of Horticulture, Coimbatore. 2014-15

A look at the area under fruit crops in the 12 blocks of Coimbatore district revealed that banana is the major crop with 2834 ha in Karamadai followed by 1060ha in Thondamuthur and 1338 ha in Annur block. The productivity is maximum (54 tonnes/ha) in Annamalai and Pollachi (North) blocks and minimum (31 tonnes/ha) in Sultan pet. Area under mango is 1046 ha in Anamalai and is less (500 ha) in other blocks. The productivity is 7 tonnes/ha in Kinathukadavu and Sulthanpet. Sapota is grown in more than 10 ha in Annur, Sulur, Sultanpet and S.S.Kulam. Amla is the other fruit crop raised in Karamadai, Madukkarai, Annur, Anaimalai, Sulur and Sulthanpet blocks. Among the blocks, Annamalai, Annur and Karamadai blocks have larger area under fruit crops compared to the other blocks. Among the blocks in the district, Thondamuthur block has more than 1000 ha under vegetables. Tomato is the major vegetable with 739 ha in Madukkarai, 453 ha in Kinnathukadavu and 314 ha in Thondamuthur. Onion has a major area of 553 ha in Thondamuthur. Again Cauliflower is grown in 82 ha in the same block. Thondamuthur block has maximum area under vegetables which was due to the nearness to Coimbatore city and the availability of irrigation. The productivity of Tomato varied from 11 to 32 tonnes/ha among the blocks. Greens are cultivated in 25 ha in Sultan pet block. Being a short duration and perishable crops agricultural planning should pay greater attention in marketing and value addition.

Table 2.29 Block wise Area, Production and Productivity of Spices and Condiments in Coimbatore District

Sl. No.	Spices & Condiments	Anamalai			Annur			Karamadai			Kinathukadavu		
		Area (ha)	Prodn. (t)	Prodty. (t/ha)	Area (ha)	Prodn. (t)	Prodty. (t/ha)	Area (ha)	Prodn. (t)	Prodty. (t/ha)	Area (ha)	Prodn. (t)	Prodty. (t/ha)
1	Cardamom	807.58	121.14	0.15	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00
2	Chillies	0.35	9.45	27.00	15.32	38.30	2.50	56.49	677.88	12.00	108.00	863.96	8.00
3	Garlic	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	Ginger	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	Pepper	125.90	38.27	0.30	0.00	0.00	0.00	1.34	0.00	0.00	0.00	0.00	0.00
6	Cloves	0.00	0.00	0.00	0.00	0.00	0.00	0.62	0.00	0.00	0.00	0.00	0.00
7	Curry leaf	0.00	0.00	0.00	136.44	3410.88	25.00	1131.91	22638.10	20.00	0.00	0.00	0.00
8	Mint	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	Coriander	0.00	0.00	0.00	0.10	0.00	0.00	2.90	2.90	1.00	0.14	0.14	1.00
10	Turmeric	0.80	16.40	20.50	532.29	10645.80	20.00	45.64	684.53	15.00	3.10	62.00	20.00
11	Tamarind	50.68	157.11	3.10	48.73	877.19	18.00	22.24	11250.91	506.00	72.14	1082.10	15.00
12	Other(Nutmeg)	10.49	10.49	1.00	0.00	0.00	0.00	0.55	0.00	0.00	0.00	0.00	0.00
	Total	**995.80**	**352.86**		**732.88**	**14972.17**		**1261.69**	**35254.32**		**183.38**	**2008.20**	

Source: Office of the Deputy Director of Horticulture, Coimbatore 2014-15.

Continued (Spices and Condiments)

Sl. No.	Spices & Condiments	Madukkarai			P.N.Palayam			Pollachi (N)			Pollachi (S)		
		Area (ha)	Prodn. (t)	Prodty. (t/ha)	Area (ha)	Prodn. (t)	Prodty. (t/ha)	Area (ha)	Prodn. (t)	Prodty. (t/ha)	Area (ha)	Prodn. (t)	Prodty. (t/ha)
1	Cardamom	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	Chillies	151.98	303.95	2.00	6.29	16.98	2.70	31.74	63.47	2.00	5.47	5.74	1.05
3	Garlic	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	Ginger	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	Pepper	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	Cloves	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	Curryleaf	2.80	0.00	0.00	83.42	16265.93	195.00	0.47	11.75	25.00	0.00	0.00	0.00
8	Mint	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	Coriander	1.11	0.00	0.00	2.33	13.95	6.00	14.90	89.40	6.00	96.31	57.78	0.60
10	Turmeric	9.33	167.94	18.00	62.82	329.81	5.25	0.55	2.89	5.25	2.98	61.09	20.50
11	Tamarind	52.77	791.55	15.00	25.07	75.21	3.00	48.43	726.47	15.00	53.36	0.00	0.00
12	Other(Nutmeg)	0.02	0.00	0.00	0.00	0.00	0.94	0.00	0.00	0.00	0.00	0.00	0.00
	Total	**218.00**	**1263.44**		**179.93**	**16701.87**		**96.09**	**893.97**		**158.11**	**124.61**	

Source: Office of the Deputy Director of Horticulture, Coimbatore 2014-15

Continued (Spices and Condiments)

Sl. No.	Spices & Condiments	S.S.Kulam			Sulur			Sulthanpet			Thondamuthur		
		Area (ha)	Prodn. (t)	Prodty. (t/ha)	Area (ha)	Prodn. (t)	Prodty. (t/ha)	Area (ha)	Prodn. (t)	Prodty. (t/ha)	Area (ha)	Prodn. (t)	Prodty. (t/ha)
1	Cardamom	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	Chillies	5.72	14.30	2.50	15.00	0.00	0.00	50.88	407.00	8.00	33.58	402.90	12.00
3	Garlic	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	Ginger	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	Pepper	0.00	0.00	0.00	0.40	0.00	0.00	0.00	0.00	0.00	0.50	0.00	0.00
6	Cloves	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	Curryleaf	8.98	224.38	25.00	19.24	480.88	25.00	6.84	0.00	0.00	1.12	22.30	20.00
8	Mint	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	Coriander	3.10	21.70	7.00	0.00	0.00	10.00	16.47	16.47	1.00	0.95	0.00	0.00
10	Turmeric	84.93	1698.50	20.00	51.65	1033.00	20.00	0.00	0.00	0.00	408.59	10214.75	25.00
11	Tamarind	11.52	0.00	0.00	34.95	629.01	18.00	24.67	0.00	0.00	36.43	437.10	12.00
12	Other (Nutmeg)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.20	6.20	1.00
	Total	**114.24**	**8671.32**		**121.23**	**2142.89**		**98.86**	**423.47**		**487.36**	**11083.25**	

Source: Office of the Deputy Director of Horticulture, Coimbatore, 2014-15

Among the spices and condiments cardamom is raised in Anaimalai block only because of the high elevation area in 807 ha. Similar is the case with pepper which is grown in 125 ha in Madukkarai and 108 ha in Kinnathukadavu block. Curry leaf is a major crop in Karamadai block with an area of 1131 ha followed by 136 ha. In Annur block, Tamarind is raised in all blocks but in a smaller area. Kinathukadavu block has the maximum area of 72 ha. In the case of spices and condiments what is more important is storage to increase the shelf life.

Table 2.30 Block wiseArea, Production and Productivity of Plantation Crops in Coimbatore District

Sl. No.	Plantation crops	Anamalai			Annur			Karamadai			Kinathukadavu		
		Area (ha)	Prodn. (t)	Prodty. (t/ha)	Area (ha)	Prodn. (t)	Prodty. (t/ha)	Area (ha)	Prodn. (t)	Prodty. (t/ha)	Area (ha)	Prodn. (t)	Prodty. (t/ha)
1	Cashew nut	9.94	4.77	0.48	6.20	19.84	3.20	9.22	0.00	0.00	0.00	0.00	0.00
2	Coffee	2252.26	1126.13	0.50	0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00
3	Tea	11186.15	22372.29	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	Rubber	5.00	2.00	0.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	Betel vine	7.64	99.32	13.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	Arecanut	57.06	57.06	1.00	9.77	9.77	1.00	755.05	755.05	1.00	11.17	11.17	1.00
7	Others (Cocoa)	34.43	37.87	1.10		0.00	0.00	2.10	12.60	6.00	6.80	6.80	1.00
	Total	**13552.46**	**23699.44**		**15.97**	**29.61**		**766.47**	**767.65**		**17.97**	**17.97**	

Source: Office of the Deputy Director of Horticulture, Coimbatore 2014-15

Sl. No.	Plantation crops	Madukkarai			P.N.Palayam			Pollachi (N)			Pollachi (S)		
		Area (ha)	Prodn. (t)	Prodty. (t/ha)	Area (ha)	Prodn. (t)	Prodty. (t/ha)	Area (ha)	Prodn. (t)	Prodty. (t/ha)	Area (ha)	Prodn. (t)	Prodty. (t/ha)
1	Cashew nut	20.95	67.02	3.20	2.54	1.15	0.45	11.48	5.17	0.45	7.20	3.46	0.48
2	Coffee	0.00	0.00	0.00	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	Tea	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	Rubber	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	Betel vine	4.86	243.00	50.00	6.11	457.88	75.00	0.45	0.00	0.00	2.00	26.00	13.00
6	Arecanut	38.84	46.60	1.20	65.81	65.81	1.00	1.48	1.48	1.00	3.08	3.08	1.00
7	Others (Cocoa)	16.61	13.29	0.80	0.97	0.87	0.90	0.80	0.00	0.00	2.00	2.20	1.10
	Total	**81.25**	**369.91**		**75.55**	**525.71**		**14.21**	**6.65**		**14.28**	**103.46**	

Source: Office of the Deputy Director of Horticulture, Coimbatore, 2014-15

Continued (Plantation Crops)

Sl. No.	Plantation crops	S.S.Kulam			Sulur			Sulthanpet			Thondamuthur		
		Area (ha)	Prodn. (t)	Prodty. (t/ha)	Area (ha)	Prodn. (t)	Prodty. (t/ha)	Area (ha)	Prodn. (t)	Prodty. (t/ha)	Area (ha)	Prodn. (t)	Prodty. (t/ha)
1	Cashew nut	1.17	0.00	0.00	0.00	0.00	0.00	28.30	0.00	0.00	6.82	4.09	0.60
2	Coffee	0.00	0.00	0.00	0.25	0.00	0.00	0.00	0.00	0.00	0.58	0.00	0.00
3	Tea	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	Rubber	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	Betel vine	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.28	0.00	0.00
6	Arecanut	10.79	10.79	1.00	22.56	22.56	1.00	0.00	0.00	0.00	841.50	1009.79	1.20
7	Others (Cocoa)	2.63	3.29	1.25	0.30	0.38	1.25	0.00	0.00	0.00	1.98	1.49	0.75
	Total	**14.59**	**10.39**		**23.11**	**22.94**		**28.30**	**0.00**		**856.15**	**1015.37**	

Source: Office of the Deputy Director of Horticulture, Coimbatore 2014-15.

The data on plantation crops revealed that Anaimalai block has an area of 11186 ha under tea and 2252 ha under coffee. This might be due to the location and elevation of the block. Arecanut is the other major plantation crop with 841 ha in Thondamuthur block followed by 755 ha in Karamadai block. Plantation crops need good processing facilities.

Table 2.31 Block wise Area, Production and Productivity of Flower Crops in Coimbatore District

Sl. No.	Flowers	Anamalai			Annur			Karamadai			Kinathukadavu		
		Area (ha)	Prodn. (t)	Prodty. (t/ha)	Area (ha)	Prodn. (t)	Prodty. (t/ha)	Area (ha)	Prodn. (t)	Prodty. (t/ha)	Area (ha)	Prodn. (t)	Prodty. (t/ha)
1	Rose	0.10	0.00	0.00	0.76	0.00	0.00	2.84	25.56	9.00	0.00	0.00	0.00
2	Jasmine	1.22	0.00	0.00	24.79	247.90	10.00	86.35	863.50	10.00	8.70	0.00	0.00
3	Mullai	0.00	0.00	0.00	17.92	179.20	10.00	111.46	1114.60	10.00	0.00	0.00	0.00
4	Jathimalli	0.00	0.00	0.00	0.00	0.00	10.00	160.86	1608.63	10.00	2.00	0.00	0.00
5	Crossandra	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	Chrysanthemum	0.00	0.00	0.00	0.00	0.00	10.00	0.00	0.00	10.00	0.00	0.00	0.00
7	Mari Gold	0.00	0.00	0.00	0.00	0.00	0.00	0.55	0.00	0.00	0.00	0.00	0.00
8	Aralli	0.00	0.00	0.00	0.55	0.00	0.00	2.48	0.00	0.00	0.00	0.00	0.00
9	Others (cocks comb)	1.51	10.54	7.00	3.18	31.80	10.00	28.12	674.76	24.00	0.00	0.00	0.00
	Total	**2.83**	**10.54**		**47.20**	**458.90**		**392.66**	**4287.05**		**10.70**	**0.00**	
Sl. No.	**Flowers**	**Madukkarai**			**P.N.Palayam**			**Pollachi (N)**			**Pollachi (S)**		
1	Rose	0.00	0.00	0.00	18.92	132.41	7.00	0.52	2.86	5.50	0.25	0.00	0.00
2	Jasmine	0.40	0.00	0.00	18.46	129.22	7.00	0.80	4.37	5.50	0.67	4.02	6.00
3	Mullai	0.00	0.00	0.00	8.21	71.84	8.75	0.00	0.00	8.75	0.00	0.00	0.00
4	Jathimalli	0.00	0.00	0.00	14.78	155.19	10.50	0.00	0.00	0.00	0.00	0.00	0.00
5	Crossandra	0.00	0.00	0.00	0.40	0.80	2.00	0.00	0.00	0.00	0.00	0.00	15.00
6	Chrysanthemum	0.00	0.00	0.00	0.00	0.00	8.00	0.00	0.00	0.00	0.00	0.00	0.00
7	Mari Gold	0.00	0.00	0.00	0.00	0.00	18.00	0.00	0.00	0.00	0.00	0.00	0.00
8	Aralli	0.00	0.00	0.00	0.96	0.00	0.00	0.00	0.00	7.50	0.00	0.00	0.00
9	Others (cock combs)	2.30	0.00	0.00	14.15	332.53	23.50	0.00	0.00	0.00	0.00	0.00	7.00
	Total	**2.70**	**0.00**		**75.87**	**821.98**		**1.32**	**7.23**		**0.92**	**4.02**	

Source: Office of the Deputy Director of Horticulture, Coimbatore, 2014-15

Continued (Flower Crops)

Sl. No.	Flowers	S.S.Kulam			Sulur			Sulthanpet			Thondamuthur		
		Area (ha)	Prodn. (t)	Prodty. (t/ha)	Area (ha)	Prodn. (t)	Prodty. (t/ha)	Area (ha)	Prodn. (t)	Prodty. (t/ha)	Area (ha)	Prodn. (t)	Prodty. (t/ha)
1	Rose	1.54	0.00	0.00	0.11	0.00	0.00	0.00	0.00	0.00	1.24	6.20	5.00
2	Jasmine	35.10	351.00	10.00	13.45	134.50	10.00	0.00	0.00	0.00	0.15	0.00	0.00
3	Mullai	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	Jathimalli	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	Crossandra	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40	0.00	0.00
6	Chrysanthemum	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.70	0.00	0.00
7	Mari Gold	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15.00
8	Arali	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.80	0.00	0.00
9	Others (cock combs)	1.50	14.95	10.00	5.46	65.46	12.00	0.00	0.00	0.00	50.52	1010.30	20.00
	Total	**38.14**	**262.32**		**19.01**	**199.96**		**0.00**	**0.00**		**55.81**	**1016.50**	

Source: Office of the Deputy Director of Horticulture, Coimbatore 2014-15.

Among the 12 blocks, area under flowers was maximum (393 ha) in karamadai followed by 75 ha in P.N.Palayam, 55 ha in Thondamuthur and 47 ha in Annur block. Jasmine and Mullai are the common flowers cultivated. S.N.Kulam block has 35 ha under Jasmine followed by 23 ha in Sulur. Mullai is cultivated in Karamadai block in 111 ha. Cultivation of flowers necessitates storage, transport and value addition for increasing the area.

Table 2.32 Percentage of Area under Major Horticultural Crops (Across Blocks) in Coimbatore District

Sl. No.	Block	Fruits	Vegetables	Spices &Condiments	Plantation crops	Medicinal& Aromatic plants	Commercial Flowers
1	Anaimalai	10.84	1.95	21.43	87.66	90.63	0.44
2	Annur	13.51	10.58	15.77	0.10	0.89	7.29
3	Karamadai	27.83	7.20	27.15	4.96	1.07	60.68
4	Kinathukadavu	2.62	11.13	3.95	0.12	0.00	1.65
5	Madukkarai	8.96	16.99	4.69	0.53	0.98	0.42
6	P.N.Palayam	6.52	2.77	3.87	0.49	0.91	11.72
7	Pollachi(N)	3.80	6.15	2.07	0.09	0.00	0.20
8	Pollachi(S)	3.47	2.73	3.40	0.09	0.00	0.14
9	S.S.Kulam	3.77	1.44	2.46	0.09	5.53	5.89
10	Sulur	3.53	3.64	2.61	0.15	0.00	2.94
11	Sulthanpet	1.86	12.19	2.13	0.18	0.00	0.00
12	Thondamuthur	13.28	23.22	10.49	5.54	0.00	8.62
	Total	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**

Source: Office of the Deputy Director of Horticulture, Coimbatore, 2014-15.

Table 2.33 Percentage of Area under Major Horticultural Crops (Within Blocks) in Coimbatore District

Sl. No.	Block	Fruits	Vegetables	Spices & Condiments	Plantation crops	Medicinal & Aromatic plants	Commercial Flowers	Total
1	Anaimalai	7.38	0.64	6.27	85.36	0.32	0.02	**100.00**
2	Annur	51.97	19.68	26.08	0.57	0.02	1.68	**100.00**
3	Karamadai	51.81	6.49	21.73	13.20	0.01	6.76	**100.00**
4	Kinathukadavu	26.30	54.02	17.02	1.67	0.00	0.99	**100.00**
5	Madukkarai	44.86	41.13	10.10	3.76	0.03	0.13	**100.00**
6	P.N.Palayam	59.67	12.25	15.22	6.39	0.04	6.42	**100.00**
7	Pollachi(N)	48.64	38.12	11.39	1.68	0.00	0.16	**100.00**
8	Pollachi(S)	54.25	20.67	22.88	2.07	0.00	0.13	**100.00**
9	S.S.Kulam	62.40	11.54	17.50	2.23	0.48	5.84	**100.00**
10	Sulur	51.93	25.86	16.48	3.14	0.00	2.58	**100.00**
11	Sulthanpet	20.83	66.00	10.24	2.93	0.00	0.00	**100.00**
12	Thondamuthur	35.46	29.99	12.04	21.14	0.00	1.38	**100.00**

Source: Office of the Deputy Director of Horticulture, Coimbatore 2014-15.

Table 2.32 provides the share of each block in the major horticulture crops while Table 2.33 gives the share of horticulture crops within each block. As regards fruit crops nearly 65% of the areas are in four blocks with Karamadai contributing to around 27%. In the area under vegetables five blocks have 74% of the total area and among them Thondamuthur alone has 23%. Nearly 75% of the area under spices and condiments are in four blocks with 27% in Karamadai block alone. About 88% of the plantation crops and 91% of medicinal and aromatic plants are in Anaimalai block. Around 72% of the areas under flowers are in Karamadai and P.N.Palayam blocks. One could conclude that major horticultural crops are location specific.

The share of each horticultural crop in each block showed that 85% in Anamalai block is under plantation crops. In Annur block, fruits contribute to 52% of area followed by spices and condiments with 26%. Similar is the case in Karamadai block also. Area under vegetables contributed to 54% followed by 26% under fruits in Kinnathukadavu block. Fruits and vegetables contributed to 86% of the area under horticultural crops in Madukkarai block. Similar is the case in P.N.Palayam block also with a share of 75%. Nearly 90 to 98% of the area under horticultural crops in Pollachi (North), S.S.Kulam, Sulur and Sulthanpet is shared by fruits and vegetables and spices and condiments. The share of area under vegetable crops is high compared to fruits in Sulthanpet block. Apart from fruits, vegetables and spices and condiments in Thondamuthur block area under plantation crops contributes to 21%.

2.11. Consumption of Chemical Fertilizers and Pesticides

The Department of Agriculture is responsible to monitor the supply of fertilizers to ensure timely availability to the farmers. To monitor the fertilizer supply, Facilitation centers are opened in all the districts from 8.00 A.M to 8.00 P.M. and the Department ensures that the farmers get the fertilizer at correct price. The details of fertilizer and pesticide chemicals consumption in the district is provided in Table.2.34.

Table 2.34. Consumption of Chemical Fertilizers and Pesticides (Year: 2014-15)

Fertilizers (in '000' Tonne)				Pesticides		Urea ('000' Tonne)
Nitrogenous (N)	Phosphatic (P_2O_5)	Potassic (K_2O)	Total (NPK)	Dust (MT.)	Liquid (Lit.)	
35.629	8.882	22.273	66.784	86	40	32.707

Source: Joint Director of Agriculture, Coimbatore.

From the above table, it could be seen that during 2014-15 the consumption of fertilizers in the district was 67 thousand tonnes. Of this, 35% formed nitrogenous fertilizers followed by 22% potassic fertilizers. In the earlier discussion on the soils it was said that the soils of the district were deficient in nitrogen. Hence, the farmers could have used more nitrogenous fertilizers for better yield. Liquid pesticides were more commonly

used than the dust form. Fertilizer being an important input for high yielding varieties to get higher yield it is necessary to advocate the farmers to go for optimum use of fertilizers.

2.12. Agricultural Engineering - Machineries and Implements

Tools, implements and powered machinery are essential and major inputs in agriculture. This gains importance in the labour unavailability scenario in agriculture and the increasing cost of labour. The details of agricultural implements and machineries available in Coimbatore district are furnished below.

Table.2.35. Agricultural Implements and Machinery (in Number)

Sl. No.	Item	2004	2009	2014
1	**Ploughs**			
	Wooden	70326	71263	27198
	Iron	3068	7170	6179
	Total	73398	78433	33377
2	**Water Pumps for Irrigation Purpose**			
	Worked by Oil Engine	5816	6360	4531
	Worked by Electric Power	51618	63184	45864
	Total	57434	69544	50395
3	**Tractors**			
	Government	49	60	2429
	Private	985	1975	
	Total	1034	2035	
4	**Sugarcane Crushers**			
	Worked by Power	1502	1618	296
	Worked by Bullocks	198	0	197
	Total	1700	1618	493
5	**Oil Ghanis**			
		45	31	464

Source: Commodity Potential Report, TNAU, 2014; Coimbatore District Profile, 2014-15.

From Table 2.35, it could be seen that the use of wooden plough decreased over years. This might be due to the decline in cattle in the farms and labour scarcity. Further small machineries like power tillers have become common. Though the small farmers could not own tractors, harvesters etc., availability of tractors through custom hire service and from larger farmers they could mechanize the farm operations. Availability of tractor is on the increase due to the steps taken by the Department of Agricultural Engineering in promoting mechanization of farm operating and the development of need based machineries by Tamil Nadu Agricultural University. For irrigation due to the decline in water table in the district and the farmers easily go up to 800 ft depth of bore well electric motor is common for lifting water. This might be the reason for more electronic power than

oil engine for lifting water in the district.. Use of sugarcane crushers are decreasing since most of the cane cultivators supply cane to sugar mills.

2.13 Agricultural Marketing and Regulated Markets

Marketing of the produce is more important in getting a good income from the crops raised. Since the farmers have small size of holdings, less marketable surplus and poor with holding capacity, it is necessary for government intervention.

There are 12 regulated markets, 1 sub market and one marketing committee in Coimbatore district. The regulated markets are located at, Sevur, Annur, Karamadai, Coimbatore, Sulur, Udumalpet, Anamalai, Kinathukadavu, Pollachi, Malayadipalayam, Negamam, Thondamuthur, Madathukulam, Pethampatti and Pongalur. The details of regulated markets are given in Table.2.36.

Table 2.36 Number of Regulated Markets (Year: 2014-2015)

Sl. No.	Name of the Block	No.of Regulated Markets	No.of Sub Regulated Markets	Total Receipts (Rs.in Lakhs)
1	P.N.Palayam	1		93.616
	S.S. Kulam			
	Cbe-Corpn.			
	Madukkarai			
2	Thondamuthur	1		12.768
3	Kinathukadavu	1	1	11.724
4	Karamadai	1		33.680
5	Pollachi (N)	1		117.081
6	Pollachi (S)	-		--
7	Anaimalai	1		23.395
8	Annur	1		91.553
9	Sultanpet (Sencheri)	1		24.861
10	Sulur	1		124.045
11	Seyur	1		20.892
12	Negamam	1		15.323
13	Head Office	1		236.716
	Total	**12**	**1**	**805.654**

Source: Commodity Potential Report, TNAU, 2014

Majority of these Regulated Markets (RMs) are provided with the necessary infrastructure such as godowns, transaction sheds, drying yards, and farmers' rest sheds.

2.14 Storage Facilities

State warehouses are located at Avinashi, Coimbatore, Mettupalayam, Palladam, Pollachi and Tiruppur, while central warehouses are located at Coimbatore, Kovaipudur, Udumalpet and Neelikonampalayam. There are four cold storage units in the district, three at Mettupalayam and one at Coimbatore city, with a total capacity of 12400 MT. The unit located at Coimbatore with a capacity of 1500 MT is mainly used for tamarind and chillies. However, the unit at Mettupalayam (2500MT) is mainly used for storage of potato and vegetable produced in Coimbatore and Nilgiris districts. The remaining two units at Mettupalayam are used for multi purposes. As regards storage godowns, all the existing 419 godowns are owned by the government. The details of the ware houses and storage godowns available in the district as on 31 March 2005 are furnished in Table 2.37.

A capital investment subsidy scheme for construction/expansion/modernization of multi chamber / multi product cold storages and storages for horticultural produce was introduced by the GOI. Cold storages help in minimizing postharvest losses incurred by farmers, particularly small and marginal farmers. The scheme is implemented by National Horticulture Board in collaboration with NABARD / National Cooperative Development Corporation (NCDC) in IX Five Year Plan starting from 1999 –2000. The cold storage capacity may vary from 10 MT to 5000 MT depending upon the volume, value, etc. of the products to be stored such as horticultural produce and other perishable items like dairy products, meat, fish, chicken, etc. The permissible subsidy is subject to a maximum of Rs. 50 lakhs per project. The scheme has been extended for implementation during the X plan period also. Many bankers are encouraging the farmers in taking up this credit linked subsidy scheme. The details of the storage godowns and agricultural godowns available in Coimbatore district is given in Table 2.37 and 2.38.

Table 2.37 List of Cold Storage Godowns

Sl.No.	Name and address of the cold storage
1	Nahar Cold Storage, Thadagam Road, Coimbatore 2.
2	KPS Cold Storage, Odanthurai, Kallar, Mettupalayam
3	A.K. Cold Storage, Nellithurai Road, Mettupalayam.

Source: Coimbatore District Profile, 2014-15.

Table 2.38 Agricultural Godowns (Year: 2014-2015)

Name and address of Agricultural Godowns		Name of address of Non-Agricultural Godowns
Food Corporation of India, Coimbatore-14.	1.	Tamil Nadu State Marketing Corporation (IMFL) Goundampalayam, Coimbatore. 30
Tamil Nadu Ware Housing Corporation Ltd., Coimbatore-12.		
Tamil Nadu Civil Supplies Corporation Ltd., Coimbatore-30 / Pollachi.		
Marketing Committee, Ramanathapuram, Coimbatore-45 & 11 Block Level Market Committee Godown		

Source: Coimbatore District Profile, 2014-15.

2.15. Sericulture

Sericulture is a high income generating enterprise crop. When cultivated intensively and linked to value addition process. Area, production and value of mulberry production in Coimbatore District are given in Table 2.39.

Table 2.39 Sericulture in Coimbatore District (Year: 2014-15)

Name of the block	Area under Mulberry (ha)	Production of Cocoons (kg)	Value (Rs.)
P. N. Palayam	18.00	10.130	32.310
S.S. Kulam	10.40	5.075	16.190
Thondamuthur	90.00	50.630	161.490
Madukkarai	33.80	19.010	60.650
Karamadai	68.00	38.250	122.017
Pollachi(N)	57.89	33.822	122.09
Pollachi (S)	147.16	93.259	336.65
Kinathukadavu	61.28	30.702	109.795
Anaimalai	162.55	114.161	421.32
Annur	176.70	99.390	317.070
Sulthanpet	53.11	29.250	120.38
Sulur	12.00	6.750	21.530
Coimbatore Urban	6.00	3.375	10.770
Total	**896.89**	**533.804**	**1852.262**

Source: Assistant Director of Sericulture, Coimbatore/Udumalpet.

The area under mulberry cultivation in the district is nearly 900 ha. Among the 12 blocks, Annur, Annamalai and Pollachi (South) contributed to 54% of the total area though

other blocks also cultivate mulberry but in a limited area. Total production of cocoon in the district is only 534 kg valued at Rs.1852/. Annur, Anamalai and Pollachi (South) blocks contributed to 57% of the total cocoon production. Farmers normally face difficulty in marketing the cocoons since they may not have cocoon markets nearby. Further it is necessary to link marketing and reeling along with area increase.

2.16 Animal Husbandry and Dairy Development

2.16.1. Livestock Population

The total population of cattle in the district was 577128 during 2013-14, as per the 17th Livestock Census in the District. Other than cattle, the farmers reared sheep (109358), goats (198574), pigs (2922) and donkeys (714) as a source of supplementary income to the crops. The farmers maintained poultry of 115.68 lakh birds for regular cash flow. (Table 2.40)

Table 2.40 Livestock Population (Year: 2011-12)

(Numbers)

Sl. No.	Particulars	Population
1	Cattle	259056
2	Buffaloes	5848
3	Sheep	109358
4	Goats	198574
5	Horses and ponies	652
6	Donkeys	714
7	Camels	4
8	Pigs	2922
	Total Livestock	**577128**
9	Elephants	0
10	Dogs	108358
11	Rabbits	396
	Poultry	
12	Back yard Poultry	429587
13	Farm Poultry	11139248
	Total Poultry	**11568835**

Source: 19th Livestock Census.

In general there is a declining trend in the cattle population. This might be due to the increasing cost of maintenance and the non-availability of fodder in general and green fodder in particular. Cross bred cows can give higher milk yield when it is given green fodder. The population of poultry increased over years. Poultry provides regular income to the farmers by way of egg and meet when the income of crops is seasonal.

The block wise livestock population of Coimbatore district has been furnished inTable 2.41.

Table 2.41 Block wise Livestock Population of Coimbatore District

Sl. No.	Type of animals	Anamalai	Annur	Karamadai	Kinathukadavu	Madukkarai	Periyanaicken Palayam	Pollachi North	Pollachi South	Sarcar Samakulam	Sultanpet	Sulur	Thondamuthur
1	Cattle	25297	21537	22880	23133	17847	14596	24102	13999	5080	24462	19920	11599
2	Buffalo	2144	489	745	84	88	76	523	202	52	39	139	255
3	Sheep	2838	13605	16908	3627	1597	13514	771	1239	2819	18383	136092	7906
4	Goat	14002	16904	26319	12463	9127	16345	9212	7654	5502	8733	16027	11469
5	Pigs	634	76	499	240	124	410	729	66	167	165	519	255
6	Poultry	729297	696382	104895	1243663	254243	0	587213	773307	22100	4807092	621840	176746
7	Others	0	781	6967	0	5333	6474	0	0	2730	5086	7180	7344

Source: TANUVAS, Chennai 2011-12.

From Table 2.41 it could be seen that among the blocks Anaimalai, Sulthanpet and Pollachi (North) have more number of cattle compared to other. This might be due to the larger level of agricultural (horticultural) activities in these blocks. Sheep population is high in Sulthanpet, Karamadai, Sulur, P.N.Palayam and Annur blocks. Sheep is again a regular source of income to farmers through wool and meat. Sulthanpet tops the blocks in poultry population followed by Kinathukadavu.

Table 2.42. Block wise Availability of Infrastructure Facilities in the Coimbatore District

Sl. No.	Infrastructures		Anamalai	Annur	Karamadai	Kinathukadavu	Madukkarai	Periyanaicken Palayam	Pollachi North	Pollachi South	Sarcar Samakulam	Sultanpet	Sulur	Thondamuthur
1	Dairy co-operative society		30	29	48	25	32	19	22	20	7	31	35	23
2	Veterinary clinics	V.H.	1	1	1		2	1		1	2	1	1	1
3	Veterinary Clinic	Clinician Centre	-	-	-	-	-	-	-	1	-	-	-	-
4	Veterinary Clinic	V.D.	4	4	4	5	5	3	6	2	4	4	5	4
5	Veterinary Clinic	Sub-Centres	7	1	4	4	3	6	5	5	4	3	2	3
6	Veterinary Clinic	Mobile Unit	1	-	-	-	-	-	-	-	-	-	-	-
7	Milk collection centre		1	5	2	1	1	-	1	-	-	1	1	Aavin milk dairy

Source: TANUVAS, Chennai, 2011-12.

The wealth of the livestock population depends on proper care and maintenance. Veterinary clinics play a major role in taking care of the health of the animals. It could be seen from the Table 2.42 that the district has 12 VH, 1 Clinical centres, 50 veterinary dispensaries, 47 sub center and one mobile unit for a livestock population of 5.8 lakh. All the blocks have veterinary dispensaries/sub centers. These 119 clinics have to meet the needs of people of the 295 revenue villages of the district. Farmers must have easy access to the clinics, since the livestock cannot be taken for long distance by walk. This indicates the need for increasing the number of veterinary clinics.

The district has 321 dairy cooperatives for the 295 revenue villages. It is necessary to plan for more milk collection centres, so that each hamlet has one centre to prevent the farmers from carrying milk for longer distance.

2.16.2. Veterinary Hospitals

All the blocks in the district have Veterinary dispensary for the effective care of livestock and poultry. The details are given in Table 2.43.

Table 2.43 Number of Veterinary Hospitals (Year: 2011-12)

Sl. No.	Name of the Block	No. of Govt. Hospitals
1	P. N. Palayam	1
2	S.S. Kulam	1
3	Thondamuthur	-
4	Madukkarai	2
5	Karamadai	1
6	Pollachi(N)	-
7	Pollachi (S)	1
8	Kinathukadavu	1
9	Anaimalai	-
10	Annur	1
11	Sultanpet	1
12	Sulur	1
13	Coimbatore corporation	2
	Total	**12**

Source: Joint Director of Animal Husbandry, Coimbatore.

2.16.3. Veterinary Institutions and Animals Treated (Block-wise)

The number of veterinary institutions, sub centres and veterinary dispensaries in the blocks of district are presented in Table 2.44. There are about 12 veterinary hospitals, 85 veterinary dispensaries; one clinical center and 22 sub centres at present in the district for the welfare of the milch animals, pets and other livestock.

Table 2.44 Number of Veterinary Hospitals (Year: 2011-12)

Sl. No.	Name of the block	Veterinary Institutions				Sub-centres	Other units		Animals treated	Castration performed
		Polyclinic	Hospitals	Dispensaries	Clinic centres		Insemination centres	Mobile units		
1	P. N. Palayam	-	1	6	-	2	-	-	79428	2328
2	S.S. Kulam	-	2	6	-	2	-	-	68016	720
3	Thondamuthur	-	-	5	-	3	-	-	90264	2352
4	Madukkarai	-	2	6	-	1	-	-	98808	3336
5	Karamadai	-	1	7	-	2	-	-	154176	5700
6	Pollachi(N)	-	-	11	-	-	-	-	88258	1719
7	Pollachi (S)	-	1	6	1	1	-	-	146968	449
8	Anaimalai	-	1	7	-	4	-	1	61310	1123
9	Kinathukadavu	-	-	8	-	2	-	-	90882	2060
10	Annur	-	1	5	-	1	-	-	79556	3765
11	Sultanpet	-	1	6	-	1	-	-	96450	1360
12	Sulur	-	1	7	-	-	-	-	119000	1897
13	Coimbatore corporation	1	1	4	-	1	-	1	78896	1008
14	Valparai	-	-	1	-	3	-	-	30434	01
	Total	**1**	**12**	**85**	**1**	**22**	**-**	**2**	**1282456**	**27829**

Source: Joint Director of Animal Husbandry, Coimbatore.

2.16.4. Dairy development

The number of milk societies, quantity and value of milk produced are presented in Table 2.45. The district has 324 milk producers' cooperatives and one district society.

Table 2.45 Dairy Development (Year: 2011-12)

Number of the societies	No. of milk societies	Quantity of milk produced (in Litres)	Value of milk produced (in Rs.)
Milk Producers co-op societies	324	46811150	913888380
Coimbatore District co-op societies	1		

Source: Coimbatore District Milk Producers Union, Coimbatore.

2.16.5. Poultry Development

The quantum of broiler and the number of eggs produced by layers in the district are presented in Tables 2.46 and 2.47.

Table 2.46 Poultry development in Coimbatore District (Year: 2011-12)

Sl. No.	Name of the Block	Broiler in kg
1	Coimbatore	9565144
2	Avinashi	11051696
3	Tiruppur	10492172
4	Udumalai	4834058
5	Pollachi	10138185

Source: Joint Director of Animal Husbandry, Coimbatore.

Table 2.47 Poultry development in Coimbatore District (Year: 2011-12)

Sl. No.	Name of the Block	Eggs in Numbers
1	Coimbatore	84614700
2	Avinashi	97764958
3	Tiruppur	92815356
4	Udumalai	42762791
5	Pollachi	89683904

Source: Joint Director of Animal Husbandry, Coimbatore.

The district produces 460 lakh kg. of broiler and 40 crores of eggs every year. Avinashi block tops the list.

2.17. Fisheries

The total quantity of fish production in the districts is presented in Table 2.48. The total inland fish production is about 65.476 tonnes in the year 2014-2015. The number of fishermen engaged in fishing and its related activities in the district is 28.

Table 2.48 Fisheries Development and Production in Coimbatore District (Year: 2014-15)

Name and Address of Fishing Centres	Inland Fish Catch (tonnes)	Marine fish Catch (tonnes)	Number of Fisherman Engaged
Pillur Dam, Mettupalayam	1.725	-	10
Solaiyar Dam, Valparai	6.166	-	10
Aliyar Nagar, Pollachi (Tk.)	57.585	-	8
Total	**65.476**	**-**	**28**

Source: Assistant Director, Fisheries, Erode and Tamil Nadu Fisheries Development Corporation, Aliyar Nagar, Pollachi.

2.18. Banking and Insurance

Banking sector should cater to the short and long term credit needs of farmers, especially marginal and small farmers, so as to facilitate them in procuring the required farm inputs at appropriate time. (Table 2.49). They should also come forward to adopt the good agricultural practices and technologies developed by the agricultural research institutes.

Table 2.49 Commercial Banks in Coimbatore District (2014-15)

Items	Deposits (Rs. In Crores)	Advances (Rs. In Crores)	Credit Deposit Ratio
Commercial Banks	40024.31	50384.19	125.88%
Co-operative Banks	1237.59	1275.36	103.05%
Total	**41269.22**	**51746.50**	

Source: Coimbatore District Statistical Handbook, 2015.

2.19. Co-operation

A co-operative society is an autonomous institution of persons united voluntarily to meet their common economic, social and cultural needs and aspirations through a jointly-owned and democratically-controlled enterprise. These societies are there to ensure the financial aids as loans for the common people. There are 9 primary agricultural and rural development banks and 142 primary agricultural cooperative credit society in the district. The primary agricultural and rural development bank has a total membership of 38222, while it is only 240 in the primary agriculture crop credit society. The details are furnished in Table 2.50.

The regulated markets and co-operative marketing societies are required to create adequate infrastructural facilities like, grading, packing and storing the produces at different production centers of the district. It is also suggested that the farmers are to make use of the various benefits such as subsidized seeds, fertilizers, plant protection chemicals, machineries and tools, extended through various agricultural development programs.

Table 2.50 Co-operative Societies in Coimbatore District (2014-15)

Sl. No.	Types of Societies	No. of Societies	Member -ship	Share Capital/ Working Capital (in lakhs)	Loans Advanced (outstanding and overdue) (in Lakhs)	No. of Emplo -yees
1	Primary Agricultural Coop. Credit Society	142	240	80862.84	85165.38	1622
2	Primary Agricultural and Rural Development Bank	9	38222	2908.42	4426.00	29
3	Cooperative Urban Bank	4	72080	23441.22	17660.30	120
4	Primary Co-operative Stores	32	86550	126.77	0	338
5	Employees Coop. Credit Society	86	37736	27218.10	23791.71	82
6	Consumer Coop. Wholesale Stores	2	1039	189.57	0	145
7	Co-op. Marketing Society	5	31734	773.20	1012.49	254
8	Special Type Societies	7	67.84	50.90	60.12	94
9	Student Co-operative. Stores	84	21633	2.16	0	2
10	Vegetable Growers Co-op. Marketing Societies	1	769	18.85	-	18
11	District Central Co-op Bank (DCCB)	1	1072	150120.28	124103.74	229
12	Urban coop. Credit Society	5	34127	19265.24	12121.32	49
13	Tamil Nadu Industrial Coop. Bank Ltd.	1	16542	4646.29	2520.99	5
14	Coimbatore District. Printers Service Industriall Coop. Society Ltd.	1	126	2.05	-	1
15	Sakthi Co-operative Industrial Estate Ltd.	1	169	10.66	-	1

Sl. No.	Types of Societies	No. of Societies	Member -ship	Share Capital/ Working Capital (in lakhs)	Loans Advanced (outstanding and overdue) (in Lakhs)	No. of Emplo -yees
16	Cheran Co-operative Industrial Estate Ltd.	1	213	8.15	0	1
17	Coimbatore & Nilgries Districts., Small Scale Industries Indl. Co op. Society	1	128	10.31	0	1
18	Coimbatore Districts. Armed Reserve Police Families Welfare Indl. Coop. Society	1	114	0.17	-	1
19	Arignar Anna Cooperative Industrial Estate Ltd.,	1	1330	24.68	-	2
20	CBE District.Anna Autorickshaw Drivers Industrial Cooperative Society Ltd.,	1	115	1.19	82.86	-
21	Dr.Ambedkar Autorickshaw Drivers Industrial Cooperative Society Ltd.,	1	57	0.16	-	-
22	AZAD Autorickshaw Drivers Industrial Co-operative Society Ltd.,	1	45	0.10	-	-
23	Eman Autorickshaw Drivers Industrial Co-operative Society Ltd.,	1	120	0.71	-	-
24	Dr.Puratchi Thalaivar Autorickshaw Drivers Industrial Co-operative Society Ltd.,	1	-	0.95	12.13	-
25	TamilNadu automobile Workshop owners Industrial Co-operative Society Ltd.,	1	36	1.80	-	-

Sl. No.	Types of Societies	No. of Societies	Member -ship	Share Capital/ Working Capital (in lakhs)	Loans Advanced (outstanding and overdue) (in Lakhs)	No. of Emplo -yees
26	CBE Technical labour contract Industrial Cooperative Society Ltd.,	1	160	1.43	-	1
27	Pollachi Technical labour contract Industrial Cooperative Society Ltd.,	1	25	1.15	-	-
28	Mettupalayam Technical labour contract Industrial Co-operative Society Ltd.,	1	37	0.78	-	-
29	Kappalankarai Coir Workers Industrial Co-operative Society Ltd.,	1	79	0.79	0.26	-
30	Thamaraikulam Adidravida Coir Workers Industrial Cooperative Society Ltd.,	1	73	0.62	0.51	-
31	Tamil Nadu Computer Information Technology	1	75	0.75	-	-
32	Women Metalworkers Industrial Cooperative Society Ltd.,	1	32	0.32	-	-
33	Utensils Manuf. Industrial Co-operative Society Ltd.,	1	30	0.30	-	-
	Total	**399**	**344775.84**	**309690.91**	**270957.81**	**2995.00**

Source: Coimbatore District Statistical Handbook, 2014.

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 and projection for the 12th Plan period (2016-2017)

ii. Yield gap analysis for the major crops

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

3.1 Trends in Area, Production and Productivity of Major Crops

3.2 Projected Area, Production and Productivity of Major Crops

3.3 Yield gap analysis

3.4 Technological Interventions and Strategies to Reduce the Yield Gaps

3.5 Crop Area Coverage and Schemes Implemented by Various Departments

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) tool 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 was estimated using 15 years' time series data from 2000-2001 to 2014-15. The equation used to estimate the annual compound growth rate is:

$$Y_t = ab^t e$$

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) = [Antilog b-1] × 100

where, Y_t = Area or Production or Yield

a = Intercept

b = Regression coefficient of t

t = Time variable

r = Compound Growth Rate (%)

Average of area, production and productivity of major crops in the district is presented in Table 3.1. It could be seen from the Table that cholam, paddy, coconut and banana are the major crops grown in the district. On an average (triennium average ending 2014-15), the district showed a paddy output of 9332 tonnes in an area of about 2160 ha. Coconut is grown in an area of about 83887 ha and 8199 kgs of nuts/ha are harvested in the district. Banana a high value crop is grown in many pockets of the district and the production is around 38808 tons/ha of banana.

Table 3.1 Area, Production and Yield of Major Crops in Coimbatore District (Triennium average ending 2014-15)

Sl. No	Crop	Area (Ha)	%	Production	Yield (Kg/ha)
1	Paddy	2160	1.57	9333	3571
2	Cholam	25182	18.31	24231	9106
3	Maize	4839	3.52	30018	4939
4	Green gram	1104	0.80	560	768
5	Turmeric	1149	0.84	6936	4316
6	Sugarcane	1234	0.90	129827	516
7	Chillies	473	0.34	206	401
8	Banana	7959	5.79	307360	38809
9	Mango	2433	1.77	6928	2849
10	Tomato	2093	1.52	18949	9131
11	Groundnut	5026	3.65	10286	2062
12	Coconut	83887	60.99	N.A	N.A
	Total	**137539**	**100.00**		

** N.A. denotes Not Available*

Table 3.2 Area under Different Crops in Blocks of Coimbatore District

Crop	Anaimalai	Annur	Karamadai	Kinathukadavu	Madukkarai	P.N.Palayam	Pollachi (N)	Pollachi (S)	S.S.Kulam	Sulthanpet	Sulur	Thondamuthur	Total
Paddy	2228.1	8.2	1.2	0	2	0	0	1.8	0	0	0	211.3	2453
Cholam	1320	4526	4188	3507	2478	1559	2071	1350	2233	1722	3401	890	29245
Cumbu	0	5.2	69	32	2	-	2	40.4		1	0	6.4	158
Maize	59	400.7	524	261	168	150	112	389	174	1684	317	417	4656
Ragi	-	2.6	24.2	-	1.4	1	0	-	1	-	-	3.8	34
Total	1379	4935	4805	3800	2649	1710	2185	1779	2408	3407	3718	1317	34093
Black Gram	22	3.5	57	72	25.6	12	39	8	14	2.74	12	308	576
Green Gram	22.1	254	172	133	14	4	52	6	194	109.4	89	79.3	1129
Red gram	48	97	158	118	116	41	25	69	38	65.7	22	75	873
Horse Gram	26.6	192	727	358	57	70	32	92	8	185.5	49	214	2011
Cowpea	274.5	333	1565	1003	258	166	499	478	16	200	24	322	5139
Bengal gram	0	6	2	150	-	90	128	305	348	22.7	10	0.9	1063
Total	**393.2**	**885.5**	**2681**	**1834**	**470.6**	**383**	**775**	**958**	**618**	**585.97**	**206**	**999.2**	**10789.5**

Source: Joint Director of Agriculture, Coimbatore 2014-15.

Table 3.2 (Continued)

Crop	Anaimalai	Annur	Karamadai	Kinathukadavu	Madukkarai	P.N.Palayam	Pollachi (N)	Pollachi (S)	S.S.Kulam	Sulthanpet	Sulur	Thondamuthur	Total
Groundnut	1775	345	63	436	337.6	0	1257	319	0	0	0	134.8	**4667**
Ginger	16	35	32	14	5	1	1	2	0	1	0	207	**314**
Castor	-	10.6	18	-	0	-	0	0	1	-	-	1	**31**
Sunflower	-	15	-	-	-	2	-	-	-	2	-	-	**19**
Total	1791	405.6	113	450	342.6	3	1258	321	1	3	0	342.8	**50315031**
Cotton	8.5	70.55	26	104	91	1.6	92	7	14	0	3.45	15	**433.1**
Sugarcane	138	259	85	0	170.22	90	2	0	129	0	42	144	**1059**
Coconut	20259	1042.59	11855.74	1807.87	4813.41	1823.34	15386.26	10554.23	2901.48	8939.35	1392.06	3755.21	**84530.51**

Source: Joint Director of Agriculture, Coimbatore, 2014-15.

The distribution of crops grown in the blocks showed that paddy is mainly grown in the Anaimalai block, cholam, are the other major crop is grown in Annur, Karamadai and Kinathukadavu blocks, maize is mainly cultivated in Sulthanpet block, Horsegram is the major pulse crop and is largely grown in Karamadai and Kinathukaduvu blocks, groundnut is cultivated mainly in Anaimalai and Pollachi (N) blocks. Sugarcane as a cash crop is cultivated in nine blocks but area is more in Annur, Madukkarai and Anamalai blocks. Cotton, another cash crop covers an area of 433 ha mostly grown in kinathukadavu, pollachi (N) and madukarai blocks.

Factors such as fertility of land, monsoon behaviour, rainfall, irrigation, application of fertilizers, climatic conditions, marketing facilities, prices, availability of agricultural labour etc., determines the area ,production and productivity of any crop. In Coimbatore district, data were collected for the major crops over a period of 10 years from 2005-06 to 2014-15. For the collected data, it has been worked out for the triennium average and from that value the percentage share of those crops has been calculated.

The Compound Growth Rates (CGR) worked out for area, production, and productivity of major crops are shown in Table 3.3.

Table 3.3 Compound Growth Rate of Area, Production and Productivity under major crops in Coimbatore District during 2015 (% per year)

Sl. No	Crop	CGR during 2005-2006 to 2014-2015 (%)		
		Area	Production	Productivity
1	Paddy	-13.52	-11.87	-0.06
2	Cholam	-13.76	15.36	30.43
3	Maize	-17.87	-10.91	7.78
4	Green gram	-15.86	-7.53	7.86
5	Turmeric	-8.15	0.85	-8.76
6	Sugarcane	-23.05	-12.31	12.01
7	Chilles	-14.69	-25.28	-12.70
8	Banana	-2.64	-4.01	-0.89
9	Mango	-5.81	-8.54	-2.79
10	Tomato	-11.51	-15.74	-4.26
11	Groundnut	-14.35	-10.79	4.06
12	Coconut	0.50	N.A	N.A

** N.A denotes Not Available*

Area under all the crops grown in Coimbatore district showed a decreasing rate except for banana where the CCR is 3.183 indicating a positive trend in area. This might be due to the declining net area sown. Though there is a decreasing trend in area, a positive growth rate in production was observed in case of maize, coconut, banana and

turmeric. This indicates that adoption of improved technologies can increase the productivity of the crop. The change in production could be mainly influenced by the changes either in the area or yield or by both.

Major Potential Crops

The above calculated triennium values are arranged in descending order and the cumulative percentage is calculated for those values and the crops which are falling above 75% are identified as major crop. The major identified potential crops are coconut, cholam, pulses, banana, groundnut and maize. (Table 3.6)

This might be due to the higher growth rate of productivity in these crops. The CGR of productivity is positive in all crops except for mango.

The positive trend in productivity could not compensate the decreasing trend in area resulting a decreasing trend in production in paddy, cholam, green gram, groundnut, sugarcane and tomato. Mango registered a declining trend in all.

Table 3.4 Major Crops based on % area to GCA

Crop	% Area	Cumulative percentage
Coconut	42.47	42.47
Cholam	17.57	60.04
Pulses	5.00	65.05
Banana	4.93	69.98
Groundnut	3.92	73.90
Maize	1.94	75.84

The above six crops contribute to nearly 76% of the area under crops. Each among these coconut and cholam alone formed 60% of the cropped area.

3.2 Projected Area, Production and Yield of Selected Crops

Based on current value in 2005-06 the projected Area, Production and Productivity of crops for 2015-16 are calculated and shown in the Table. 3.5. In the projected value, Sugarcane is the ruling crop followed by Banana, Paddy, Groundnut, Maize and Cholam**.** Therefore, these crops can be further exploited for their yield potential and will be focused as potential crops to be intervened through technological intervention for their improvement in production and productivity.

The compound growth rate analysis revealed the current pattern of changes (percentage) in the area, production and yield. The area of crops like paddy, cholam, maize, greengram, groundnut, coconut, sugarcane, banana, tomato and turmeric showed reduction in the area than in the year 2011-12. Though the yield trend showed a positive sign, the loss in the area could not be compensated with a higher production in the district. In order to prevent decline in the area, production and yield in the district, adequate interventions have to be made in the areas of planting materials, crop management and plant protection measures for the various crops that are grown in the district.

Table 3.5 Projected Area, Production and Yield Based for the Major Potential Crops Identified

Description	Paddy			Cholam			Maize		
	Area	Prodn.	Yield	Area	Prodn.	Yield	Area	Prodn.	Yield
Compound Growth Rate (%)	-12.77	-9.90	1.61	-11.16	-3.85	7.16	-14.22	9.03	23.92
Triennium Average ending 2011-12	2704	10263	3802	28919	17898	639	4474	28042	6287
2012-13	2141	10049	3900	27117	20159	665	4582	63564	10416
2013-14	1868	9055	3963	24090	19382	712	3931	69303	12908
2014-15	1629	8160	4026	21402	18636	763	3372	75560	15995
2015-16	1421	7353	4091	19013	17918	818	2892	82382	19820

Description	Greengram			Groundnut			Coconut		
	Area	Prodn.	Yield	Area	Prodn.	Yield	Area	Prodn.	Yield
Compound Growth Rate (%)	-9.75	-5.47	5.54	-10.38	-3.68	6.67	-1.86	1.20*	6.041*
Triennium Average ending 2011-12	1743	1032	584	6906	14544	2106	80983	11995	14807
2012-13	1796	954	579	6429	16579	2370	82083	13371	16757
2013-14	1621	902	611	5762	15968	2528	80553	13638	17769
2014-15	1463	853	645	5164	15380	2697	79052	13910	18843
2015-16	1320	806	681	4628	14814	2877	77579	14188	19981

Area in Hectares; Production in Tonnes; Yield in Kg/ ha

Description	Sugarcane			Banana			Mango		
	Area	Prodn.	Yield	Area	Prodn.	Yield	Area	Prodn.	Yield
Compound Growth Rate (%)	-18.64	-16.69	0.60	3.18	5.21	1.46	-3.77	-7.52	-4.57
Triennium Average ending 2011-12	1601	178451	113	8790	380784	43562	2608	10169	3912
2012-13	1360	197528	119	9985	460195	43534	2612	8799	3117
2013-14	1107	164553	120	10303	484194	44167	2514	8137	2974
2014-15	901	137083	120	10631	509445	44809	2419	7525	2839
2015-16	733	114198	121	10969	536012	45461	2328	6959	2709

Description	Tomato			Turmeric		
	Area	Prodn.	Yield	Area	Prodn.	Yield
Compound Growth Rate (%)	-6.96	-4.74	1.86	-4.61	1.62	5.26
Triennium Average ending 2011-12	2621	33477	12695	1809	15507	7936
2012-13	2580	36271	13261	1487	14310	8592
2013-14	2401	34553	13508	1418	14542	9045
2014-15	2234	32916	13759	1353	14777	9521
2015-16	2078	31356	14016	1291	15016	10022

Area in Hectares; Production in Tonnes; Yield in Kg/ ha
Area in Hectares; Production in Tonnes; Yield in Kg/ ha (Denotes growth rates from 2004 to 2011*

The projected data in the above table shows that except in banana the area under all major crops will decline. This is not a good sign, Agriculture still contributes for employment and for meeting the food requirements of the people. While planning for agri. development apart from technological improvements intervention it is also necessary to prevent the diversion of agri. land for non-agricultural purposes.

3.3. Yield Gap Analysis

The yield gap analysis, that is, the difference between maximum yield potential of the crop (at experimental farm), maximum yield obtained by the progressive farmers (maximum yield from crop cutting experiment) and current average farm yield has been carried out for selected crops. Through the collected information the difference between the potential yield, maximum farm level yield and average yield had been calculated and presented in table 3.6. There is about 20 per cent yield gap in the case of paddy and around 50 per cent yield gap in sorghum. The yield gap in most other crops such as maize, pulses and groundnut is almost negligible.

Table 3.6. Yield Gap for Major Crops

Crops	Average yield (t/ha)	Progressive yield (t/ha)	Potential yield (t/ha)	Gap 1	Gap2
Paddy	5.6	7	8.25	1.3	1.4
Cholam	2.0	3.2	4.56	1.4	1.2
Maize	7.0	7.2	7.4	0.2	0.2
Black gram	0.7	0.72	0.9	0.2	0.0
Green Gram	0.7	0.75	0.9	0.2	0.1
Red gram	1.0	1.02	1.16	0.1	0.0
Groundnut	1.7	1.81	1.9	0.1	0.1
Sugarcane	5.6	5.8	6	0.2	0.2

While planning for agricultural development strategies one should first aim to reduce yield gap. Since the progressive farmers by adopting relevant packages of practices could get a better yield than the average yield of farmers. This necessitates good extension system. The second stage should be to reduce yield gap 1.

In the case of milk there is a gap of 2 kg in cow and 2kg in buffalo. This might be mainly due to the lack of green fodder. Strategies should aim at cultivation of green fodder and dry fodder sufficiently and supplied to farmers.

Table 3.7 Yield Gap for Milk Yield in Coimbatore District

Sl. No.	Type of animals		Milk yield per day	
			Potential	Actual
1	Cows	a. Local / N.D.	6 kg	4 kg
2	Cows	b. Cross breed	12 kg	10 kg
3	Buffalo	a. Local / N.D.	-	-
4	Buffalo	b. Cross breed	8 kg	6 kg

3.4 Technological Interventions and Strategies to Reduce the Yield Gaps

Table 3.8 Suggestions for the Agricultural Development in Coimbatore District

Sl. No.	Crop	Constraints Faced	Suggestions
1.	Paddy	• Low subsidy rate for pesticides and non-availability of green manures. • SRI technique in Paddy not practiced in larger scale. • Non availability of good quality seeds. • Lower level of transplanting through machine. • Low adoption of Single Seedling +Line planting in SRI technique. • Labour shortage for transplanting and harvesting • Lesser role of private agency in seed production.	• Promotion of use of high yielding varieties and hybrid varieties. • To develop High yielding variety suitable to kuruvai and samba season (like BPT 5204) • More adopted variety of ADT 38 and ASD 16 require quality seeds in time • Increasing quality seeds through seed villages. • Transplanter and paddy cum harvester to be promoted and made available in time. • SRI- power weeder should be provided in time on custom hiring basis. • To develop transplanter for planting single seeding. • Promotion of private agency in seed production with quality control.
2.	Cholam	• Lack of availability of quality seeds. • Increased cost of labour for harvesting. • No value addition at farm level	• CO (S) 28, TNAU SORGHUM variety CO 30, TNAU SORGHUM HYBRID CO 5, BSR 1 variety seed production to be increased • Small-scale equipments and implements needs to be developed. • Value added products should be encouraged by emphasizing the nutritive value.

Sl. No.	Crop	Constraints Faced	Suggestions
3.	Maize	• Lack of production and distribution of quality seeds. • Need for larger scale production of breeder seeds • Low level of value addition and export options. • Non adoption of INM and IPM • low level of adaptation of packages of practices	• Promising hybrid-TNAU MH CO6 can be promoted with adequate seed production • Promotion of New High yielding varieties and Hybrids (Co 6 and other hybrids) • Demonstration of value addition and to provide information on export • Need for adequate extension to promote INM and IPM • Seed treatment with Metalaxyl @6g/kg of seed for protection against downy Mildew and Foliar spraying of Maize maxim at the time of flowering and grain filling stage @3kg/ac to be promoted.
4.	Sugar cane	• Non-availability of quality seed material (setts) • Poor adoption of SSI techniques due to labour shortage • Labour scarcity and delayed cutting order from the companies • Procurement only by sugar factory	• Improve the production of seed material and encouraging single bud cultivation. • Awareness creation on SSI • Improvement of micro-irrigation and fertigation for sugarcane. • Issuing of harvesting machinery at subsidized cost and government should regulate the timely issue of cutting order from the company. • Government should take effort to procure sugarcane for fuel purpose.
5.	Groundnut	• Non availability of pure variety seeds. • Demand for pink color 4 seeded variety.(Like Andhra variety) • Poor adoption of population maintenance and poor pod setting • Non availability of gypsum in time. • Labour scarcity prevents timely operation.	• Pure varieties of VRI 2 and JL 24 are to be made available. • Seed multiplication to ensure steady supply of quality seeds • Seed village concept is necessary. • Introduce high yielding hybrid variety (Pink colour kernel) • Farmers should maintain optimum population of 33plts/sqm • Create awareness on population maintenance and Foliar spray of Brassinolide at 0.5 ppm at flowering and pod formation stages. • Dept. of Agriculture should arrange for supply of gypsum in time • Gypsum application, soil loosening and micronutrient spray to be promoted.

Sl. No.	Crop	Constraints Faced	Suggestions
			• Tractor seed drill should be made available in adequate nos. and in time also. • Development of modified groundnut harvester - without any damage for kernel.
6.	Coconut	• Rejuvenation of existing garden with low yield • Button shedding**:** Shedding of buttons and premature nuts. • Barren Nuts	• **Rejuvenation of existing garden is to be taken up** • Thinning of thickly populated gardens: In the farmer's holdings, 41 per cent of the trees give a yield of less than 20nuts/palm/year. By cutting and removal of these trees the yield could be increased to 1750 nuts/ha. After removal of low yielding trees, the populations should be maintained at 175-200 palms/ha. • Apply manurial schedule of 50 kg of FYM or green leaf plus NPK at 560, 320, 1200 g/palm and irrigate at 10 days intervals during summer months in addition to manuring. • Solar pump set to be provided to small and marginal farmers.
7.	Horticulture crops	• The perishable nature limits the extent of market and trading opportunities. • Inadequate and timely availability of pedigree planting materials. • Period of waiting is significantly long for those seeking quick return. • Lack of technical guidance for increasing the productivity per unit of area due to weak extension machinery	• Commodity groups and group marketing should be promoted to ensure high prices. • Ripening and cold chambers are necessary for banana • Tissue culture Nendran Banana may be developed • Post-harvest facility (value addition) especially for Tomato needs to be established near Kinathukadavu • Trainings and motivation to cultivate high-value horticultural crops • Promotion of semi organic-based cultivation

Table 3.9 Suggestions for the Dairy Development in Coimbatore District

Sl. No.	Type of animals		Reason for low yield	Suggestion
1	Cows	a. Local / N.D.	Low genetic potential	To improve the cross breeds. of Promote and supply adequate quantity of fodder especially green fodder.
		b. Cross breed	Low quality and quantity of nutrients in the feed	
2	Buffalo	a. Local / N.D.	Low genetic potential	
		b. Cross breed	Low quality and quantity of nutrients in the feed	

3.5. Crop area coverage in the district and schemes implemented by various departments

The details of various schemes implemented by the line departments of the district are presented below.

3.5.1. Agriculture

The fund allocated and physical target for the district in the field of agriculture during 2012-15 are given in Table. 3.10.

Table 3.10 Schemes Implemented by Department of Agriculture (2012-13 to 2014-15)

(Rs. in lakhs)

Sl. No.	Name of the Scheme	2012-13		2013-14		2014-15	
		Physical Achieve.	Financial Achieve. (in Lakhs)	Physical Achieve.	Financial Achieve. (in Lakhs)	Physical Achieve.	Financial Achieve. (in Lakhs)
1	ISOPOM-Oilseeds	1270 Qtl 442 No. 3244 ha	38.401	553 Qtl 97 No. 1412 ha	15.548	--	--
2	ISOPOM-Maize	100 Qtl 54 No.	5.289	100 Qtl 54 No.	5.289	--	--
3	ICDP Rice	30 Mt 24 No	4.39	--	--	--	--
4	Seed Village	136 Mt 80 No.	54.2	860 Qtl 35 No.	30.95	860 Qtl 31 No.	30.35
5	NADP - Enrichment of Soil Fertility	35 Mt 700 ha 193 No.	102.280	--	--	--	--
6	NADP - SRI demonstration	80 No.	2.400	--	--	--	--
7	NADP - Program on Pulses Mission	64 No. 330 ha	206.96	2657 ha 93 No. 520 Qtl	10.347	848 ha 11 No.	64.70
8	NADP – Precision Farming	24 No. 80 ha	20.065	--	--	--	--
9	NADP - Increasing the Production and Productivity of Cotton	4.5 Qtl 300 ha	2.23	--	--	--	--
10	NADP - Total Coconut Seedlings	105471 Seedlings	8.15	--	--	59300 Seedlings	6.645

Sl. No.	Name of the Scheme	2012-13		2013-14		2014-15	
		Physical Achieve.	Financial Achieve. (in Lakhs)	Physical Achieve.	Financial Achieve. (in Lakhs)	Physical Achieve.	Financial Achieve. (in Lakhs)
11	NADP - INSIMP	2000 ha 400000 Minikits 6 No.	70.76	1000 ha 10 Qtl 2 No.	34.98	--	--
12	NADP - Distribution of Power tiller	13 No.	19.5	--	--	--	--
13	NADP - Training to 2 farmers per block	26 No.	0.26	--	--	--	--
14	NFSM	216 Qtl 857 ha 40 No	20.823	436.75Qtl 2149 ha 135 No.	57.729	1270 ha 440 Qtl 35 No.	28.745
15	National Agricultural Insurance Scheme	25000 No.	55	--	--	--	--
16	Weather Based Crop Insurance Scheme	2500 No.	19	--	--	--	--
17	Technology Mission on Cotton	50 ha 6 No.	0.795	30.2 ha 2 No.	1.35	--	--
18	Paddy Mission	--	--	30 Qtl 200 ha	7.5	0.30 Mt	3.00
19	Sustainable Sugarcane Initiative	--	--	60 ha 4 No.	18.00	--	--
20	Revalidated 2012-13-NADP	--	--	845 ha 50047 No.	54.05	--	--
21	NADP- Upscaling Foodgrain Mission - Pulses	--	--	39.6 ha 5 No.	1.9648	--	--
22	Oil Seed Mission	--	--	--	--	898 ha 57 No.	11.375
23	Millet Mission	--	--	--	--	24 ha 2 No.	1.37

Source: Joint Director of Agriculture, Coimbatore.

Major crops cultivated in Coimbatore district are Paddy, Maize, Groundnut, Cholam, Sugarcane, Coconut and other horticultural crops. Though noted for trade and industry, the district is by no means backward in the field of agriculture. Close association and link with the Agricultural College and the Research Institute has helped farmers to keep abreast of the developments in agricultural technologies and practices and also improved varieties of seeds. The publicity and developmental activities launched by the agricultural institutions penetrated far and wide in the district. Added to this is the propaganda and demonstration organized by the Agricultural Department.

Though the soil is not the best, utilization of improved methods of cultivation and improved varieties of seeds together have helped the farmers in the district to maximize their output. Cholam is grown in 38200 ha followed by Maize in 17500 ha. Pulses are also cultivated more in the district and the area is 8605 ha. Among the non-food crops, oil seeds constitute 17.76 % of the total area under nonfood crops. An area of 17860 ha is under oil-seeds cultivation and of these groundnut accounts for 17500 ha while gingelly accounts for 610 ha only. Groundnut is the most popular oil-seed raised in this district. Among other non-food crops, the most important is sugarcane. Sugarcane is raised in 2000 ha. In respect of all commercial crops improved varieties have been adopted by the farmers and this has helped them to get high yield. Availability of limited irrigation facilities coupled with the awareness of improved technology along with the schemes in agri helped the farmers to maintain and develop agriculture.

It could be seen from Table 3.10 that government is implementing 10 schemes under NADP. These schemes especially SRI demonstration, Pulses mission, Precision farming, distribution of power tiller and training farmers certainly help the farmers in solving some of the problems identified in the earlier pages. What is needed is to implement the schemes with the full participation and cooperation of the farmers.

3.5.2 Horticulture

Various schemes implemented by the department of horticulture during the year 2012-15 are given in Table 3.11 with the target area and funds allotted for the period.

Through centrally sponsored schemes, majority of the funds are allotted in the National Horticultural Mission. A sum of Rs. 327.24 lakhs was allotted during 2012-15. The other schemes include National Mission on Medicinal Plants (NMMP), National Mission on Micro-Irrigation (NMMI) and IAMWARM. Under state sponsored schemes, Integrated Horticulture Development Scheme (IHDS) was operated with a budget allocation of 52.96 lakhs.

Table 3.11 Schemes implemented by Department of Horticulture (2012-13 to 2014-15) (Rs. in lakhs)

Sl. No.	Year	2012-13				2013-14				2014-15			
	Name of the Scheme	Physical (Ha)		Financial (Rs.in lakhs)		Physical (Ha)		Financial (Rs.in lakhs)		Physical (Ha)		Financial (Rs.in lakhs)	
		Target	Achievement	Target	Achievement	Target	Achievement	Target	Achievement	Target	Achievement	Target	Achievement
I	**STATE PLAN SCHEMES**												
1	Integrated Horticulture Development Scheme	1352	1441	36.97	36.97	800.00	805.00	16.00	15.99	–	–	–	–
2	National Agriculture Development Program - Precision farming	200.00	200.00	42.50	42.50	208.00	194.00	41.60	38.80	145.00	116.00	85.33	54.20
3	National Agriculture Development Program- Hi tech productivity	115.00	115.00	11.63	11.63	560.00	546.00	50.77	49.02	–	–	–	–
4	Rainfed Area Development Program	190.00	190.00	70.05	66.61	106.00	106.00	47.23	47.23	140.00	106.00	32.40	20.97

5	Pandal vegetables	_	_	_	_	74.99	56.80	132.48	101.20	_	_	_	_
6	Perimetro	_	_	_	_	652.00	652.00	430.00	106.43	914.00	652.00	267.75	194.32
7	IAMWARM	_	_	_	_	195.00	195.00	57.47	54.26	_	_	_	_
8	Urban Horticulture Development Scheme ("Do it yourself kit")	_	_	_	_	3735.00	714.00	98.98	18.92	_	_	_	_
	Total	**1857 Ha 416 Nos**	**1946 Ha 416 Nos**	**167.51**	**164.07**	**2595.99 Ha 3735 Nos**	**2554.80 714 Nos**	**874.53**	**431.86**	**1199.00**	**874.00**	**385.48**	**269.49**
II	**CENTRALLY SPONSORED SCHEME (GOI)**												
9	National Horticulture Mission	705 Ha 651 Nos 8000 Sqm	685 Ha 651 Nos 8000 Sqm	71.060	59.210	970 Ha 21000 Sqm 801 Nos	747.5 Ha 14000 Sqm 1150 Nos	234.658	129.517	965 Ha 13000 Sqm 247 Nos	965 Ha 13000 Sqm 247 Nos	217.128	138.516
10	National Mission on Micro Irrigation	1160.00	1154.86	450.00	474.62	1020.00	1318.00	640.00	576.45	10.00	_	0.86	_
11	National Mission on Medicinal Plants	10.00	10.10	0.86	0.86	10.00	3.00	0.86	0.26				
12	National Bamboo Mission	_	_	_	_	_	_	_	_	5.00	5.00	0.96	0.50
8	MI under OFWM of NMSA	_	_	_	_	_	_	_	_	_	_	_	_

	a) Horticulture	_	_	_	_	_	_	_	_	457.00	242.97	227.71	182.11
	b) Agriculture	_	_	_	_	_	_	_	_	58.00	44.11	39.39	31.43
	Sub Total	_	_	_	_	_	_	_	_	515.00	287.08	267.10	213.53
	Total	**1875 Ha 651 Nos 8000 Sqm**	**1849.96 Ha 651 Nos 8000 Sqm**	**521.921**	**534.688**	**2000.00Ha 21000 Sqm 801Nos**	**2068.5 Ha 14000 Sqm 801 Nos**	**875.52**	**706.23**	**1495 Ha 13000 Sqm 247 Nos**	**1257.08 Ha 13000 Sqm 247 Nos**	**485.18**	**352.55**
	Grand Total	**3750 Ha 1067 Nos 8000 Sqm**	**3796 Ha 1067 Nos 8000 Sqm**	**689.431**	**698.758**	**4595.990 Ha 21000 Sqm 4536 Nos**	**4623.30 Ha 14000 Sqm 1515 Nos**	**1750.05**	**1138.08**	**2694 Ha 13000 Sqm 247 Nos**	**2131.08 Ha 13000 Sqm 247 Nos**	**870.66**	**622.04**

Source: Deputy Director of Horticulture, Coimbatore.

in 2012-13 and 2014-15. National Agricultural Development Program/Scheme was sanctioned with a budget outlay of Rs.327.24 lakhs under different schemes in the district.

The efforts in the promotion of agriculture in the region for the farmers in realizing quick and better income is well reflected in the mission mode approach in micro irrigation, medicinal plants, bamboo and horticulture besides rainfed area development.

3.5.3 Agricultural Engineering

The schemes implemented by the Department of Agricultural Engineering during 2012-15 are presented in the Table. 3.12.

A total budget of Rs.373.51 lakhs was allocated under the Western Ghats Development Program towards construction of check dams in the district. Under IAMWARM scheme, Rs.459.6 lakhs was allocated towards micro irrigation system installation. For distribution of Agricultural Machinery to farmers under NADP scheme, Rs.571.16 lakhs was allocated in the budget.

With declining area under crops and water table one potential area for development is the Western Ghats development. Promotion of water conservation, increase the use of solar power, solution to climate change and restoration of water bodies are the urgent needs of the day. Keeping the sanctioned project and matching it with the needs of the farmer the development plan must suggest the strategies.

3.5.4 Agricultural Marketing

The schemes implemented by the department of marketing are illustrated in Table. 3.13.

3.5.5. Animal Husbandry

The schemes implemented by the department of marketing are given in Table. 3.14.

Though the schemes listed cover most of the problem faced by the farmers, area to be covered, number to be achieved must keep in tune with the requirements of the people. Another major problem is the access to medical care for cattle and its access to villagers.

Table 3.12 Schemes Implemented by Department of Agricultural Engineering (2012-13 to 2014-15)

(Rs. in lakhs)

Sl. No.	Scheme	Work	2012-13		2013-14		2014-15	
			No. of work	Expenditure incurred	No. of work	Expenditure incurred	No. of work	Expenditure incurred
1	Western Ghats Development Program - (WGDP)	Check dam	54 Nos.	185.46100	19 Nos.	83.80	21 Nos.	104.25
2	Tamil Nadu Irrigated Agriculture Modernization and Water Bodies Restoration and Management project - (TN - IAMWARM)	Micro Irrigation System	557 Nos.	130.03692	387 Nos.	193.85754	244 Nos.	135.701
3	Artificial Recharge Structures - (A.R.S)	Check dam	5 Nos.	66.59573	--	--	--	--
4	National Agricultural Development Program - (NADP)	Distribution of Agricultural Machinery implement to farmers an subsidy basis	982 Nos.	266.629	761 Nos.	185.25	585 Nos.	119.28
5	Run Off Management - (R.O.M)	Check dam	--	--	2 Nos.	10.00	--	--
6	Tamil Nadu Irrigated Agriculture Modernization and Water Bodies Restoration and Management project - (TN - IAMWARM)	Farm pond	--	--	6 Nos.	3.00	--	--

Sl. No.	Scheme	Work	2012-13		2013-14		2014-15	
			No. of work	Expenditure incurred	No. of work	Expenditure incurred	No. of work	Expenditure incurred
7	5HP AC Solar pump installation (Tracking)	Tracking type Solar P.V.pumping System (Bore well)	--	--	--	--	--	--
8	5HP AC Solar pump installation (Tracking)	Tracking type Solar P.V.pumping system (Open well)	--	--	--	--	23 Nos.	88.32
9	5HP AC Solar pump installation (Tracking)	Tracking type Solar P.V.pumping System (Surface mounted)	--	--	--	--	8 Nos.	31.9898
10	Tamil Nadu Irrigated Agriculture Modernization and Water Bodies Restoration and Management project - (TN - IAMWARM)	Fish seed farm	--	--	--	--	2 Nos.	5.10
11	National Initiative On Climate Resilient Agriculture - (NICRA)	Check dam	--	--	--	--	1No.	12.0514
12	5 HP AC Solar pump Installation (Fixed)	Fixed type solar P.V.Pumping System	--	--	--	--	19 Nos.	57.85120

Source: Executive Engineer, Department of Agricultural Engineering, Coimbatore.

Table 3.13.Schemes in Agricultural Marketing and Agribusiness

(Finance - Rs. in lakhs)

Sl. No.	Scheme / project title	2012-13			2013-14			2014-15		
		Physical		Finance	Physical		Finance	Physical		Finance
		Unit	Target	Allocation	Unit	Target	Allocation	Unit	Target	Allocation
I.	**Centrally sponsored**									
National Agricultural Development Program (NADP)										
1.	Tomato Cold Storage-Kinathukadavu	1	1	225.00						
2.	Tender Coconut Market Complex-Thippampatti				1	1	325.00			
3.	Polluvapatti Rural Sandhai-Construction of cleaing, sorting, grading and washing shed with electrical fittings and water supply				1	1	24.00			
II.	**State sponsored**									
1	Food Incubation centre-Kinathukadavu				1	1	110.00			
2	IAMWARM Aliyar sub-basin - Storage shed and Drying yard in ten villages (Kottur, Singanallur, Naickenpalayam, Odaiyakulam, Chinnapampalayam, Samathur, S.Ponnapuram, Jallipatti and Nalluthukuli)	Storage shed-10 Drying Yard-10	Storage shed-10 Drying Yard-10	133.00						
3	IAMWARM Amaravathi sub-basin Drying yard in 3 Villages (Jothampatti, Cholamadevi and Karatholuvu)	Drying Yard-3	Drying Yard-3	9.90						

Sl.No.	Scheme / project title	2012-13			2013-14			2014-15		
		Physical		Finance	Physical		Finance	Physical		Finance
		Unit	Target	Allocation	Unit	Target	Allocation	Unit	Target	Allocation
III.	**Central and State sponsored(Indicate the share)**									
National Mission on Food Processing (Central-75% and State contribution-25%)										
Food processing industry										
1	Avalon Cosmetics Pvt. Ltd 195/1A & 1B, Appanaickenpatti, Sulur, Coimbatore – 641402. Foods Contract Manufacturing / Health drink – Horlicks			25.00			25.00			
2.	Pappain Extraction by Fruzyme Biotech 85-A, Manikkapuram, Palladam, Tiruppur - 641 605 Ph No: 9994855988, Email- id: fruzymekarthi@gmail.com			25.00			25.00			
HRD-EDP										
3	The Ramasamy Chinnammal Trust (RCT) 29, Vallalar Nagar, Vadavalli, Coimbatore-641041 Phone No: 0422 – 242 3074, 2425204 Email-id: saras_eswar@yahoo.co.in						2.00			
Promotional-Seminar										
4	Dr..D. Ravi, Asst Professor, Government Arts. College ,Coimbatore						3.00			
5	Tamil Nadu Agricultural University						3.00			

Table 3.14 Schemes implemented by Department of Animal Husbandry (2012-13 to 2013-14)

(Rs. in lakhs)

Sl. No.	Specific intervention / Schemes identified	2012-13		2013-14	
		Phy.	Fin.	Phy.	Fin.
1	Accelerated Fodder Development Program (Irrigated) Fodder Cultivation	-	-	91 Acres	5.1
2	Propagation of *Azolla*	37 Units	0.45	-	-
3	Buffalo Rearing	-	-	-	-
4	Silage Making	-	-	1	0.1
5	State Fodder development Scheme			100	13.04
6	Drought Mitigation Program- Fodder Production	-	-	150.5	7.8
7	Kaalnadai Pathukappu Thittam	16	0.19	13	0.16
8	Western Ghats Development Project	34	6.25	160	7.72
9	Cattle Insurance Scheme	308	-	-	-
10	TN-IAMWARM Project	9,465	3	5,094	2
11	T.N. Government's Priceless Distribution of Goats Scheme	407	51.89	259	33.67
12	Vaccination (PPR)	407	-	259	-

Source: TANUVAS, Chennai, 2013-14.

CHAPTER IV

DISTRICT PLAN

The interventions proposed, the associated outlays, the physical targets, budgetary requirements, time frame for achievements in the agriculture (field crops), horticulture, agricultural engineering, agricultural marketing and animal husbandry, fisheries and PWD sectors are discussed in this chapter. This would comprehend the activities and the achievements to be made in the next five years of period (2017-2022) under NADP.

4.1. Agriculture Sector

The various development issues, constraints and activities (interventions) planned for the development of agriculture and allied sectors have been discussed in earlier chapters. Based on the discussions the district plan in full has been briefly outlined below in this chapter. The activities planned and the associated targets and costs are presented for the development of both agricultural and allied sectors.

4.1.1 Paddy

4.1.1.1. Enhancing the Paddy productivity

Paddy is one of the most important food grain crops of the State. However, the area under paddy is declining especially in Coimbatore district due to the failure of monsoon, rain shadow region and declining area under canal irrigation in all blocks except Anaimalai and Thondamuthur blocks. Hence the demand for paddy to meet the requirements of the people is to be met only by increasing the productivity of paddy in Coimbatore district. Increasing the productivity of paddy is highly dependent on the adoption of modern technologies. System of Rice Intensification (SRI) is one of the new technologies which need awareness creation and adoption for improving the productivity of the crop among the rice growers.

4.1.1.2. Project components

- Promotion of SRI Technology covered in Anaimalai Block.
- Distribution of certified seeds covered in Anaimalai and Thodamuthur Block.
- Seed production- certified seeds covered in Anaimalai Block.
- Incentives for paddy machine planting covered in Anaimalai Block.
- Distribution of MN mixture, bio fertilizer, zinc sulphate and herbicides covered in Anaimalai Block and Thondamuthur Block in Coimbatore district.

4.1.1.3. Budget

It is proposed to incur **₹.77.65** lakhs over a period of five years with the finance facilities under the NADP and other sources as given in Table 4.1.

4.1.1.4. Expected outcome

The SRI technology will result in an increase in the yield of paddy and in turn the production of paddy. This will result in the ensuring of food security for the people.

4.1.1.5. Implementing agency

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

Table 4.1. Budget for Interventions in Paddy

(₹. in lakhs)

Sl. No	Interventions	Unit	Unit Cost (in Rs.)	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	15000	B1	0	0.00	10	1.50	10	1.50	10	1.50	10	1.50	40	6.00
2	Distribution of High Yielding Varieties	MT	35000	B1,B12	0	0.00	11	3.85	11	3.85	11	3.85	11	3.85	44	15.40
3	seed production - Certified class	MT	26000	B1	0	0.00	10	2.60	10	2.60	10	2.60	10	2.60	40	10.40
4	Incentives for paddy machine planting	Ha	10000	B1	0	0.00	20	2.00	20	2.00	20	2.00	20	2.00	80	8.00
5	Distribution of MN mixture/ Copper Sulphate	Ha	1000	B1,B12	100	1.00	125	1.25	125	1.25	125	1.25	125	1.25	600	6.00
6	Distribution of biofertilizer / PPFM / bioinputs / plant nutrient mobilizing bacteria	Ha	300	B1,B12	200	0.60	250	0.75	250	0.75	250	0.75	400	1.20	1350	4.05
7	Distribution of Zinc sulphate (Soil application & foliar)	Ha.	1000	B1,B12	100	1.00	150	1.50	150	1.50	150	1.50	150	1.50	700	7.00
8	Distribution of herbicides	Ha.	1000	B1,B12	0	0.00	20	0.20	20	0.20	20	0.20	20	0.20	80	0.80
9	Demonstration of drip irrigation	ha	100000	All Blocks	20	4.00	20	4.00	20	4.00	20	4.00	20	4.00	100	20.00
	Total					**6.60**		**17.65**		**17.65**		**17.65**		**18.10**		**77.65**

B1-Anaimalai, B2-Annur, B3-Karamadai, B4-Kinathukadavu, B5-Madhukarai, B6-PN Palayam, B7-Pollachi North, B8-Pollachi South, B9-SS Kulam, B10-Sultanpet, B11-Sulur, B12-Thondamuthur

4.1.2. Millets

4.1.2.1. Enhancing the Millets productivity

Millets being culturally stigmatized as “poor man’s crop” is grown mainly under rainfed conditions in Tamil Nadu. Maize, sorghum and cumbu are the major millets cultivated in most parts of Coimbatore district. In the recent years, concern for millets has been on the rise within India, however a steep fall in consumption can be presumed. The overall fall in demand is often attributed to factors like changing food habits, growing urbanization, increased incomes, and competition from other crops. Maize and sorghum are becoming popular in the district in recent times due to huge demand for poultry feed production and raw material for value addition for bakery products. Due to its low cost of cultivation and low water requirement it is preferred under rainfed conditions in the dry land area of the district. Therefore, there is scope for increasing the productivity and production of millets through appropriate technologies like distribution of quality seeds, soil health enhancers, plant protection measures and demonstration of technologies.

4.1.2.2. Project components

- Seed production covered in Anamalai and Thondamathur Block in Coimbatore District.
- Distribution of LPG operated bird scarer covered in Sulur Block.
- Distribution of bio fertilizer liquid/ carrier, MN mixture covered in all blocks.
- Expansion of area under minor millets covered in P.N.Palayam, Anamalai and Thondamuthur Blocks.
- Formation of small millet groups covered in P.N.Palayam and S.S.Kulam block.
- Millet processing unit for minor millet covered in Annur, Karamadai and Kinatukadavu blocks.
- Demonstration (supply of seed, seed treatment & MN mixture) for sorghum and maize conducted in Madukarai, Sultanpet and Sulaur Block.
- Drip irrigation for maize covered in all blocks except Madukarai, Sultanpet and Sulur.

4.1.2.3. Budget

It is proposed to incur **₹ 1031.64** lakhs over a period of five years with the available finance facilities under the NADP and other sources as given in Table 4.2.

4.1.2.4. Expected outcome

The expected outcome will be increased area under maize and other millets with improved varieties along with the package of practices resulting in an increase in the millets production.

4.1.2.5. Implementing Agency

Department of Agriculture will implement the project.

Table 4.2. Budget for Interventions in Millets

(₹. in lakhs)

Sl. No.	Components	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
	Millets															
1	Distribution of LPG operated Bird Scarrer	Nos.	0.1	All Blocks Except B1,B12	0	0.00	55	5.50	55	5.50	55	5.50	55	5.50	220	22.00
2	Distribution on biofertilizer - Liquid / Carrier	Ha	0.003	All Blocks Except B1,B12	1000	3.00	1300	3.90	1300	3.90	1300	3.90	1300	3.90	6200	18.60
3	Expansion of area under Minor Millets (Demo - supply of seed, seed treatment, MN mixture & Organic package)	Ha	0.05	B6,B9	0	0.00	40	2.00	40	2.00	40	2.00	40	2.00	160	8.00
4	Formation of small millet groups	Nos.	0.2	B6,B9	0	0.00	2	0.40	2	0.40	2	0.40	2	0.40	8	1.60
5	Millet Processing unit - Minor millet	Nos.	2.5	B2,B3,B4	0	0.00	3	7.50	0	0.00	0	0.00	0	0.00	3	7.50
6	Seed Production / Incentives for quality seed	MT	0.63	All Blocks Except B1,B12	0	0.00	38	23.94	38	23.94	38	23.94	38	23.94	152	95.76
7	Soil moisture conservation practices	Ha	0.05	All blocks	125	6.25	125	6.25	125	6.25	125	6.25	125	6.25	625	31.25
8	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															
8	Demonstration (Supply of seed, seed treatment, MN mixture & Organic package)	Ha	0.05	B5,B10,B11	0	0.00	320	16.00	320	16.00	320	16.00	320	16.00	1280	64.00
9	Distribution of biofertilizers - Liquid / Carrier	Ha	0.003	All Blocks Except B1,B6,B7,B12	2750	8.25	2600	7.80	2600	7.80	2600	7.80	2600	7.80	13150	39.45
10	Distribution of MN mixture (12.5kg/ha)	Ha	0.007	All Blocks Except B1,B7,B8,B12	2600	18.20	2600	18.20	2600	18.20	2600	18.20	2600	18.20	13000	91.00

Sl. No.	Components	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
11	Seed distribution	MT	0.7	All Blocks Except B1,B7,B8,B12	0	0.00	6	3.85	6	3.85	6	3.85	6	3.85	22	15.40
	Maize															
12	Demonstration (Supply of seed, seed treatment & MN mixture, organic package)	Ha	0.05	All Blocks Except B1,B2,B5	0	0.00	440	22.00	440	22.00	440	22.00	440	22.00	1760	88.00
13	Distribution of biofertilizers - Liquid / Carrier	Ha	0.003	All Blocks Except B1,B2,B5,B10 ,B11	0	0.00	340	1.02	340	1.02	340	1.02	340	1.02	1360	4.08
14	Drip irrigation for maize	Ha	1	All Blocks Except B5,B10,B11	85	85.00	100	100.00	100	100.00	100	100.00	100	100.00	485	485.00
	Total					**132.70**		**230.36**		**222.86**		**222.86**		**222.86**		**1031.64**

B1-Anaimalai, B2-Annur, B3-Karamadai, B4-Kinathukadavu, B5-Madhukarai, B6-PN Palayam, B7-Pollachi North, B8-Pollachi South, B9-SS Kulam, B10-Sultanpet, B11-Sulur, B12-Thondamuthur

4.1.3. Pulses

4.1.3.1. Enhancing the productivity of pulses

Pulses constitute one of the important food components for supply of protein for human beings. The area under pulses in Coimbatore district is less than 14,804 ha with a productivity of 606, 712 and 643 kg/ha for green gram, black gram and Bengal gram respectively. The Tamil Nadu state as a whole is a deficit state in pulses requirement for meeting the recommended level of pulse consumption per head, and importing pulses will be a costlier affair. In this context, increasing the productivities of pulses gains importance. Therefore increase in the productivities of pulses through awareness creation, field demonstration, supply of high yielding variety seeds and adoption of improved package of practices is proposed.

4.1.3.2. Project components

- Purchase of breeder seed covered in all blocks in Coimbatore district except sulur.
- Production of foundation/certified seeds covered in all blocks
- Distribution of certified seeds covered in all blocks
- Distribution of biofertilizer and micro nutrients covered in all blocks
- DAP spray and Pulse Wounder covered in all blocks.
- Bund cropping covered in all blocks & line sowing covered in all block except Pollachi North and Pollachi South.
- Distribution of yellow sticky trap, weedicide, plant protection chemicals covered in all blocks
- Seed treatment & soil application with *Trichoderma viridi* covered in all blocks except annamalai.
- Demonstration of cropping system and pure cropping covered in all blocks except P.N.Palayam, S.S.Kulam, Sultanpet and Sulur.

4.1.3.3. Budget

It is proposed to incur **₹.916.13** lakhs over a period of five years with the finance facilities under the NADP and other sources as given in Table 4.3.

4.1.3.4. Expected outcome

The project will result increased area under pulses with improved varieties along with the package of practices resulting in an increase in the pulse production. Increased productivity will also increase the income of the farmers.

4.1.3.5. Implementing Agency

Department of Agriculture will implement the project

Table 4.3. Budget for Interventions in Pulses

(₹. in lakhs)

Sl. No.	Interventions	Unit	Unit cost (in Rs.)	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	250000	All Blocks Except B1	0	0.00	1	2.75	1	2.75	1	2.75	1	2.75	4	11.00
2	Production of Foundation/ Certified pulses seeds	MT	86000	All Blocks	38	32.68	46	39.13	46	39.13	46	39.13	46	39.13	220	189.20
3	Distribution of Certified Seeds	MT	100000	All Blocks	44	43.50	45	45.00	45	45.00	45	45.00	45	45.00	224	223.50
4	Distribution of Biofertilizer/ Organic packages (Rhizobium + Phosphobacteria) - Liquid / Carrier	Ha	600	All Blocks	3000	18.00	2450	14.70	2450	14.70	2450	14.70	2450	14.70	12800	76.80
5	Distribution of Micro Nutrients(5 kgs/ Ha)	Ha	350	All Blocks	230	0.81	710	2.49	710	2.49	710	2.49	710	2.49	3070	10.75
6	DAP Spray	Ha	700	All Blocks	1330	9.31	1550	10.85	1550	10.85	1550	10.85	1550	10.85	7530	52.71
7	Pulse wonder - 5 kg/ha	Ha	1000	All Blocks	0	0.00	190	1.90	190	1.90	190	1.90	190	1.90	760	7.60
8	Bund Cropping	Ha	300	All Blocks	500	1.50	560	1.68	560	1.68	560	1.68	560	1.68	2740	8.22
9	Line sowing	Ha	2250	All Blocks Except B7,B8	250	5.63	440	9.90	440	9.90	440	9.90	440	9.90	2010	45.23
10	Distribution of Yellow sticky trap /pheromone trap	ha	1000	All Blocks	0	0.00	180	1.80	180	1.80	180	1.80	180	1.80	720	7.20

Sl. No.	Interventions	Unit	Unit cost (in Rs.)	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
11	Cropping system based demonstration	Ha	12500	B12	0	0.00	100	12.50	100	12.50	100	12.50	100	12.50	400	50.00
12	Distribution of weedicide	Ha	1000	All Blocks Except B1	0	0.00	550	5.50	550	5.50	550	5.50	550	5.50	2200	22.00
13	Plant Protection Chemicals	Ha	1000	All Blocks Except B1	275	2.75	550	5.50	550	5.50	550	5.50	550	5.50	2475	24.75
14	Seed treatment and soil application with Trichoderma viridi	Ha	700	All Blocks Except B1	1140	7.98	550	3.85	550	3.85	550	3.85	550	3.85	3340	23.38
15	Pure crop demonstration - Black gram and green gram	Ha	6300	All Blocks B6,B9, B10, B11	400	25.20	550	34.65	550	34.65	550	34.65	550	34.65	2600	163.80
	Grand total					**147.35**		**192.19**		**192.19**		**192.20**		**192.20**		**916.13**

B1-Anaimalai, B2-Annur, B3-Karamadai, B4-Kinathukadavu, B5-Madhukarai, B6-PN Palayam, B7-Pollachi North, B8-Pollachi South, B9-SS Kulam, B10-Sultanpet, B11-Sulur, B12-Thondamuthur

4.1.4. Oilseeds

4.1.4.1. Enhancing the productivity of oilseeds

Oilseed crops have become cash crops as they command more prices in the market. Oilseed industry is also depending on the prospects of increasing the area under these crops for supply of raw materials. Coimbatore district has lesser area about 5% of total cropped area under oilseed crops like groundnut, gingelly, sunflower, oil palm and so on. The reduction in the area under oilseed crops is mainly due to the increased cost of cultivation mainly caused by the high cost of labour and plant protection in the cultivation of oilseed crop like groundnut. Hence it is necessary to increase the productivity of these oilseed crops. As these oilseeds crops are cultivated under rainfed conditions, their productivities are low. However, as their outputs fetch higher prices in the market, farmers could get more income, if they could get more yield from oilseed crops. Therefore, it is necessary to provide the needed assistance to the farmers by way of subsidized inputs and promotion of technology.

4.1.4.2. Project components

- Purchase of breeder seed covered in all blocks except P.N.Palayam and S.S.Kulam.
- CBD- groundnut, gingelly/ castor covered in all blocks except P.N.Palayam, S.S.Kulam, Sultanpet and Sulur.
- Seed production- foundation seeds, certified seeds covered in all blocks except P.N.Palayam, S.S.Kulam,Sultanpet and sulur.
- Distribution of certified seeds covered in all blocks except P.N.Palayam, S.S.Kulam, Sultanpet and Sulur.
- Distribution of MN mixture, biofertilizer and liquid bio fertilizer covered in all blocks except P.N.Palayam, S.S.Kulam,Sultanpet and Sulur.
- Castor as bund crop covered in all blocks except P.N.Palayam, S.S.Kulam,Sultanpet and Sulur.
- Seed drill sowing/ line sowing of groundnut with pulsus as intercrop covered in all blocks except P.N.Palayam S.S.Kulam, Sultanpet and Sulur.
- Distribution of tractor operated thresher covered in all blocks except p.n.palayam, S.S.Kulam, Sultanpet and Sulur.
- Distribution of power operated groundnut stripper covered in all blocks except P.N.palayam S.S.Kulam, Sultanpet and Sulur.
- Distribution of power operated groundnut decordicator covered in all blocks except P.N.Palayam, S.S.Kulam, Sultanpet and Sulur.

4.1.4.3. Budget

It is proposed to incur **₹.1055.06** lakhs over a period of five years with the financial assistance under the NADP and other sources as given in Table 4.4.

4.1.4.4. Expected outcome

The expected outcome of the project will result in an increase in the production of oilseed especially groundnut, gingelly and 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.

4.1.4.5. Implementing Agency

Department of Agriculture will implement the project

Table 4.4. Budget for interventions in Oilseeds

(₹. in lakhs)

Sl. No.	Interventions	Unit	Unit Cost (in Lakhs.)	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	1.50	All Blocks Except B6,B9	1	2.10	3	4.95	3	4.95	3	4.95	3	4.95	15	21.90
2	Compact Block Demonstration - Groundnut	Ha	0.20	All Blocks Except B6,B9,B10, B11	110	22.00	120	24.00	120	24.00	120	24.00	120	24.00	590	118.00
3	Compact Block Demonstration - Gingelly / Castor	Ha	0.06	B2,B12	0	0.00	20	1.20	20	1.20	20	1.20	20	1.20	80	4.80
4	**GROUNDNUT**															
5	Strengthening seed chain by foundation seed production	Mt	0.76	All Blocks Except B6,B9,B10, B11	11	8.36	14	10.64	14	10.64	14	10.64	14	10.64	67	50.92
6	Strengthening seed chain by certified seed production	Mt	0.73	All Blocks Except B6,B9,B10, B11	84	61.32	86	62.78	86	62.78	86	62.78	86	62.78	428	312.44
7	Distribution of Certified seeds	Mt	0.84	All Blocks Except B6,B9,B10, B11	84	70.56	84	70.56	86	72.24	86	72.24	86	72.24	426	357.84
8	Distribution of Seed Treatment Chemicals and Bioagents (T.Viridi)	Kg	0.00	All Blocks Except B6,B9,B10, B11	0	0.00	80	0.12	80	0.12	80	0.12	80	0.12	320	0.48
9	Application of Gypsum to Groundnut Crop	Ha	0.02	All Blocks Except B6,B9,B10, B11	220	3.52	340	5.44	340	5.44	340	5.44	340	5.44	1580	25.28

Sl. No.	Interventions	Unit	Unit Cost (in Lakhs.)	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	Distribution of Micro Nutrient Mixture	Ha	0.02	All Blocks Except B6,B9,B10, B11	100	1.50	350	5.25	350	5.25	350	5.25	350	5.25	1500	22.50
11	Distribution of Biofertilizer	Ha	0.01	All Blocks Except B6,B9,B10, B11	170	1.02	150	0.90	150	0.90	150	0.90	150	0.90	770	4.62
12	Distribution of Liquid Biofertilizer	Ha	0.01	All Blocks Except B6,B9,B10, B11	800	4.80	800	4.80	800	4.80	800	4.80	800	4.80	4000	24.00
13	Castor as Bund crop	Ha	0.01	All Blocks Except B6,B9,B10, B11	140	0.84	110	0.66	110	0.66	110	0.66	110	0.66	580	3.48
14	Seed Drill Sowing / Line sowing of Groundnut with Pulses as intercrop(hiring charges only)	Ha	0.03	All Blocks Except B6,B9,B10, B11	0	0.00	400	12.00	400	12.00	400	12.00	400	12.00	1600	48.00
15	Distribution of Tractor operated thresher	Nos.	1.50	All Blocks Except B6,B9,B10, B11	0	0.00	8	12.00	0	0.00	8	12.00	0	0.00	16	24.00
16	Distribution of Power Operated Groundnut Stripper	Nos.	1.30	All Blocks Except B6,B9,B10, B11	0	0.00	8	10.40	8	10.40	0	0.00	0	0.00	16	20.80
17	Distribution of Power operated Groundnut Decorticator	Nos.	1.00	All Blocks Except B6,B9,B10, B11	0	0.00	8	8.00	0	0.00	0	0.00	8	8.00	16	16.00
	Grand total					**176.02**		**233.70**		**215.38**		**216.98**		**212.98**		**1055.06**

B1-Anaimalai, B2-Annur, B3-Karamadai, B4-Kinathukadavu, B5-Madhukarai, B6-PN Palayam, B7-Pollachi North, B8-PollachiSouth, B9-SS Kulam, B10-Sultanpet, B11-Sulur, B12-Thondamuthur

4.1.5. Oil palm

4.1.5.1. Enhancing the productivity of Oil palm

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 is extracted from the pulpy portion (monocarp) of the fruit of Oil Palm. The Crude Palm Oil is deep orange red in colour and is semi solid at a temperature of 20 degree centigrade. Palm Oil contains an equal proportion of saturated and unsaturated fatty acids 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 Tecopherols 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.Therefore, 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 productivity increases. MM-II of NMOOP and MM-III of NMOOP are being implemented in 13 States viz; Tamil Nadu, Andhra Pradesh, Assam, Arunachal Pradesh, Chhattisgarh, Gujarat, Karnataka, Kerala, Mizoram, Nagaland, Odisha, Telangana, and West Bengal.

4.1.5.2. Project components

- Oil palm area expansion programme covered in Annur,Karamadai, P.N.Palayam and Thondamuthur blocks in Coimbatore district.
- Cultivation maintenance programme covered in Madukarai, S.S.Kulum Thondamuthur, Annur, Karamadai and P.N.Palayam blocks in Coimbatore district.
- Inputs for intercropping covered in Madukarai, S.S.Kulum, Thondamuthur, Annur, Karamadai and P.N.Palayam blocks in Coimbatore district.
- Supply of diesel pumps covered in Thondamuthur, Annur and Karamadai blocks in Coimbatore district
- Construction of borewells covered in Thondamuthur, Annur and Karamadai blocks.
- Aluminium portable ladder covered in all blocks except Anamalai.

- Wire mesh & oilpalm cutter covered in Thondamuthur block.
- Neem/pungam area expansion programme covered in Anamalai block

4.1.5.3. Budget

It is proposed to incur **₹.166.37** lakhs over a period of five years with the finance facilities under the NADP and other sources.

4.1.5.4. 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.

4.1.5.5. Implementing Agency

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

Table 4.5 Enhancing Oilpalm Production in Coimbatore District

(₹. in lakhs)

Sl. No.	Interventions	Unit	Unit Cost (in Lakhs.)	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	**NMOOP -Mini Mission -II (Oilpalm)**															
2	Oilpalm Area Expansion Programme	Ha	0.14	B2,B3,B6, B12	58	8.12	27	3.78	27	3.78	27	3.78	27	3.78	166	23.24
3	Cultivation maintenance	Ha	0.1	B2,B3,B5,B 6,B9,B12	93	9.30	93	9.30	103	10.30	92	9.20	92	9.20	473	47.30
4	Inputs for Intercropping	Ha	0.1	B2,B3,B5,B 6,B9,B12	93	9.30	93	9.30	103	10.30	92	9.20	92	9.20	473	47.30
5	Supply of Diesel pumps	No	0.3	B2,B3,B12	2	0.60	3	0.90	2	0.60	2	0.60	2	0.60	11	3.30
6	Construction of Borewells	No	1	B2,B3,B12	2	2.00	2	2.00	3	3.00	2	2.00	2	2.00	11	11.00
7	Alumium portable ladder	No	0.06	B2,B3,B12	0	0.00	3	0.18	2	0.12	3	0.18	2	0.12	10	0.60
8	Wire mesh	No	0.1	B12	0	0.00	1	0.10	0	0.00	0	0.00	0	0.00	1	0.10
9	Oilpalm Cutter	No	0.03	B2,B3,B12	2	0.06	3	0.09	2	0.06	2	0.06	2	0.06	11	0.33
10	**NMOOP -Mini Mission -III (Tree Borne Oilseeds)**															
11	Neem/ Pungam Area Expansion Programme	Ha	0.2	All Blocks Except B1	32	6.40	19	3.80	13	2.60	13	2.60	13	2.60	90	18.00
12	Cultivation maintenance	Ha	0.05	All Blocks Except B1	32	1.60	30	1.50	30	1.50	30	1.50	30	1.50	152	7.60
13	Inputs for Intercropping	Ha	0.05	All Blocks Except B1	32	1.60	30	1.50	30	1.50	30	1.50	30	1.50	152	7.60
	Grand total					**38.98**		**32.45**		**33.76**		**30.62**		**30.56**		**166.37**

B1 – Anaimalai, B2 – Annur, B3 – Karamadai, B4 – Kinathukadavu, B5 – Madukarai, B6 – P.N.Palayam, B7 – Pollachi(N), B8 – Pollachi(S), B9 – S.S.Kulam, B10 – Sultanpet, B11 – Sulur, B12 – Thondamuthur

4.1.6. Cotton

4.1.6.1. Enhancing the productivity of Cotton

Coimbatore which was once known as the Manchester of South India due to the importance of cotton and textile industry is slowly losing the above name. Cotton is one of the important cash crops which require irrigation facilities. The area under cotton in Coimbatore district was 1,288 ha spread over Kinathukadavu, Madhukarai and Annur blocks and the average yield in the district was 658 kg per ha which was higher than that of the state (481 kg of lint per ha). To supply the raw material to the textile industry, it is necessary to increase the production of cotton. Therefore, it is necessary to provide the needed assistance to the farmers by way of subsidized inputs and promotion of technologies.

4.1.6.2. Project components

- Cotton seed treatment and distribution of biofertilizer covered in Pollachi North, Pollachi South and Kinatukadavu blocks.
- Distribution of MN mixture and distribution of PP chemicals covered in Kinatukadavu, Madukarai, Pollachi North and Pollachi South blocks.

4.1.6.3. Budget

It is proposed to incur **₹.33.31** lakhs over a period of five years with the finance facilities under the NADP and other sources as given in Table 4.5.

4.1.6.4. Expected outcome

The implementation of the above project will result in an increase in the productivity of cotton in Kinathukadavu and Annur blocks during South West monsoon and improved cotton technologies produce more cotton as well as supply of quality raw material to the textile industry which will improve the income of the farmers.

4.1.6.5. Implementing Agency

Department of Agriculture will implement the project

Table 4.6. Budget for interventions in cotton

(₹. 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	Cotton seed treatment	Ha	300	B5,B7,B8, B4	0	0.00	200	0.60	200	0.60	200	0.60	200	0.60	800	2.40
2	Distribution of biofertilizer	Ha	300	B5,B7,B8, B4	362	1.09	350	1.05	350	1.05	350	1.05	350	1.05	1762	5.29
3	Distribution of MN Mixture	Ha	1000	B4,B7,B8, B5	362	3.62	350	3.50	350	3.50	350	3.50	350	3.50	1762	17.62
4	Distribution of PP chemicals	Ha	1000	B4,B7,B8, B5	0	0.00	200	2.00	200	2.00	200	2.00	200	2.00	800	8.00
	Grand total					**4.71**		**7.15**		**7.15**		**7.15**		**7.15**		**33.31**

B1-Anaimalai, B2-Annur, B3-Karamadai, B4-Kinathukadavu, B5-Madhukarai, B6-PN Palayam, B7-Pollachi North, B8-Pollachi South, B9-SS Kulam, B10-Sultanpet, B11-Sulur, B12-Thondamuthur

4.1.7. Sugarcane

4.1.7.1. Enhancing the productivity of sugarcane

Sugarcane is an important cash crop and it also yields many valuable by products like bagasse (useful for cogeneration and paper making), ethanol (a product that can be blended in petroleum products), spent wash (used as an organic manure) and so on. Although no sugar mill is located in Coimbatore district, farmers supply sugarcane to the mills located in neighboring districts like Erode and Karur. The area under sugarcane in Coimbatore district was low 2911 Ha which accounted for only 0.89 per cent of the sugarcane area in the state. However, the productivity of cane in the district is much higher, i.e., 130 tonnes/ ha than that of the state (113 tonnes/ha). Therefore, promotion of sugarcane cultivation not only provides higher income and more employment opportunities to farmers and farm labourers.

4.1.7.2. Project components

- Distribution of gypsum (500 kg/ha) covered in all blocks except Kinatukadavu, Pollachi North and Pollachi South.and Karamadai blocks.
- Distribution of bio fertilizer, MN mixture and weedicide covered in all blocks except Kinatukadavu, Pollachi North and Pollachi South.and Karamadai Block
- Micro irrigation – drip covered in all blocks except Kinatukadavu, Pollachi North and Pollachi South.and Karamadai Blocks.

4.1.7.3. Budget

It is proposed to incur **₹.286.76** lakhs over a period of five years with the finance facilities under the NADP and other sources as given in Table 4.7.

4.1.7.4. Expected outcome

The project will be increasing the productivity of sugarcane per hectare will help in making available required quantity of canes to the mills and also would enhance income and employment opportunities of farmers and farm labourers.

4.1.7.5. Implementing Agency

Department of Agriculture will implement the project

Table 4.7. Budget for interventions in Sugarcane

(₹. 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	Disribution of Gypsum (500 Kg/Ha)	Ha	0.02	All Blocks Except B7,B8,B4	0	0.00	90	1.80	90	1.80	90	1.80	90	1.80	360	7.20
2	Distri. of biofertilizer (Ha)	Ha	0.006	All Blocks Except B7,B8,B4	0	0.00	90	0.54	90	0.54	90	0.54	90	0.54	360	2.16
3	Distri. of weedicide (Ha)	Ha	0.01	All Blocks Except B7,B8,B4	0	0.00	90	0.90	90	0.90	90	0.90	90	0.90	360	3.60
4	Distribution of Micro Nutrient Mixture	Ha	0.02	All Blocks Except B7,B8,B4	0	0.00	90	1.80	90	1.80	90	1.80	90	1.80	360	7.20
5	Microirrigation - Drip (1.2x0.6)	ha	1.24	All Blocks Except B7,B8,B4	35	43.40	60	74.40	30	37.20	30	37.20	60	74.40	215	266.60
	Grand total					**43.40**		**79.44**		**42.24**		**42.24**		**79.44**		**286.76**

B1-Anaimalai, B2-Annur, B3-Karamadai, B4-Kinathukadavu, B5-Madhukarai, B6-PN Palayam, B7-Pollachi North, B8-Pollachi South, B9-SS.Kulam, B10-Sultanpet, B11-Sulur, B12-Thondamuthur

4.1.8. Coconut

4.1.8.1. Enhancing the productivity of Coconut

Coimbatore district has an area of 82,704 ha in 2011-12 under coconut cultivation and this accounted for 19.72 per cent of the area under coconut in the state. Coconut is the major crop grown in the district accounting for 44 per cent of the gross cropped area. Coconut cultivation gained importance in the red soil tracts of Pollachi and this might be due to the suitability of the soil, climate and labour problem in the cultivation of other crops. However, the farmers face the decline in the yield of coconut year after year. To get higher yield the existing gardens are to be rejuvenated with high yielding varieties and through improved high production technologies.

4.1.8.2. Project components

- Distribution of T x D hybrid and tall seedlings covered in all blocks.
- Distribution of MN mixture covered in all blocks.
- Distribution of pheromone traps for red palm weevil/ Rhinocerous beetle covered in all blocks.
- Distribution of power operated rocker sprayer covered in Anamalai and Thondamathur blocks.
- Drip irrigation covered in all blocks.
- Intercropping with green manures covered in Anamalai and Thondamathur blocks.
- Replanting and rejunation of coconut gardens covered in all blocks.
- Control of eriophid mite covered in Anamalai block.
- Establishment of neera processing unit covered in Anamalai block.
- Distribution of wheel barrow covered in all blocks

4.1.8.3. Budget

It is proposed to incur **₹.4037.54** lakhs over a period of five years with the finance facilities under the NADP and other sources as given in Table 4.8.

4.1.8.4. Expected outcome

High yielding varieties of coconut seedlings will result in an increase in the yield and production of coconut. This in turn will also help in the increase in the production of coconut oil and availability of tender coconuts to the people.

4.1.8.5. Implementing Agency

Department of Agriculture will implement the project

Table 4.8. Budget for interventions in Coconut

(₹. 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	Distribution of T x D hybrid seedlings	No	0.0006	All Blocks	0	0.00	17500	10.50	17500	10.50	17500	10.50	17500	10.50	70000	42.00
2	Distribution of Tall Seedlings	No	0.0004	All Blocks	0	0.00	14000	5.60	13000	5.20	13000	5.20	13000	5.20	53000	21.20
3	Distribution of D xT hybrid Seedlings	No	0.0015	All Blocks Except B3,B6,B8 ,B9,B11	0	0.00	5900	8.85	5900	8.85	5900	8.85	5900	8.85	23600	35.40
4	Distribution of MN mixture	Ha	0.1000	All Blocks	0	0.00	785	78.50	785	78.50	785	78.50	785	78.50	3140	314.00
5	Distribution of Pheromone traps for Red palm weevil/ Rhinocerous beetle	Ha	0.0160	All Blocks	1998	31.97	0	0.00	0	0.00	0	0.00	0	0.00	1998	31.97
6	Distribution of power operated rocker sprayer	No	0.1000	B1,B12	0	0.00	20	2.00		0.00	20	2.00	20	2.00	60	6.00
7	Drip irrigation	Ha	0.3500	All Blocks	175	61.25	225	78.75	225	78.75	225	78.75	225	78.75	1075	376.25
8	Intercropping with green manures	Ha	0.0300	B1,B12	0	0.00	200	6.00	200	6.00	200	6.00	200	6.00	800	24.00
9	Replanting and Rejunation of coconut gardens	Ha	0.4500	All Blocks	1240	558.00	1150	517.50	1150	517.50	1100	495.00	1070	481.50	5710	2569.50
10	Control of Eriophid mite	No. of tree	0.0002	B1	0	0.00	10	0.00	10	0.00	10	0.00	10	0.00	40	0.01
11	Establishment of Neera processing unit	No	600.00	B1	0	0.00	1	600.00	0	0.00	0	0.00	0	0.00	1	600.00
12	Training on neera production	Batchec	0.2500	B1	0	0.00	1	0.25	0	0.00	0	0.00	0	0.00	1	0.25
13	Distribution of wheel barrow	No	0.0400	All Blocks	0	0.00	106	4.24	106	4.24	106	4.24	106	4.24	424	16.96
	Grand total					**651.22**		**1312.19**		**709.54**		**689.04**		**675.54**		**4037.54**

B1-Anaimalai, B2-Annur, B3-Karamadai, B4-Kinathukadavu, B5-Madhukarai, B6-PN Palayam, B7-Pollachi North, B8-Pollachi South, B9-SS Kulam, B10-Sultanpet, B11-Sulur, B12-Thondamuthur

4.1.9. Training to farmers

4.1.9.1. Enhancing the livelihood of farmers through training

Agricultural extension is being provided at the Block level and below, under the Extension Reforms scheme being implemented. Farmers can 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 bigger profits in the long run.

4.1.9.2. Project components

- State level trainings to Extension officials covered in Anamalai, Annur, Karamadai, Kinatukadavu and Thondamathur blocks.
- State level and interstate level training programmes to farmers covered in Anamalai, Annur, Karamadai, Kinatukadavu and Thondamathur blocks.
- Exposure visits in all blocks.

4.1.9.3.Budget

It is proposed to incur **₹. 18.35** lakhs over a period of five years with the finance facilities under the NADP and other sources.

4.1.9.4.Expected outcome

The project will result 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.

4.1.9.5.Implementing Agency

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

Table 4.9. Training of Farmers in Coimbatore District

(Rs. in Lakhs)

Sl. No.	Cafeteria of Activities	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
	District Level															
	Training of Farmers															
1	Training of 536 Groups of Seed Village Farmers in quality Seed Production technology.	Nos.	0.1	B12, B4, B3, B1, B2	0	0.00	5	0.50	0	0.00	0	0.00	0	0.00	5	0.50
2	Training of Farmers under Mission Soil Health Card	Nos.	0.15	B12, B4, B3, B1, B2	0	0.00	5	0.75	0	0.00	0	0.00	0	0.00	5	0.75
3	With in the district training of Farmers	Nos.	0.1	B12, B4, B3, B1, B2	0	0.00	5	0.50	0	0.00	0	0.00	0	0.00	5	0.50
4	With in the State training of Farmers	Nos.	1.2	B12,B4,B3,B1,B2	0	0.00	5	6.00	0	0.00	0	0.00	0	0.00	5	6.00
	Training of Farmers With in the district															
5	Major & Minor Millets	Nos.	0.1	B4,B10,B11	0	0.00	3	0.30	2	0.20	2	0.20	2	0.20	9	0.90
6	Organic cultivation practices	Nos.	0.1	B1,B2	0	0.00	2	0.20	0	0.00	0	0.00	0	0.00	2	0.20
7	Paddy	Nos.	0.1	B12,B9,B6,B5,B3,	0	0.00	5	0.50	0	0.00	0	0.00	0	0.00	5	0.50
	Exposure visit of Farmers															
8	With in the district exposure visit	Nos.	0.15	All Blocks	12	1.80	12	1.80	12	1.80	12	1.80	12	1.80	60	9.00
	Grand total					**1.80**		**10.55**		**2.00**		**2.00**		**2.00**		**18.35**

B1 – Anaimalai, B2 – Annur, B3 – Karamadai, B4 – Kinathukadavu, B5 – Madukarai, B6 – P.N.Palayam, B7 – Pollachi(N), B8 – Pollachi(S), B9 – S.S.Kulam, B10 – Sultanpet, B11 – Sulur, B12 – Thondamuthur

4.1.10. Infrastructure

4.1.10.1. 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 and sent to 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. The overall budget required to establish seed testing laboratory in order to maintain the quality of seeds are **₹. 1048.00 lakhs.**

4.1.10.2.The major interventions are,

- Construction of IAEC with vehicle shed covered in S.S.Kulam, Sultanpet, P.N.Palayam and Kinatukadavu blocks.
- Office furnishings and other amenities in all blocks.

4.1.10.3. Budget

It is proposed to incur **₹.1598** lakhs over a period of five years with the finance facilities under the NADP and other sources as given in Table 4.10.

4.1.10.4. Implementing Agency

Department of Agriculture will implement the project

Table 4.10. Infrastructure Development in Coimbatore District

(₹. 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	Construction of Integrated Agricultural Extension Centre with vehicle shed and compound wall	Nos.	25000000	B9,B10, B6,B4	0	0.00	1	250.00	2	500.00	1	250.00	0	0.00	4	1000.00
2	Office Furnishings and other amenities	Nos.	200000	All Blocks	0	0.00	12	24.00	0	0.00	12	24.00	0	0.00	24	48.00
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					**0.00**		**274.00**		**550.00**		**774.00**		**0.00**		**1598.00**

B1 – Anaimalai, B2 – Annur, B3 – Karamadai, B4 – Kinathukadavu, B5 – Madukarai, B6 – P.N.Palayam, B7 – Pollachi(N), B8 – Pollachi(S), B9 – S.S.Kulam, B10 – Sultanpet, B11 – Sulur, B12 – Thondamuthur

4.1.11. 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 may be due to decline in organic matter content of the soil of the State leading 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 by providing subsidy for establishment of vermicompost units with training in vermicompost.

4.1.11.1. Project Component:

- Distribution of soil health card covered in all blocks of Coimbatore district.
- Permanent vermin compost units covered in all blocks of Coimbatore district.
- HDPE vermin compost units covered in all blocks of Coimbatore district.
- Green manuring covered in all blocks of Coimbatore district.

4.1.11.2. Budget:

Enhancing soil health by distributing enriched farm yard manure, micro-nutrient mixture, gypsum, bio-fertilizers, *etc.* is essential to maximize profitability. The overall budget to undertake the various interventions in Coimbatore district is **₹. 519.16** lakhs.

4.1.11.3. 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 also in the future.

4.1.11.4. Implementing Agency:

The projects will be implemented by the Department of Agriculture.

Table 4.11. Soil Health Management in Coimbatore District

(₹. 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
	Soil Health Management															
1	Permanent Vermi compost units	Cluster Nos.	50000	All Blocks	0	0.00	12	6.00	12	6.00	12	6.00	12	6.00	48	24.00
2	HDPE Vermi compost units	Kit Nos	12000	All Blocks	0	0.00	12	1.44	12	1.44	12	1.44	12	1.44	48	5.76
3	Green Manuring	Nos	4000	All Blocks	935	37.40	1025	41.00	1025	41.00	1025	41.00	1025	41.00	5035	201.40
4	Distribution of Soil Health Card	Ha	300	All Blocks	0	0.00	24000	72.00	24000	72.00	24000	72.00	24000	72.00	96000	288.00
	Grand total					**37.40**		**120.44**		**120.44**		**120.44**		**120.44**		**519.16**

B1 – Anaimalai, B2 – Annur, B3 – Karamadai, B4 – Kinathukadavu, B5 – Madukarai, B6 – P.N.Palayam, B7 – Pollachi(N), B8 – Pollachi(S), B9 – S.S.Kulam, B10 – Sultanpet, B11 – Sulur, B12 – Thondamuthur

4.1.12. Rainfed Area Development

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 opportunities for faster agricultural growth compared to irrigated areas that have reached a plateau. With proper management, rainfed areas have the potential of contributing a larger share to food grain production. Increasing of agricultural productivity of rainfed areas in a sustainable manner can be done by adopting appropriate farming system based approaches Restoration of confidence in rainfed agriculture by creating sustained employment opportunities through improved on-farm technologies and cultivation practices would enhance of farmer's income and livelihood support for reduction of poverty in rainfed areas.

4.1.12.1. Project components

- Milch Animal (1 no) + 1 ha cropping system with inter crop & border plantation like castor/sesbania etc. covered in all blocks of Coimbatore district.
- Creation of Farm pond covered in all blocks of Coimbatore district except Anamalai block.
- Promotion of Farmers club for Sustainable Dryland Agriculture covered in all blocks of Coimbatore district.

4.1.12.2. Budget

It is proposed to incur **₹. 2017.55** lakhs over a period of five years with the finance facilities under the NADP and other sources.

4.1.12.3. Expected outcome

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

4.1.12.4. Implementing Agency

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

Table 4.12. Rainfed Area Development in Coimbatore District

(₹. 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	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	All blocks	600	330.00	100	55.00	500	275.00	400	220.00	200	110.00	1800	990.00
2	Creation of Farm pond	Nos.	0.75	All Blocks Except B1	0	0.00	11	8.25	0	0.00	0	0.00	0	0.00	11	8.25
3	Promotion of Farmers club for Sustainable Dryland Agriculture	Cluster	84.9415	All blocks	0	0.00	12	1019.30	0	0.00	0	0.00	0	0.00	12	1019.30
	Grand total					**330.00**		**1082.55**		**275.00**		**220.00**		**110.00**		**2017.55**

B1 – Anaimalai, B2 – Annur, B3 – Karamadai, B4 – Kinathukadavu, B5 – Madukarai, B6 – P.N.Palayam, B7 – Pollachi(N), B8 – Pollachi(S), B9 – S.S.Kulam, B10 – Sultanpet, B11 – Sulur, B12 – Thondamuthur

4.1.13. 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 population below the economic injury level. IPM used in agriculture, horticulture, forestry, human habitations, preventive conservation and general pest control, include 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 pests management employe a 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.

4.1.13.1. Interventions

1. Farmers Field Schools (FFS) covered in all blocks of Coimbatore district.
2. Field days covered in all blocks of Coimbatore district.
3. Integrated Pest Management Villages covered in all blocks of Coimbatore district.
4. Establishment of Coconut Parasite Breeding Station covered in all blocks of Coimbatore district.
5. Establishment of Sugar cane Parasite Breeding Station covered in all blocks of Coimbatore district.
6. Establishment of Bio-pesticide production unit covered in all blocks of Coimbatore district.
7. IPM School covered in all blocks of Coimbatore district.

4.1.13.2. Budget

It is proposed to incur **₹.9.60** lakhs over a period of five years with the finance facilities under the NADP and other sources.

4.1.13.3. Implementing Agency

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

Table 4.13. Integrated Pest Management in Coimbatore District

(₹. in lakhs)

Sl. No.	Interventions	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	Farmers Field Schools (FFS)	Nos.	20000	All blocks	0	0	12	2.4	0	0	0	0	12	2.4	24	4.8
2	Field days	No.	20000	All blocks	0	0	12	2.4	0	0	0	0	12	2.4	24	4.8
	Grand total					**0.00**		**4.80**		**0.00**		**0.00**		**4.80**		**9.60**

B1 – Anaimalai, B2 – Annur, B3 – Karamadai, B4 – Kinathukadavu, B5 – Madukarai, B6 – P.N.Palayam, B7 – Pollachi(N), B8 – Pollachi(S), B9 – S.S.Kulam, B10 – Sultanpet, B11 – Sulur, B12 – Thondamuthur

4.1.14. 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 farmer's field of Coimbatore district.

4.1.14.1. Project Component:

- Distribution of tractor, mini tractor and power tiller covered in all blocks of Coimbatore district except P.N.Palayam and S.S.Kulam block.
- Distribution of rotavator, laser leveler covered in Anamalai and Thondamathur block.
- Distribution of pump set, mobile sprinklers, rain guns and PVC Pipes to carry irrigation water from source to field covered in all blocks of Coimbatore district.
- Solar light trap covered in all blocks of Coimbatore district.
- Power operated sprayer covered in all blocks of Coimbatore district.
- Distribution of Tarpaulins covered in all blocks of Coimbatore district.

4.1.14.2. 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 **₹. 1600.68** lakhs.

4.1.14.3. 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.

4.1.14.4. Implementing Agency:

The projects will be implemented by the Department of Agriculture.

Table 4.14. Farm Machineries in Coimbatore District

(₹. 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
	Farm Mechanization															
1	Solar light trap	No.	4000	All Blocks	600	24.00	120	4.80	120	4.80	120	4.80	120	4.80	1080	43.20
2	Battery operated sprayer	Nos.	4000	All Blocks	24	1.92	60	4.80	60	4.80	60	4.80	60	4.80	264	21.12
3	Distribution of Laser leveller	Nos	380000	B1,B12	0	0.00	4	15.20	0	0.00	0	0.00	2	7.60	6	22.80
4	Distribution of Mini Tractor	Nos	300000	All Blocks	0	0.00	24	72.00	24	72.00	0	0.00	24	72.00	72	216.00
5	Distribution of Mobile Sprinklers	Ha	30000	All Blocks	60	18.00	120	36.00	120	36.00	120	36.00	120	36.00	540	162.00
6	Distribution of Powertiller	Nos	150000	B1,B12	20	30.00	10	15.00	10	15.00	10	15.00	10	15.00	60	90.00
7	Distribution of Pumpset	Nos	30000	All Blocks	0	0.00	1	0.30	1	0.30	0	0.00	0	0.00	2	0.60
8	Distribution of Rain guns	Ha	40000	All Blocks	60	36.00	120	72.00	120	72.00	120	72.00	120	72.00	540	324.00
9	Distribution of Rotavator	Nos	80000	All Blocks	0	0.00	12	9.60	0	0.00	0	0.00	12	9.60	24	19.20
10	Distribution of Tarpaulins	Nos	8000	All Blocks	0	0.00	24	1.92	24	1.92	0	0.00	24	1.92	72	5.76
11	Distribution of Tractor	Nos	600000	All Blocks Except B6,B9	0	0.00	20	120.00	20	120.00	20	120.00	20	120.00	80	480.00
12	PVC Pipes to carry Irrigation water from source to field	Unit	40000	All Blocks	60	24.00	120	48.00	120	48.00	120	48.00	120	48.00	540	216.00
	Grand total					**133.92**		**399.62**		**374.82**		**300.60**		**391.72**		**1600.68**

B1 – Anaimalai, B2 – Annur, B3 – Karamadai, B4 – Kinathukadavu, B5 – Madukarai, B6 – P.N.Palayam, B7 – Pollachi(N), B8 – Pollachi(S), B9 – S.S.Kulam, B10 – Sultanpet, B11 – Sulur, B12 – Thondamuthur

4.1.15. Information Technology in Agriculture

Agriculture is a 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 must 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.

4.1.15.1. 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 timely 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 for taking decisions. At present, the farmer depends 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 input devices, output devices, processors, storage devices, software, networking devices, transmission media and other accessories covered in all blocks of Coimbatore district.

4.1.15.2. Budget

It is proposed to incur **₹.98.76** lakhs over a period of five years with the finance facilities under the NADP and other sources.

4.1.15.3. 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

4.1.15.4. Implementing Agency

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

Table 4.15. Information Technology in Coimbatore District

(₹. 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	Procurement of Hardware for replacement of old hardware	Nos	50000	All Blocks	0	0.00	12	6.00	0	0.00	12	6.00	0	0.00	24	12.00
2	Connectivity Charges	Nos	11000	All Blocks	0	0.00	12	1.32	12	1.32	12	1.32	0	0.00	36	3.96
3	Printer cum Scanner	Nos	20000	All Blocks	0	0.00	12	2.40	0	0.00	0	0.00	0	0.00	12	2.40
4	UPS and Electrical Accessories	Nos	35000	All Blocks	0	0.00	12	4.20	0	0.00	0	0.00	0	0.00	12	4.20
5	Xerox machine	Nos	75000	All Blocks	0	0.00	12	9.00	0	0.00	0	0.00	0	0.00	12	9.00
6	Laptop/Desktop	Nos	50000	All Blocks	0	0.00	12	6.00	0	0.00	0	0.00	0	0.00	12	6.00
7	Anti -virus software	Nos	2500	All Blocks	0	0.00	12	0.30	0	0.00	0	0.00	0	0.00	12	0.30
8	Television	Nos	100000	All Blocks	0	0.00	12	12.00	0	0.00	0	0.00	0	0.00	12	12.00
9	Colour printer	Nos	15000	All Blocks	0	0.00	12	1.80	0	0.00	0	0.00	0	0.00	12	1.80
10	4G Internet - Dongle	Nos	2500	All Blocks	0	0.00	12	0.30	0	0.00	0	0.00	0	0.00	12	0.30
11	**Equipments for Documentation**															
a	Handycam	Nos	30000	All Blocks	0	0.00	12	3.60	0	0.00	0	0.00	0	0.00	12	3.60
b	Camera	Nos	25000	All Blocks	0	0.00	12	3.00	0	0.00	0	0.00	0	0.00	12	3.00
c	GPS instrument	Nos	20000	All Blocks	0	0.00	12	2.40	0	0.00	0	0.00	0	0.00	12	2.40
d	Android mobile	Nos	15000	All Blocks	0	0.00	12	1.80	0	0.00	0	0.00	0	0.00	12	1.80
e	External Hard disk	Nos	5000	All Blocks	0	0.00	12	0.60	0	0.00	0	0.00	0	0.00	12	0.60
12	Audio - visual Aids	Nos	150000	All Blocks	0	0.00	12	18.00	0	0.00	0	0.00	0	0.00	12	18.00
	LCD projector	Nos	75000	All Blocks	0	0.00	12	9.00	0	0.00	0	0.00	0	0.00	12	9.00
	Pico Projector	Nos	35000	All Blocks	0	0.00	12	4.20	0	0.00	0	0.00	0	0.00	12	4.20
13	Air conditioner for computer room	Nos	40000	All Blocks	0	0.00	12	4.80	0	0.00	0	0.00	0	0.00	12	4.80
	Grand total					**0.00**		**90.12**		**1.32**		**7.32**		**0.00**		**98.76**

B1 – Anaimalai, B2 – Annur, B3 – Karamadai, B4 – Kinathukadavu, B5 – Madukarai, B6 – P.N.Palayam, B7 – Pollachi(N), B8 – Pollachi(S), B9 – S.S.Kulam, B10 – Sultanpet, B11 – Sulur, B12 – Thondamuthur

Table 4.16 Budget Requirement for Agriculture Sector

(Rs. in Lakhs)

Sl. No.	Crops	2017-18	2018-19	2019-20	2020-21	2021-22	Total
1	Paddy	6.60	17.65	17.65	17.65	18.10	77.65
2	Millets	132.70	230.36	222.86	222.86	222.86	1031.64
3	Pulses	147.35	192.20	192.20	192.19	192.19	916.13
4	Oilseeds	176.02	233.70	215.38	216.98	212.98	1055.06
5	Oilpalm	38.98	32.45	33.76	30.62	30.56	166.37
6	Cotton	4.71	7.15	7.15	7.15	7.15	33.31
7	Sugarcane	43.40	79.44	42.24	42.24	79.44	286.76
8	Coconut	651.22	1312.19	709.54	689.04	675.54	4037.54
9	Training	1.80	10.55	2.00	2.00	2.00	18.35
10	Infrastructure	0	274.00	550.00	774.00	0.00	1598.00
11	Soil Health Management	37.40	120.44	120.44	120.44	120.44	519.16
12	Rainfed Area Development	330.00	1082.55	275.00	220.00	110.00	2017.55
13	Integrated Pest Management	0.00	4.80	0.00	0.00	4.80	9.60
14	Farm Mechanization	133.92	399.62	374.82	300.60	391.72	1600.68
15	Strengthening of State Seed Farm	0.00	0.00	0.00	0.00	0.00	0.00
16	Agriculture Information Technology	0.00	90.12	1.32	7.32	0.00	98.76
	Grand total	**1704.10**	**4087.22**	**2764.36**	**2843.09**	**2067.78**	**13466.56**

4.1.16. TNAU Research Infrastructure and Development

The major thrust was given on creation of infrastructure facilities for enhancing the productivity of major crops grown in the State, creation of value addition facilities, skill development through hands-on training to farmers and women and establishing modern nurseries for production and supply of genuine planting materials in flowers and spice crops.

4.1.16.1. Research Infrastructure

4.1.16.1.1. Establishment of Agribusiness Incubator cum Accelerator

India is blessed with varied agro-climatic zones and produces food to one sixth population of the world and aiming to achieve four per cent annual growth consistently. In order to achieve the above growth, there is a need for more number of agripreneurs and startups who could invest in agriculture. However, the macro business environment supporting the growth of startup is not conducive to the new agripreneurs. To bridge the above gaps, the Government of India (GOI) has implemented various innovation based entrepreneurial promotion schemes viz., Make in India, Startup India, Standup India, Atal Innovation Mission (AIM) and Digital India movements. In this regard, there is an urgent need to establish the agribusiness incubation units in different centres of TNAU that will enhance the agribusiness activities in Tamil Nadu.

4.1.16.1.2. Establishment of bioinoculant production units for enhancing productivity of pulses in Northern and Southern districts of Tamil Nadu

Microbial inoculants including bio fertilizers and bio control agents are cheap and potential inputs that would increase the yield of pulse crops especially in dry land regions. Coating the seeds with bio inoculants is a novel approach to achieve seedlings with high vigour. The application of bio fertilizers like *Rhizobium* and Pink Pigmented Facultative Methylotrophs (PPFM) and use of bio contol agents like *Trichoderma spp* and *Pseudomonas fluorescens* can be effectively used for controlling soil borne pathogens in pulse crops through seed treatment and soil application. It was already demonstrated through various field studies that seed inoculation of bioinoculants and biocontrol agents can improve the yield to a tune of 20% with an additional saving of 25 per cent of fertilizer and fungicide inputs. However, farmers are found to have low adoption levels in the use of these bio inputs due to the inadequate availability. Hence, the establishment of new bio fertilizer and bio control production units is essential to popularize and meet out the demand of these bio inputs in Northern and Southern districts of Tamil Nadu. Pulse crops especially black gram and green gram grown in dry areas will be covered in all blocks of Coimbatore district.

4.1.16.1.3. Production of elite planting materials in flowers and spices by establishment of modern nurseries

Mass propagation through innovative techniques and supply of elite planting materials of jasmine, tuberose and other ornamentals through improved technologies will help to meet demand from flower growers for quality planting materials. The rhizomatous crops viz., turmeric and ginger are propagated through rhizomes. There is scarcity for better quality seed rhizomes. Production of turmeric and ginger transplants and distribution to the farmers for planting will mitigate these problems. Recently a rapid propagation method through protray system using single node bud has been standardized for turmeric and ginger in TNAU, which brings down the cost of planting materials. Apart from supply of quality planting materials to meet the demand-gap in these crops, training offered on hi-tech production and propagation practices will definitely pave way for upliftment of the farming community, and this is to be covered in all blocks of Coimbatore district.

4.1.16.1.4.Strengthening research infrastructure in regional research stations of Tamil Nadu Agricultural University

Capacity building in an Institute like in TNAU needs guidance and support to those who are associated with the process. There is no doubt that TNAU remains as the one of the leading State Agricultural Universities (SAU) in India, its growth is continuous due to the support it receives from the Tamil Nadu Government. Having the goal of “doubling the yield and trebling the income” of Tamil Nadu farmers, Tamil Nadu Government is supporting TNAU in all possible ways for the capacity and capability building by improving infrastructure facilities of TNAU, located all over the state. The Research Stations of TNAU need strengthening of their research infrastructure to accommodate students from the teaching campuses to do their thesis research in sub-stations after completing their course work. The major infrastructural improvements required at the research stations include: 1) Field cum laboratory facilities and 2) Facilities for storing experimental materials. The proposed budget outlay is Rs. 900 lakhs covered in all blocks of Coimbatore district.

4.1.16.1.5.Biocontrol laboratory

The main objective of bio-control laboratories is to control pests/disease through the use of natural predators and biofertilizers instead of using chemical pesticides. To encourage the use of bio fertilizers / bio pesticide, Govt. of Tamil Nadu has established few bio-control laboratories. These labs produce biofertilizers like Azospirillum, Phosphobacteria and VAM and bio-pesticides viz.*Trichoderma, Pseudomonas*, *Beauveria* and *Verticilium* in

their laboratories and supplied to the farmers of various regions. The proposed intervention is also focused on establishment of bio control laboratories at stations for research and development covered in all blocks of Coimbatore district.

4.1.16.1.6.Strengthening of TNAU Botanical garden

The TNAU botanical garden, with more than 800 species of flora, draws a lot of school children, college students and also public. The garden is almost 40 years old with variety of plants. A lot of children play in the park daily, and schoolchildren from across the city visit the botanical garden for excursions. Species conservation is mentioned in the mission statements of most major botanical gardens, yet the actual conservation value of existing ex situ tree collections is low. The garden has to be face lifted with different types of slides, butterfly swings, spring ducks and new park benches. With the view of these objectives, the project is proposed to strengthen the Botanical garden with plant and non-plant components.

4.1.16.1.7.Establishment of DATA Centre

A data center is a facility used to house computer systems and associated components, such as telecommunications and storage systems. It generally includes redundant or backup power supplies, redundant data communications connections, environmental controls (e.g., air conditioning, fire suppression) and various security devices. Large data centers are industrial scale operations using as much electricity as a small town. Collection, processing and interpretation of market data will help in assessing the market price and to decide the price of the commodities covered in all blocks of Coimbatore district.

4.1.16.1.8.Rice Technology Complex: Establishment of Pilot Plant for Rice Milling, Processing and Value Addition at Tamil Nadu Agricultural University, Coimbatore

A pilot plant with a processing capacity of 0.5 tonnes/ha for milling, processing and value addition of paddy is proposed to be set up in Tamil Nadu Agricultural University, Coimbatore. It will have milling and processing components. The milling unit will consist of cleaner, grader, rubber roll sheller, gravity separator, whitener, polisher, and packaging machine all of which are inter-connected by elevators and chutes for seamless movement of grain from end to end. The processing unit is aimed at producing a range of value added products such as brown rice, puffed rice, flaked rice and rice flour. Accordingly, the processing unit will be made of puff making machine, flaking machine, pounding machine, twin screw extruders and pulverizes and packaging machines. Such a modern rice processing facility will be a valuable aid in disseminating the

latest post harvest technologies among the various stake-holders including students covered in all blocks of Coimbatore district.

4.1.16.1.9.Cattle Breeding Farm

India has the largest Cattle and Buffalo population in the world. Considerable importance was given to the Livestock Development Programme for increasing the production of major products such as milk, meat, wool and eggs to increase the income of the economically weaker sections of the community i.e. small farmers, marginal farmers and Agricultural Labourers covered in all blocks of Coimbatore district.

4.1.16.1.10.Establishment of Cold storage

Roughly 30% of food that is consumed in developing countries is perishable. Cold storage facilities are crucial to minimize post-harvest losses; however, losses occur at every step in the post-harvest cycle, and therefore cold storages cannot be considered as independent solutions to prevent post-harvest spoilage but as one component that needs to be integrated in a cold chain network from the point of harvest to the point of purchase by the end consumer. Cooling and cold storage are very energy intensive and expensive undertakings that require reliable electricity supply. Hence, unbroken cold chains and the use of appropriate cold storage facilities are generally not accessible for small-scale farmers covered in all blocks of Coimbatore district.

4.1.16.1.11.Automated nematode extraction units

Much progress has been made in developing efficient procedures for extracting nematodes from soil, but investigations of nematode numbers as related to crop damage and other studies dealing with population dynamics are frequently of limited value because of unmanageable variation in sampling and extraction**.** A major problem with all extraction procedures is obtaining a representative sub sample of larger soil samples collected from plots or fields covered in Annur block of Coimbatore district.

4.1.16.1.12.Establishment of research facilities for improving photosynthesis in rice, pulses and oil seeds

Towards improving photosynthetic efficiency in major crops like rice, black gram, green gram, groundnut and sunflower, in this project, it is proposed to evaluate the cultivars, mutants, genotypes and other relevant germplasm for photosynthetic efficiency and capacity. The research has to be performing at TNAU and other centres of TNAU analyzing that architecture of plant, leaf morpho-anatomical traits, leaf canopy structure, leaf and flag leaf photosynthesis and spike/pod traits are important contributors of improved

photosynthetic efficiency during seed/ grain filling stage of above crops. The preliminary results from analysis of leaf traits and developmental aspects of selected lines developed by TNAU identified several unique features revealing the underpinning developmental programs connected to the observed superior photosynthesis phenotypes. This project is developed to exploit these observations and the unique resources developed by TNAU and to create new opportunities in the form of discovery of new gene targets for improving photosynthetic efficiency in major crops covered in all blocks of Coimbatore district.

4.1.16.1.13.Establishment of Pilot Water Soluble Fertilizer Production Units

Currently, adoption to different precision micro irrigation methods and high yielding varieties more importantly require water soluble fertilizers for efficient and balanced use of fertilizer nutrients. Hence, demand for the water soluble fertilizers is increasing as the area under micro-irrigation is on the increase. This has focused attention on water soluble fertilizers. At present most of water soluble fertilizers are imported and supplied to farmers at high cost. Nutrient wise when compared to conventional straight fertilizers the cost of nutrients in water soluble fertilizers is 10 to 20 times high. Under these circumstances, it is necessary to adopt chemical technologies that can demonstrate production of water soluble fertilizers using low cost materials in low investment industrial units. In this back ground, Tamil Nadu Agricultural University proposes to establish such a low cost pilot water soluble production units, so that its design and process can be taken up as a model for establishing similar units in the marketing organizations of the State as well as by the entrepreneurs. To establish water soluble fertilizer production unit a budget outlay of Rs. 170 lakhs is proposed.

4.1.16.1.14.Establishment of Microbial Type Culture Collection Facility and Mycological Museum

The main objectives of Microbial Type Culture Collection Facility are to act as a repository, to supply authentic fungal cultures and identification of fungi as well as to provide related services to farmers, technocrats and scientists mycologists and plant pathologists working in research Institutions, Universities and Industries for teaching, demonstration and investigational purposes covered in all blocks of Coimbatore district.

Activities

1. Conservation, preservation and maintenance
2. Identification services of fungal cultures
3. Supply and deposition of authentic fungal cultures

4. Taxonomic Investigations

5. Documentation of the fungal cultures.

Services

1. Identification of fungal and bacterial cultures

2. Supply of fungal cultures

3. Deposition of cultures

Facilities for identification of all groups of pure fungal cultures and plant pathogenic bacteria will be created in Microbial Type Culture Collection Facility. In this, different groups of fungi viz., Oomycetes, Zygomycetes, Ascomycetes and Deuteromycetes and plant pathogenic bacteria will be identified for the cultures received from researchers and students of different parts of the country. The project is proposed with a budget outlay of Rs. 330 lakhs.

4.1.16.1.15.Establishment of tissue culture facility for supplying quality planting material in coconut to the farmers

Coconut is one of the remunerative crops in the tropics. Increased consumption of tender coconuts, increased use of coconut oil for culinary purposes and development of other industrial products from various parts of coconut tree/fruits necessitates significant increase in coconut production. Among the various strategies proposed for increasing coconut production in the country, supply of quality seedlings stands first towards establishment of elite gardens and thereby to increase the coconut productivity and production. As of now, only 30% of the seedling requirement by the farmers is met due to low rate of multiplication of seedlings (1:1) from coconuts. Coconut is propagated mainly by seed which is highly variable and quite slow since one plant is obtained from one seed. Hence, any further increase in seedling supply depends on development of new technologies to increase in the rate of multiplication which is possible through micro-propagation/tissue culture. Studies at University of Philippines, Las Banos demonstrated the feasibility of using micro-propagation technique in rapid multiplication of elite cultivars in coconut. This proposal is aimed at establishing infrastructure for a dedicated infrastructure and tissue culture facility at Tamil Nadu Agricultural University, Coimbatore for developing a reproducible and cost effective technology for mass multiplication of elite coconut genotypes and thereby to reduce the gap between demand and supply of coconut seedling. The project is proposed with a budget outlay of Rs. 1070 Lakhs covered in all blocks of Coimbatore district.

4.1.16.2. Production and Growth

4.1.16.2.1. Sustainable food cum fodder supply through mixed cropping system in rainfed areas

India has the rich tradition of blending crop and animal agriculture to ensure a sustainable livelihood to millions of rural poor. Since time immemorial, both of these rural enterprises have not only been supplementary, but also complementary with the output of one becoming the input for the other, having numerous forward and backward linkages between them. Despite considerable increases in productivity through genetic improvement of Indian livestock the productivity remains low, attributed due to malnutrition, under-nutrition or both. In order to enhance the milk production and meet the future demand, livestock's should be fed with nutritious green fodder throughout the year covered in all blocks of Coimbatore district.

4.1.16.2.2. Pilot promotion of homestead nutritional and medicinal garden in selected districts of Tamil Nadu

An assessment of Homestead Gardens in four districts of Tamil Nadu viz., Coimbatore, Kanyakumari, Trichy and Tirunelveli will be made in association with the Department of Horticulture and categorized into types of garden depending on the area and integration of crops. Pilot promotion of Homestead garden with nutritional vegetables and medicinal herbs of local importance will be established in these four districts to create awareness on nutritional, medicinal value and economic value of vegetables and medicinal herbs. Vegetables and medicinal herbs will be selected based on nutritive and medicinal value besides the economic value for marketing in local shandy. Through this project, malnutrition can be alleviated in rural region besides encouraging the people to adopt preventive health care management. Through this, the amount spent towards the purchase of vegetables and expenses towards the health care will be reduced. The excess produce can be converted into value added products and this is to be covered in all blocks of Coimbatore district.

4.1.16.2.3. Site Specific Technological Intervention on Soil, Water and Crop Management

Tamil Nadu agricultural university is continuously developing different technologies. However, success rate of these technologies are high when they adopted at right time, right location and for right problem. Presently, for want of increased technological efficiency and sustained output, we need to plan for locations specific options instead of large scale

adoptions. Agricultural production system is not a single technology dependent and need right combination of different technologies. Hence, integration of proven crop production technologies will be done and demonstrated to increase the productivity of the land, water and crop for specific location. This project is aimed to develop and disseminate technological combination at Micro Agro Climate Zone (MACZ) level (macro unit) which will be validated at farm level (micro unit). Each one MACZ viz., Thanjavur (Cauvery Delta Zone), Dindigul (Western Zone) and Sivagangai (Southern zone) districts will be adapted and demonstrated for irrigated wet land, irrigated dry land and rainfed eco system technologies, respectively covered in all blocks of Coimbatore district.

4.1.16.2.4. Automated Bio-inoculants production Facilities

Bioinoculants play an important role in the management of biotic and abiotic stress. Hence, in Indian perspective, there is a needful demand to increase productivity of bioinnoculants for pest management and to improve the soil health and plant health leading to a sustainable agriculture. However, the lack of quality bioinoculants in time, availability of spurious bioproducts in the market, lack of quality regulation of bioinnoculants and the lack of awareness among the farming community warrants for the establishment of automated pilot plant facility for large scale production and supply of quality bioinnoculants including *Trichoderma viride*, *Pseudomonas fluorscens*, *Bacillus spp*., *Beauveria bassiana*, Rhizobium and PPFM. These Pilot plant facilities proposed in four different locations in Tamil Nadu will help to create awareness on the use of bioinoculants in Tamil Nadu among the farmers, agripreneurs, extension functionaries and other stakeholders covered in all blocks of Coimbatore district.

4.1.16.2.5. Automated Mushroom Spawn Production Facilities

Microbial inoculants like Trichoderma, Pseudomonas (PGPR), Bacillus spp, nitrogen fixing, phosphate solubilizing and cellulolytic organisms have been well studied for their potential use in crop production. With the increasing demand for quality spawn, and quality bioinoculants, it is very much imperative to set up “Large Scale Pilot Plant Facilities for Automated Bioinoculants and Mushroom Spawn Production”. In toto, the project proposal aims to accomplish large scale supply quality bioinoculants and mushroom spawn to promote and encourage farmers of Tamil Nadu on organic sustainable farming and crop residue management through mushroom growing and compost production. The outcome of the project will be a boon to revolutionize primary and secondary agriculture in Tamil Nadu towards the production of protein rich food, quality feed and bioinoculants enriched compost

simply, by way of crop residue management in agricultural, horticultural and forestry eco-systems. Hence, the scheme proposal is submitted for funding under NADP with a total budget outlay of Rs.15 lakhs covered in Annur block of Coimbatore district.

4.1.16.2.6. Seed production of maize and millets through cluster approach to achieve food and nutritional security in Tamil Nadu

Millet seeds are not given much care in terms of their production, processing and labeling. In most cases they are produced in rainfed conditions. It is envisaged that unless the knowledge on quality seed is imparted to the producers, the use of quality millet seeds will not have much awareness. The knowledge of quality seeds will also improve seed price at farm doorstep and encourage the farmers to produce quality seeds. Simple techniques like seed treatment, maintaining right plant population per unit area, roguing of off types, harvesting at right stage, processing using simple hand held round holed sieves and care in drying and storage will improve seed quality. The seeds can be produced by marginal farmers and the household women can be engaged in processing and maintaining seed quality covered in all blocks of Coimbatore district.

4.1.16.2.7. Quick test kit for pesticide residue analysis

Pesticide residues in food are hazardous to our health. Determining whether there are pesticide residues in fruits, grains, vegetables, soil and water is important in making our food safe and healthy. The test kit can detect three types of pesticide compounds: organophosphates, carbamates, and pyrethroids. It uses four types of solutions (Solution 1 and 2 for detecting organophosphates; Solution 3 and 4 for detecting carbamates) and an ultraviolet (UV) flashlight for detecting pyrethroids. The kit gave a higher level of reliability. These kits can be used in the field, in markets or in the home. To address this concern, quick-test kits have been developed that can detect residues of pesticides, herbicides and fungicides. The project is proposed at the cost of Rs. 100 lakhs covered in all blocks of Coimbatore district.

4.1.16.2.8. Remote sensing-based information for crop management and insurance in Tamil Nadu

With recent advances, SAR based crop observation favours crop monitoring during the monsoonal cropping seasons with high spatial and temporal resolution. TNAU with its experiences in these areas of advanced earth monitoring, can act as a nodal agency in crop monitoring and disaster management to support the state and the Central government. The efficiency of Remote sensing technology in mapping rice area and estimating yields has

been successfully demonstrated by Tamil Nadu Agricultural University through the annual rice area maps, seasonality maps, rice phenology maps and finally yield maps at district and block level with high accuracies of 89-94% for rice area and 87-96% for rice yield obtained during the 2015-16. With these points in view the project on 'Remote Sensing-Based Information for Crop Management and Insurance in Tamil Nadu' is proposed to sustain rice monitoring and to develop protocols for major crops to derive information for Crop management, yield estimation, loss assessment and insurances for the whole state thereby to facilitate the farmers, extension workers, crop insurers and policy makers through a dynamic decision support system covered in all blocks of Coimbatore district.

4.1.16.2.9. Supply chain management in tomato and onion

Tomato and onion are the two major vegetables which are imperative ingredient of Indian cuisine. In India, tomato is cultivated over an area of 8.65 lakh ha with a total production of 16 million tonnes and productivity of 19.5 mt/ ha. Tomato cultivation in Tamil Nadu is mainly concentrated in Krishnagiri, Dharmapuri, Coimbatore, Theni and Dindigul districts with marketing outlets at Ottanchatram, Madurai, Coimbatore and Chennai. The national average yield of tomato is far below the potential yield of 50 t/ ha due to various production constraints like improper choice of varieties, negligence in nursery management, non-adoption of Site Specific Nutrient Management, improper pest and disease management, seasonal variations etc., Instability of production, due to the above factors led to demand and supply gap which leads to price fluctuations from Rs. 3.00 to 50.00 per Kg at consumer point. The green tomatoes can be stored for 4-5 weeks at 12-15^{0}C and 85-90 % relative humidity. As that of tomato, onion is also produced 194.03 lakh tonnes in India from an area of 12.03 lakh ha with the productivity of 16.13 t/ha during the year 2013-14. Maharashtra is the leading producer of onion in India which contributes 30% followed by Madhya Pradesh (15%) and Karnataka (11%). In Tamil Nadu, Perambalur, Trichy, Dindigul, Erode, Namakkal, Tiruppur and Tirunelveli are the major onion growing districts. Small onion occupies nearly 75 per cent of the total onion produced in Tamil Nadu with a productivity of 12 tonnes per hectare. Marketing constraints includes unpredictability of the arrivals and prices of onion. The fluctuation in price of tomato and onion really affects the income of the farmers as well as the consumer's interest to buy them. Hence, it is very much essential to find out ways and means to enhance the productivity, stabilize the price to safeguard the interest of producers and also the consumers. In this contest, this proposal is proposed.

4.1.16.2.10. Maximization of yield and profit of cucurbitaceous vegetables under protected cultivation and popularization of the technology through farmers' participatory approach

Among the vegetables, cucurbits are high value commercial crops and relatively better adopted by small and marginal farmers as compared to other crops. Generally cucurbits include vine crops like bitter gourd, snake gourd, ridge gourd, bottle gourd, ash gourd, coccinia and others belonging to the family cucurbitaceae. They are grown in the backyards mostly yielding low with poor quality fruits due to the lack of adoption of high yielding hybrids with improved cultivation technologies. Since they are highly cross pollinated, hybrid vigor has been recently exploited in a large manner by adoption of hybrids. The technology of growing hybrids has to be popularized among farmers unlike the cultivation of varieties to attain maximum net return with high cost benefit ratio. The farmers prefer to extend the crop duration by force when the price of produce is high or want once over harvest when the price is at peak. In many crops like bitter gourd, ridge gourd and snake gourd, the crop duration was extended by normal course under drip and fertigation system for which the scheduling of nutrition has to the followed. Hence to maximize the yield as well as profit from cucurbit vegetable growing the farmers have to be trained in the following techniques like

- Effective cropping sequence of cucurbits
- Continuous cropping for continuous supply
- Exploiting the maximum yield potential through fertigation and training
- Intercropping with leafy vegetables to get additional income
- Integrated pest control technologies for maximizing marketable quality fruits.

Through implementation of this project awareness will be created among the farmers about the productivity and profitability of gourd. The project is proposed at the cost of Rs. 638 lakhs covered in all blocks of Coimbatore district.

4.1.16.2.11. Doubling Farmers' Income through Skill Development in the Management of Nematode Problems of Horticultural Crops

Plant parasitic nematodes are small microscopic roundworms which live in the soil and attack the roots of plants. Crop production problems induced by nematodes therefore generally occur as a result of root dysfunction, reducing rooting volume and foraging and utilization efficiency of water and nutrients. Many different genera and species of nematodes can be important to crop production in Tamil Nadu. In many cases a mixed community of

plant parasitic nematodes is present in a field, rather than having a single species occurring alone. In general, the most widespread and economically important nematode species include the root-knot nematode, Meloidogyne spp., and sting nematode, Belonolaimus longicaudatus. The host range of these nematodes, as with others, includes most if not all of the commercially grown vegetables within the state. Yield reductions can be extensive but vary significantly between plant and nematode species. In addition to the direct crop damage caused by nematodes, many of these species have also been shown to predispose plants to infection by fungal or bacterial pathogens or to transmit virus diseases, which contribute to additional yield reductions. The project is proposed at the cost of Rs. 150 lakhs covered in Annur block of Coimbatore district.

4.1.16.2.12. Strengthening of quality seed production to increase seed replacement rate in groundnut through Farmers' Participatory approach in Tamil Nadu

The low replacement rate in groundnut indicates that farmers used the crop retained for seed purpose or obtained it from fellow farmers. However, these seeds need not be of poor quality. The lateral exchange of seeds among the farmers may also help in diffusing new varieties faster. The low SRR adopted by government should be increased as proposed shown in table for proper diffusion of varieties / hybrids from seed production centres. At public sector level, the NSC, SFC and State Seed Corporations are producing quality seeds and distributing to the farming community. The quality seeds produced in government owned seed farms and farmers holdings under seed farm agreement condition are being distributed through Agricultural Extension Centres to the farming community. The seed multiplication programme is handled by the Agricultural and Horticultural Departments in their State Seed Farms. There are certain practical difficulties in the production of quality seeds in government owned farms by the Agriculture and Horticulture departments, which are now responsible for non-availability of adequate quantities of seed materials to the farmers. The project is proposed at the cost of Rs. 264.32 lakhs covered in all blocks of Coimbatore district.

4.1.16.2.13. Promotion of Quality Seed Production in Green Manure Crops through Public-Private Partnership for integrated Agriculture Development Programme

Green manure crop like sunhemp and Daincha not only fixes atmospheric nitrogen but also improve the soil health. Green manures seeds are currently the orphan among crop seeds with not much care endowed in production, processing and labeling. In most cases they are produced in waste and degraded land further deteriorating seed quality which is essential in ameliorating problem soil and improving soil fertility. It is envisaged that unless

the knowledge on quality seeds is imparted to the producers, the use of quality green manure seeds will deteriorate further. The knowledge of quality seeds will also improve seed price at farm doorstep and encourage the farmers to produce quality seeds. The seeds can be produced by marginal farmers and the household women can be engaged in processing and maintaining seed quality. The project will be implemented in 5 districts of Tamil Nadu (Coimbatore, Kanchipuram, Vellore, Salem and Villupuram) by the Farmer Producer's Organization under Public Private Partnership for integrated agriculture development programme. The proposal is proposed with a budget out lay of Rs. 101.82 lakhs.

4.1.16.3. Overall budget

The projects on infrastructure, research and development will be implemented with a budget out lay of **Rs. 10469.72 lakhs.**

4.1.16.4. Project implementing agency

The projects will be implemented by Tamil Nadu Agricultural University in the various colleges and research stations. The progress of the projects will be monitored/reviewed by the Vice-Chancellor and Director of CARDS, Nodal officer once in a year**.**

4.1.16.5. Project outcome

The creation of infrastructure will enhance the quality of the research and it paves way for the state-of-art for the young researchers. The research and developmental activities is a continuous process, the innovative ideas that emerge from the young minds will help in identifying solutions to the field problem.

Table 4.17. Budget outlay for research and development

(₹. in lakhs)

Sl. No.	Interventions	Blocks Covered	Unit Cost	2017-2018		2018-2019		2019-2020		2020-2021		2021-2022		Total	
				Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.
I	**Research Infrastructure**														
1	Establishment of Agribusiness Incubator and Accelarator	Coimbatore	665	1	665.00	0	0.00	0	0.00	0	0.00	0	0.00	1	**665.00**
2	Developing crop specific nutrient mixture and establishment of modern industrial fertilizer mixing unit for distribtution to farmers	Coimbatore	610	0	0.00	0	0.00	0	0.00	0	0.00	1	610.00	1	**610.00**
3	Establishment of bio inoculants production units for enhancing productivity of pulses in Northern and Southern Districts of Tamil Nadu	Coimbatore	293	0	0.00	0	0.00	1	293.00	0	0.00	0	0.00	1	**293.00**
3	Establishment of modern nurseries for supply of elite planting materials on flowers and spices	Coimbatore	155	0	0.00	1	155.00	0	0.00	0	0.00	0	0.00	1	**155.00**

Sl. No.	Interventions	Blocks Covered	Unit Cost	2017-2018		2018-2019		2019-2020		2020-2021		2021-2022		Total	
				Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.
4	Strengthening research infrastructure in regional reseaech stations of Tamil Nadu Agricultural University	Coimbatore	900	0	0.00	0	0.00	0	0.00	1	900.00	0	0.00	1	**900.00**
5	Establishment of biocontrol laboratory	Coimbatore	80	0	0.00	0	0.00	0	0.00	0	0.00	1	80.00	1	**80.00**
6	Establishment of glasshouse	Coimbatore	4	1	2.00	1	2.00	1	2.00	1	2.00	0	0.00	4	**8.00**
7	Strenghtneing of Tamil Nadu Agricultural University Botanical Garden	Coimbatore	100	0	0.00	0	0.00	1	100.00	0	0.00	0	0.00	1	**100.00**
8	Establishment of DATA Centre	Coimbatore	100	1	100.00	0	0.00	0	0.00	0	0.00	0	0.00	1	**100.00**
9	Creation of nursery infrastrucutres (Mist chambers, shadenet house & Environment controlled chamber)	Coimbatore	6	1	6.00	1	6.00	1	6.00	1	6.00	1	6.00	5	**30.00**
10	Creation of Video conferencing lab (2) and seed storage and processing godown (1)	Coimbatore	10	2	20.00	0	0.00	0	0.00	1	10.00	0	0.00	3	**30.00**

Sl. No.	Interventions	Blocks Covered	Unit Cost	2017-2018		2018-2019		2019-2020		2020-2021		2021-2022		Total	
				Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.
11	Establishment of phytochemisry, soil carbon sequestration and soil health improvement laboratory and cryoconservation unit	Coimbatore	50	1	50.00	0	0.00	0	0.00	0	0.00	1	50.00	2	**100.00**
12	Creation of Advanced grain quality analysis laboratory	Coimbatore	50	1	50.00	1	50.00	1	50.00	0	0.00	0	0.00	3	**150.00**
13	Establishment of Rice Technology Park Complex	Coimbatore	250	0	0.00	1	250.00	0	0.00	0	0.00	0	0.00	1	**250.00**
14	Development of Automated Nematode Extraction Units and Musuhroom spawn production unit	Coimbatore	20	1	20.00	0	0.00	1	20.00	0	0.00	0	0.00	2	**40.00**
15	Establishment of Entrepreneurial Development Centre	Coimbatore	5	1	5.00	0	0.00	0	0.00	0	0.00	0	0.00	1	**5.00**
16	Establishment of Cattle Breeding Farm	Coimbatore	10	1	10.00	0	0.00	0	0.00	0	0.00	0	0.00	1	**10.00**
17	Establishment of Cold storage	Coimbatore	25	0	0.00	1	25.00	0	0.00	0	0.00	0	0.00	1	**25.00**

Sl. No.	Interventions	Blocks Covered	Unit Cost	2017-2018		2018-2019		2019-2020		2020-2021		2021-2022		Total	
				Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.
18	Establishment of automated nematode exractionunits (1), Department laboratories (2), Training unit(1) and Field laboratory (1)	Annur	10	1	10.00	1	10.00	1	10.00	1	10.00	1	10.00	5	**50.00**
19	Establishment of automated mushroom spawn production unit	Annur	15	1	15.00	0	0.00	0	0.00	0	0.00	0	0.00	1	**15.00**
20	Establishment of glasshouse, poly house and shade net house	Annur	6	1	6.00	1	6.00	1	6.00	0	0.00	0	0.00	3	**18.00**
21	Establishment of research facilities for improving photosynthesis in rice, pulses and oilseeds	Coimbatore	652	0	0.00	0	0.00	1	652.00	0	0.00	0	0.00	1	**652.00**
22	Production of water soluble fertilizers	Coimbatore	170	1	170.00		0.00		0.00		0.00		0.00	1	**170.00**
23	Establishment of Microbial Type Culture Collection Facility and Mycological Museum	Coimbatore	330	0	0.00	1	165.00	0	165.00	0	0.00	0	0.00	1	**330.00**

Sl. No.	Interventions	Blocks Covered	Unit Cost	2017-2018		2018-2019		2019-2020		2020-2021		2021-2022		Total	
				Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.
24	Establishment of tissue culture facility for supplying quality planting material in coconut to the farmers	Coimbatore	1070	0	0.00	1	535.00	1	535.00	0	0.00	0	0.00	2	**1070.00**
		Total (I)			**1129.00**		**1204.00**		**1839.00**		**928.00**		**756.00**		**5856.00**
II	**Production and Growth**														
1	Bee keeping for cross pollination and yield enhancement for major crops in rainfed agriculture	Coimbatore	250	1	250.00	0	0.00	0	0.00	0	0.00	0	0.00	1	250.00
2	Sustainable food cum fodder supply throguh mixed cropping system in rainfed areas	Coimbatore	105	1	105.00	0	0.00	0	0.00	0	0.00	0	0.00	1	105.00
3	Enrichment of protein supply through insects un humans food and animal feed	Coimbatore	155	1	155.00	0	0.00	0	0.00	0	0.00	0	0.00	1	155.00
4	Production of turmeric and ginger transplants in protrays and demonstration of technologies to the farmers	Coimbatore	100	1	100.00	0	0.00	0	0.00	0	0.00	0	0.00	1	100.00

Sl. No.	Interventions	Blocks Covered	Unit Cost	2017-2018		2018-2019		2019-2020		2020-2021		2021-2022		Total	
				Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.
5	Pilot promotion of homestead nutirtional and medicinal garden in selected districts of Tamil Nadu	Coimbatore	135	0	0.00	1	135.00	0	0.00	0	0.00	0	0.00	1	135.00
6	Demonstration of quality seed production and arressting seed deterioration during storage in groundnut	Coimbatore	115	0	0.00	1	115.00	0	0.00	0	0.00	0	0.00	1	115.00
7	Enhancing water use efficiency and productivity through maintenance of micro irrigation systems	Coimbatore	75	0	0.00	0	0.00	1	75.00	0	0.00	0	0.00	1	75.00
8	Biointensive pest management in major vegetable and flower crops grown under protected cultivations	Coimbatore	90	0	0.00	0	0.00	1	90.00	0	0.00	0	0.00	1	90.00
9	Innovative approach for production of elite planting materials of commercial flowers and ornamental plants	Coimbatore	99	1	99.00	0	0.00	0	0.00	0	0.00	0	0.00	1	99.00

Sl. No.	Interventions	Blocks Covered	Unit Cost	2017-2018		2018-2019		2019-2020		2020-2021		2021-2022		Total	
				Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.
10	Securing agricultural production system through site specific technological interventions on soil, water and crop management	Coimbatore	360	1	360.00	0	0.00	0	0.00	0	0.00	0	0.00	1	360.00
11	Enhancing productivity and profitability of farm by adopting good agriculture practices of capsicum and cucumber	Coimbatore	160	1	160.00	0	0.00	0	0.00	0	0.00	0	0.00	1	160.00
12	Production and supply of quality seeds of improved varieties in small millets	Coimbatore	32	1	32.00	0	0.00	0	0.00	0	0.00	0	0.00	1	32.00
13	Popularization of TNAU Papaya CO 8 in Tamil Nadu, through farmers participatory approach	Coimbatore	50	0	0.00	1	50.00	0	0.00	0	0.00	0	0.00	1	50.00

Sl. No.	Interventions	Blocks Covered	Unit Cost	2017-2018		2018-2019		2019-2020		2020-2021		2021-2022		Total	
				Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.
14	Farmer participatory hybrid / varietal seed production of maize and millets through cluster approach to achieve food and nutritional secutity in Tamil Nadu	Coimbatore	105	0	0.00	0	0.00	0	0.00	0	0.00	1	105.00	1	105.00
15	Maximizing of yield and profit of cucurbitaceous vegetables under polyhouse cultivation and popularization of the technology through farmers participatory approach	Coimbatore	253	0	0.00	1	253.00	0	0.00	0	0.00	0		1	253.00
16	Supply chain managemnt in tomato and onion	Coimbatore	640	0	0.00	0	0.00	0	0.00	0	0.00	1	640.00	1	640.00
17	Mainstreaming of organic production practices for maximizing the yield potential of rice, pulses and small millets in Tamil Nadu and its impact assessment of the productivity	Coimbatore	65	0	0.00	0	0.00	1	65.00	0	0.00	0	0.00	1	65.00

Sl. No.	Interventions	Blocks Covered	Unit Cost	2017-2018		2018-2019		2019-2020		2020-2021		2021-2022		Total	
				Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.
18	Development of detectiobn kit for quick pesticide residue analysis	Coimbatore	100	0	0.00	0	0.00	0	0.00	1	100.00	0	0.00	1	100.00
19	Farmer participatory hybrid / varietal seed production of maize and millets through cluster approach to achieve food and nutritional security in Tamil Nadu	Coimbatore	130	0	0.00	0	0.00	1	130.00	0	0.00	0	0.00	1	130.00
20	Remote sensing-based information for crop management and insurance in Tamil Nadu	Coimbatore	255	0	0.00	0	0.00	1	255.00	0	0.00	0	0.00	1	255.00
21	Supply chain management in tomato and onion	Coimbatore	638.08	0	0.00	1	375.04	0	263.04	0	0.00	0	0.00	1	638.08
22	Maximization of yield and profit of cucurbitaceous vegetables under protected cultivation and popularization of the technology through farmer's participatory approach	Coimbatore	185.5	0	0.00	1	185.50	0	0.00	0	0.00	0	0.00	1	185.50

Sl. No.	Interventions	Blocks Covered	Unit Cost	2017-2018		2018-2019		2019-2020		2020-2021		2021-2022		Total	
				Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.
23	Doubling Farmers' Income through Skill Development in the Management of Nematode Problems of Horticultural Crops	Coimbatore	150	0	0.00	1	150.00	0	0.00	0	0.00	0	0.00	1	150.00
24	Strengthening of quality seed production to increase seed replacement rate in groundnut through Farmers' Participatory approach in Tamil Nadu	Coimbatore	264.32	0	0.00	1	91.44	0	159.94	0	12.94	0	0.00	1	264.32
25	Promotion of Quality Seed Production in Green Manure Crops through Public-Private Partnership for IADP	Coimbatore	101.82	0	0.00	1	66.94	0	14.94	0	19.94	0	0.00	1	101.82
26	Organic vegetable production	Coimbatore	26	0	0	1	26	0	0	0	0	0	0	1	26
27	Nematode management in nursery	Coimbatore	25	0	0	1	25	0	0	0	0	0	0	1	25
		Total (II)			**1261.00**		**1472.92**		**1052.92**		**132.88**		**745.00**		**4664.72**
		Grand total (I+II)			**2390.00**		**2676.92**		**2891.92**		**1060.88**		**1501.00**		**10520.72**

4.2. HORTICULTURE

Horticulture plays a vital role in food and nutritional security of the people as well as in earning foreign exchange through export of raw and value added horticultural crops. The farmers are ready to go in 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:

4.2.1. Area expansion of Horticultural crops

4.2.1.1. Fruit Crops

Today's changing food consumption 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 movement of the digestive system. There are some fruits that give 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 a healthy life. Considering the importance of fruits, the productivity can be increased by promotion of cultivation of fruit crops in the potential areas.

4.2.1.2.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 farmer's society, collection centers, reefer vans, retail outlets, mobile stores etc. are the components to be promoted for increasing the productivity and marketing of vegetables.

4.2.1.3.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 provide 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.

4.2.1.4. 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 opportunities 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 increasing their production.

4.2.1.5 .Plantation crops

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

4.2.1.6. Area expansion by Precision Farming Technology

By providing inputs like water soluble fertilizers, hybrid / high yielding vegetable seeds and plant protection chemicals, the area under annual crops like vegetables, flowers, spices, medicinal plants and one year long season crops like banana, tapioca, annual moringa and turmeric could be raised under precision farming technology.

4.2.1.7. Area expansion by high density planting

By adopting high density planting in mango, guava and sapota, the area under fruit trees could be increased. This includes supply of pedigree planting materials, integrated nutrient management and integrated pest management.

4.2.1.8. Area expansion by Normal Planting

Besides precision farming and high density planting, the area could be increased by normal planting as well by using pedigree planting materials in fruits, spices, flowers and plantation crops. Similarly, by extending support for the planting materials of high value vegetables, the protected cultivation of vegetable area could also be increased. Likewise, cultivation of cut flowers and filler foliage also need to be encouraged.

4.2.1.9. Protected cultivation

Precision Farming through Hi tech cultivation practices could be 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 select districts of the State by providing subsidy.

4.2.1.10. Rejuvenation of Old Orchards – Mango and Guava

In general, 40-45 years old mango trees exhibit decline in fruit yield because of dense and overcrowded canopy. The trees do not get proper sunlight resulting in decreased production of shoots. New emerging shoots are weak and are unsuitable for flowering and fruiting. The population of insects and pests builds up and the incidence of diseases increases in such orchards. These unproductive trees can be converted into productive ones by pruning with the techniques developed. Similarly, a procedure to rejuvenate and restore the production potential of old unproductive and wilt affected guava orchards has been developed, which employs pruning of branches at different periodicity and at different severities. Crowding and encroachment of guava trees with subsequent inefficient light utilization is an obvious problem with older orchards, if trees are not well managed. The internal bearing capacity of guava trees also decreases with time, due to overshadowing of internal bearing wood.

4.2.1.11. 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 farm land 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 value for their produce.

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 enable 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.

4.2.1.12. 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.

4.2.2. Capacity building

4.2.2.1. Capacity building of Horticultural Officers and Farmers

In service training of horticultural officers regularly would help them to update the modern technologies in production, marketing and value addition of horticultural crops including organic farming. Similarly, exposure visits to farmers to nearby districts / States and even foreign countries would help them aware and adopt new innovative technologies.

4.2.2.1.2. Mechanization in cultivation of horticultural crops

Mechanization encourages large scale production and improves the quality of farm produce. It ensures reduction of drudgery associated with variety of farm operations and also encourages the utilization of input and thereby harnessing the potential of available resources. Provision of power operated machineries and tools including power operated saw and plant protection equipments, power machines with rotavator / equipment, power machines including accessories and equipment would strengthen the infrastructural facilities.

4.2.2.1.3. Micro Irrigation, Water harvesting and Management

With increasing demand on water from various sectors, the availability of water is under severe stress. Agriculture sector is the largest one in using of water. While irrigation projects (Major and medium) have contributed to the development of water resources, conventional methods of irrigation are inefficient and lead to wastage of water. It has been recognized that the use of modern irrigation methods like drip and sprinkler irrigation are the ways for the efficient use of surface as well as ground water resources.

Majority of fruit trees / orchards are under rainfed cultivation. It is advisable to bring a minimum percentage of the area under irrigation by providing and strengthening the water harvesting system. This includes provision of drip irrigation facilities wherever possible, recharge of defunct bore wells, provision of pipes and protected distribution system, provision of water lifting devices, in situ water conservation and the like.

4.2.2.1.4. Special Interventions

4.2.2.1.2.1. Production Enhancement through Precision Farming

Farmers have experienced fruitful results of technology especially during the past five years. Hence further increase in the production of horticultural crops would be possible both by increasing area and productivity by adopting advanced technologies like precision farming, high density planting, protected cultivation, shade net nursery, integrated pest management and integrated nutrient management. Besides increasing infrastructure and mechanization facilities, productivity enhancement is considered by area expansion and resorting to high

tech cultivation practices. Annual crops like vegetables, flowers, spices, medicinal plants and one year long season crops like banana, tapioca, turmeric and annual moringa could be considered for expansion by precision farming technology and providing assistance for inputs like water soluble fertilizers, hybrid/ high yielding vegetable seeds, plant protection chemicals etc., with subsidy.

4.2.2.1.2.2. Pandal / Trellis cultivation, Propping / Support / Staking

Pandal vegetables being short duration crops fit very well in the cropping system by offering viable option to the growers to get increased income per unit area. However, the cultivation of vegetables is too constrained due to high initial investment cost. With the objective of enhancing area under pandal vegetables and encouraging farmers to realize increased income, this project is proposed by popularizing high yielding/hybrid seed materials and dissemination of improved method of cultivation to farmers. It is proposed to cover at least 500 hectares in crops like bitter gourd, ribbed gourd, snake gourd, pandal bean's etc.

4.2.2.1.2.3. Banana Bunch Sleeve

'Bunch care techniques' are to be followed in banana cultivation to achieve the best quality. Transparent polyethylene sleeves are recommended to cover the bunch immediately after opening of the last hand. Using of opaque polythene covers / sleeves gauge (during winter) and paper bags (to avoid chilling injury at frost conditions and sun scrotch). The bunch will be free from insect bites, fungi, bacteria attacks and physical injuries. The cover will also improve bunch appeal and maturity of bunch will be advanced by 7 to 10 days.

4.2.2.1.2.4. Agro Ecosystem Analysis (AESA) based IPM

The IPM has been evolving over the decades to address the deleterious impacts of synthetic chemical pesticides on environment ultimately affecting the interests of the farmers. The economic threshold level (ETL) was the basis for several decades but in modern IPM (FAO 2002) emphasis is given to AESA where farmers take decisions based on larger range of field observations. Decision making in pest management requires a thorough analysis of the agro-ecosystem. Farmer has to learn how to observe the crop, how to analyze the field situation and how to make proper decisions for their crop management. This process is called the AESA. In AESA based IPM, emphasis is given to natural enemies, plant compensation ability, abiotic factors and P: D ratio.

4.2.2.1.2.5. Rainfed Area Development Programme (RADP)

Rainfed areas assume special significance in terms of ecology, agricultural productivity and livelihood for millions of rural households in India.

To ensure agriculture growth in the rainfed areas, the Government of India launched a new scheme “Rainfed Area Development Programme (RADP)” in the year 2011-12 as a sub-scheme under Rashtriya Krishi Vikas Yojana (RKVY).

It aims at improving quality of life of farmers especially, small and marginal farmers by offering a complete package of activities to maximize farm returns. RADP focuses on Integrated Farming System (IFS) for enhancing productivity and minimizing risks associated with climatic variabilities.

4.2.2.1.2.6. Mushroom production

Commercial production of edible Mushrooms converts the agricultural, industrial, forestry and household wastes into nutritious food (Mushroom). Indoor cultivation of oyster mushrooms utilizes the vertical space and is regarded as the highest protein producer per unit area and time – almost 100 times more than that of the conventional agriculture and animal husbandry.

4.2.2.1.2.7. Supporting structures for vegetable production

Vegetables are excellent source of vitamins and minerals such as calcium, iron besides proteins and carbohydrates. Vegetables combat under nourishment and are known to be a cheapest source of natural protective tools.

4.2.2.1.2.8. Staking, trellis and propping

Though most vegetables grow on their own, plants with vining and sprawling growth or with brittle stems and heavy fruits need support. Peas, cucumbers, pole beans, tomatoes, squash, eggplant and pepper benefit from trellising, caging or staking. The trick to heavy harvests is to knows which vegetable support system works best for each plant. Trellising, which involves tying plant stems to vertical structures with garden twine or plant ties, allows you to fit more plants in the garden. It is the preferred support method for peas, indeterminate vine-type tomatoes, pole and runner beans, cucumbers and smaller squash varieties.

4.2.2.1.2.9. Pandal structure

Pandal vegetables, being short duration crops, fit very well in the intensive cropping system. It offers viable option for the growers to get increased income per unit area. It includes number of vegetables viz. bitter gourd, snake gourd, ribbed gourd, pandal avarai etc.

These vegetables are grown on commercial scale and are capable of giving high yields and high economic returns to the growers. It has tremendous market potential. The cultivation of vegetables is constrained due to high initial investment cost. With the objective of enhancing area under pandal vegetables and encouraging farmers to obtain increased income, it is proposed to implement the project on “Encouraging Cultivation of Pandal Vegetables. In this situation, financial support for the establishment of pandal structures for the vegetables will increase in the area and production of pandal vegetables. Along with this support on supply of high yielding / hybrid seed materials for cultivation will be additional assistance.

4.2.2.1.2.10. Crop Insurance

Crop Insurance coverage has to be done for major crops like paddy, millets, pulses, oilseeds, sugarcane, cotton, cash crops and all horticulture crops in the notified areas.

4.2.2.1.2.11. Horticultural mechanization

With increasing agricultural labour shortage in India, a calculated shift to mechanization is imperative. Not only does mechanization provide for optimal utilization of factor resources (viz., land, labour, water, capital and expensive farm inputs), it also helps farmers to save valuable time and effort. Judicious use of time, labour and resources helps facilitate sustainable intensification (multi-cropping) and timely planting of crops and towards giving crops more time to mature, leading to improved productivity.

4.2.2.1.2.12. Micro irrigation in horticultural crops

Micro-irrigation will generally use less than half the volume of water required by the traditional ‘watering’ systems such as sprinkler irrigation. Lower pressures used less energy for pumping while precise placement of more exact water volumes enhances and improves water management. Micro Irrigation system scales down requirement of labour and takes care of application of fertilizers.

4.2.3. Budget

The budget requirement for fulfilling the various interventions is ₹**.28141.69** Lakhs. The details of budget requirement for each intervention across the blocks are shown in Table 4.18.

4.2.3. Implementing agency

The projects will be implemented by the Department of Horticulture.

Table 4.18 Budget for horticulture development

(₹. in lakhs)

Sl. No.	Interventions	Unit	Unit cost	Blocks 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	All Blocks except B2, B7, B9, B10 & B11	156	195.00	187	233.75	212	265.00	238	297.50	259	323.75	1052	1315.00
2	Banana / Hill Banana sucker & Pine apple sucker	Ha	0.875	All Blocks except B1, B4, B5 & B8	225	196.88	290	253.75	355	310.63	435	380.63	530	463.75	1835	1605.63
3	UHDP in Papaya, Mango, Guava, Pomegranate, Acidlime	Ha	1.25	B2 & B6	25	31.25	35	43.75	45	56.25	55	68.75	65	81.25	225	281.25
4	HDP in Mango, Guava, Litchi, Pomegranate	Ha	1	B2, B5, B6 & B12	26	26.00	36	36.00	46	46.00	56	56.00	66	66.00	230	230.00
5	Normal Planting in Mango	Ha	0.6	All Blocks except B10 & B12	89	53.40	125	75.00	157	94.20	193	115.80	228	136.80	792	475.20
6	Normal planting in Guava	Ha	0.6	B4	2	1.20	4	2.40	10	6.00	15	9.00	25	15.00	56	33.60
7	Normal planting in Amla	Ha	0.6	All Blocks except B1, B3, B5, B7 & B12	113	67.80	157	94.20	220	132.00	252	151.20	292	175.20	1034	620.40
8	Normal planting in Papaya	Ha	0.6	B1, B2, B4, B6 & B7	23	13.80	38	22.80	55	33.00	72	43.20	91	54.60	279	167.40
9	Banana for leaf production	Ha	0.6	B4 & B12	2	1.20	0	0.00	5	3.00	10	6.00	15	9.00	32	19.20

Sl. No.	Interventions	Unit	Unit cost	Blocks covered	2017-2018		2018-2019		2019-2020		2020-2021		2021-2022		Total	
					Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.
II	**Area expansion of vegetable crops**															
10	Brinjal	Ha	0.5	All Blocks except B1	99	49.50	140	70.00	180	90.00	221	110.50	273	136.50	913	456.50
11	Bhendi	Ha	0.5	All Blocks except B1 & B7	94	47.00	129	64.50	163	81.50	193	96.50	232	116.00	811	405.50
12	Green Chillies	Ha	0.5	All Blocks except B1	115	57.50	168	84.00	231	115.50	284	142.00	364	182.00	1162	581.00
13	Tomato	Ha	0.5	All Blocks	215	107.50	305	152.50	395	197.50	465	232.50	535	267.50	1915	957.50
14	Gourds including pumpkin and tinda	Ha	0.5	All Blocks except B1 & B3	192	96.00	287	143.50	382	191.00	437	218.50	487	243.50	1785	892.50
15	Peas & Beans	Ha	0.5	B12	5	2.50	5	2.50	5	2.50	5	2.50	5	2.50	25	12.50
16	Greens	Ha	0.5	B2, B6, B9, B10, B11 & B12	80	40.00	105	52.50	130	65.00	155	77.50	180	90.00	650	325.00
17	Small Onion	Ha	0.5	All Blocks except B1, B3, B5, B6 & B7	203	101.50	233	116.50	270	135.00	308	154.00	345	172.50	1359	679.50
18	Bellary Onion	Ha	0.5	B3 & B4	20	10.00	25	12.50	45	22.50	60	30.00	75	37.50	225	112.50
19	Cauliflower	Ha	0.5	B12	10	5.00	10	5.00	10	5.00	10	5.00	10	5.00	50	25.00
20	Annual Moringa	Ha	0.5	B12	5	2.50	5	2.50	5	2.50	5	2.50	5	2.50	25	12.50
21	Cabbage	Ha	0.5	B12	5	2.50	5	2.50	5	2.50	5	2.50	5	2.50	25	12.50
22	Cucumber/ gherkin	Ha	0.5	B8	10	5.00	12	6.00	15	7.50	20	10.00	25	12.50	82	41.00
23	Beetroot	Ha	0.5	B2, B8, B9, B10, B11 & B12	135	67.50	175	87.50	195	97.50	215	107.50	235	117.50	955	477.50
24	Tapioca	Ha	0.5	All Blocks except B1, B3, B5 & B12	160	80.00	240	120.00	340	170.00	390	195.00	440	220.00	1570	785.00

Sl. No.	Interventions	Unit	Unit cost	Blocks covered	2017-2018		2018-2019		2019-2020		2020-2021		2021-2022		Total	
					Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.
25	Cultivation of hybrid Vegetables under protected structures	1000 Sq.m	1.4	B12	1	1.40	1	1.40	1	1.40	1	1.40	1	1.40	5	7.00
IV	**Area expansion of Spices crops**															
26	Seed and Rhizomatic spices (Coriander, Turmeric, Ginger, Dry Chilly, Cumin, Fennel, Fenu greek, Dil, Cardamom etc.,)	Ha	0.3	B2, B3, B6, B9, B10, B11 & B12	277	83.10	320	96.00	350	105.00	380	114.00	410	123.00	1737	521.10
27	Perennial spices (Pepper, Curry leaf, All spice, Cinnamon, Clove, Tamarind, Nut meg etc.,)	Ha	0.5	B1, B2, B3 & B12	75	37.50	85	42.50	90	45.00	105	52.50	115	57.50	470	235.00
V	**Area expansion of Flower crops**															
28	Loose flowers - Jasminum sp, Crossandra, Marigold, Rose, Chrysanthemum , Nerium, Torenia	Ha	0.4	B2, B3, B6 & B12	52	20.80	64	25.60	76	30.40	88	35.20	100	40.00	380	152.00
29	Bulbous flowers - Tube rose, Gladioli, Dahlia, Bird of paradise, Heliconia, Tulip	Ha	1.5	B6	10	15.00	15	22.50	20	30.00	25	37.50	30	45.00	100	150.00

Sl. No.	Interventions	Unit	Unit cost	Blocks covered	2017-2018		2018-2019		2019-2020		2020-2021		2021-2022		Total	
					Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.
VI	**Area expansion /Gap filling of Plantation crops**															
30	Cocoa	Ha	0.5	B1, B5, B6, B7 & B12	77	38.50	107	53.50	137	68.50	145	72.50	154	77.00	620	310.00
31	Arecanut	Ha	0.5	B6 & B12	35	17.50	40	20.00	45	22.50	50	25.00	55	27.50	225	112.50
32	Coconut	Ha	0.5	B4, B7 & B8	65	32.50	140	70.00	175	87.50	210	105.00	245	122.50	835	417.50
VII	**Rejuvenation/ INM-IPM/Mulching/Anti bird net**															
33	Mango/ Cashew - Rejuvenation	Ha	0.4	B1, B4, B7 & B8	30	12.00	46	18.40	66	26.40	96	38.40	121	48.40	359	143.60
34	INM/IPM for Horticultural crops	Ha	0.04	All Blocks except B1, B4, B7, & B8	120	4.80	145	5.80	170	6.80	195	7.80	220	8.80	850	34.00
35	Mulching	Ha	0.32	All Blocks except B1, B4, B5 & B8	70	22.40	95	30.40	120	38.40	145	46.40	170	54.40	600	192.00
36	Anti Bird net	1000 Sq.m	0.35	B1, B7, B8, B9, B10 & B12	15	5.25	28	9.80	32	11.20	35	12.25	38	13.30	148	51.80
VIII	**Pollination Support through Bee Keeping**															
37	Bee hive & Colony	No	0.04	All Blocks	640	25.60	735	29.40	835	33.40	935	37.40	1032	41.28	4177	167.08
38	Honey Extractor	No	0.2	All Blocks	73	14.60	86	17.20	100	20.00	114	22.80	134	26.80	507	101.40
IX	**Organic Farming**															
39	Organic farming and PGS certification in 50 acre cluster	1 cluster	14.95	B12	15.95	238.45	1	14.95	1	14.95	1	14.95	1	14.95	19.95	298.25
40	HDPE Vermibed	No	0.16	All Blocks except B3 & B8	80.16	12.83	110.32	17.65	125.32	20.05	150.32	24.05	160.32	25.65	626.44	100.23

Sl. No.	Interventions	Unit	Unit cost	Blocks 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**															
41	Integrated farming system - Horticulture Based farming	Ha	0.5	B4, B5 & B7	50	25.00	90	45.00	110	55.00	140	70.00	170	85.00	560	280.00
42	Green manuring	Ha	0.04	B4 & B7	30	1.20	68	2.72	85	3.40	112	4.48	140	5.60	435	17.40
43	Moisture stress management - Minimum irrigation gurantee by PUSA hydrogel	Ha	0.1	B4 & B12	22.5	2.25	27.5	2.75	32	3.20	35	3.50	40	4.00	157	15.70
B	**Infra structures and Assets creation**															
I	Protected cultivation															
1	Poly Green House	1000 Sq.m	9.35	All Blocks except B1, B3, B5 & B8	13	121.55	17	158.95	22	205.70	27	252.45	32	299.20	111	1037.85
II	**Mushroom production**															
2	Cottage mushroom unit	1 No.	1	B2	0	0.00	2	2.00	0	0.00	0	0.00	0	0.00	2	2.00
III	**Vermi compost unit**															
3	Permanent Vermicompost Unit	600 cu.ft	1	All Blocks except B4, B5 & B8	14	14.00	19	19.00	25	25.00	36	36.00	42	42.00	136	136.00
IV	**Supporting structures for Horticulture crop production**															
4	Staking/ Trellies/ Propping	Ha	1	B1, B4, B5, B7, B8 & B12	125	125.00	160	160.00	190	190.00	220	220.00	245	245.00	940	940.00

Sl. No.	Interventions	Unit	Unit cost	Blocks 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	Permanent Pandhal structure	Ha	4	All Blocks except B2, B3 & B9	117	468.00	197	788.00	258	1032.00	328	1312.00	399	1596.00	1299	5196.00
C	**Special interventions**															
6	Farm deficiency correction	Ha	0.04	All Blocks	1420	56.80	1825	73.00	1980	79.20	2170	86.80	2340	93.60	9735	389.40
7	Promotion of Roof top Garden/ Potager garden Kit	No	0.005	All Blocks except B1, B5, B7 & B8	1300	6.50	1425	7.13	1430	7.15	1520	7.60	1640	8.20	7315	36.58
8	Promotion of Roof top Garden/ Potager garden Kit with shadenet	No	0.0735	B4 & B12	50	3.68	75	5.51	100	7.35	125	9.19	150	11.03	500	36.75
9	Banana Bunch Sleeve	Ha	0.25	All Blocks except B1, B5, B7, B8 & B10	135	33.75	180	45.00	235	58.75	290	72.50	345	86.25	1185	296.25
10	AESA based IPM in fruits and vegetables Pheramone trap	Ha	0.04	All Blocks except B5	205	8.20	285	11.40	340	13.60	395	15.80	450	18.00	1675	67.00
11	AESA Based IPM in fruits and vegetables Yellow sticky trap	Ha	0.04	All Blocks except B5	160	6.40	230	9.20	280	11.20	340	13.60	400	16.00	1410	56.40
12	AESA Based IPM in fruits and vegetables Light trap	Ha	0.08	All Blocks except B1, B3, B5 & B7	90	7.20	140	11.20	200	16.00	285	22.80	345	27.60	1060	84.80
D	**Post Harvest Management**															
1	Pack house (9 m X 6 m)	1 No	4	All Blocks except B1, B2, B3, B5 & B6	7	28.00	9	36.00	11	44.00	14	56.00	17	68.00	58	232.00

Sl. No.	Interventions	Unit	Unit cost	Blocks 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	Low cost onion structure 25 mt	1 No	1.75	B9, B11 & B12	7	12.25	7	12.25	9	15.75	9	15.75	9	15.75	41	71.75
3	Drying yard	1 No	5	B12	1	5.00	1	5.00	1	5.00	1	5.00	1	5.00	5	25.00
F	**Mechanization - Machineries, Equipments & Tools**															
1	Power tiller/Tractor/Mini tractor	Nos	1	All Blocks except B1, B5, B7 & B8	9	9.00	13	13.00	15	15.00	20	20.00	22	22.00	79	79.00
2	Land development, tillage and seed bed preparation equipments	Nos	0.3	B12	5	1.50	5	1.50	5	1.50	5	1.50	5	1.50	25	7.50
3	Manual Sprayer-Knapsack/Foot operated Sprayer	Nos	0.12	All Blocks except B7, B8 & B12	62	7.44	89	10.68	117	14.04	147	17.64	177	21.24	592	71.04
4	Tractor Mounted / Operated Sprayer (Below 20HP)	Nos	0.2	B4	3	0.60	5	1.00	7	1.40	9	1.80	11	2.20	35	7.00
5	Potato planter/Potato harvester / Onion harvester	No	0.3	B9, B11 & B12	31	9.30	31	9.30	31	9.30	31	9.30	31	9.30	155	46.50
6	Mulch laying machine	No	0.7	B12	3	2.10	4	2.80	5	3.50	6	4.20	7	4.90	25	17.50
7	Hand operated sprayer with face mask	Nos	0.025	B12	5	0.13	5	0.13	5	0.13	5	0.13	5	0.13	25	0.63
8	Nets for safe harvesting of fruits,Headlights for flower picking	Nos	0.005	All Blocks	10	0.05	15	0.08	20	0.10	25	0.13	30	0.15	100	0.50
9	Power operated sprayer	Nos	0.05	All Blocks	105	5.25	154	7.70	199	9.95	241	12.05	283	14.15	982	49.10

Sl. No.	Interventions	Unit	Unit cost	Blocks covered	2017-2018		2018-2019		2019-2020		2020-2021		2021-2022		Total	
					Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.
10	Plastic crates for vegetable & fruits handling	No of sets containing 10crates	0.075	All Blocks except B5 & B8	730	54.75	1035	77.63	1220	91.50	1430	107.25	1630	122.25	6045	453.38
11	Turmeric Boiler		2.5	B9, B11 & B12	2	5.00	2	5.00	2	5.00	2	5.00	2	5.00	10	25.00
12	Turmeric Polishing Machine		0.88	B12	1	0.88	1	0.88	1	0.88	1	0.88	1	0.88	5	4.40
13	Pepper Spike Thresher Stripper, Pepper peeler cum Washer	No	0.15	All Blocks	1	0.15	1	0.15	1	0.15	1	0.15	1	0.15	5	0.75
14	Aluminium Ladders for Harvesting	No	0.2	B4 & B12	10	2.00	5	1.00	5	1.00	5	1.00	5	1.00	30	6.00
15	Equipments for manure management (Motorized Shredder for cutting biomass for making Vermicomposts and organic mulching)	No	1.26	All Blocks	10	12.60	15	18.90	20	25.20	25	31.50	30	37.80	100	126.00
G	**Water / Irrigation Management**															
1	Micro Irrigation - Drip	Ha	1.12	All Blocks except B5	550	616.00	652	730.24	734	822.08	816	913.92	898	1005.76	3650	4088.00
2	Rain gun	Ha	0.34	B12	5	1.70	5	1.70	5	1.70	5	1.70	5	1.70	25	8.50
3	Sprinkler	No	0.195	B12	5	0.98	5	0.98	5	0.98	5	0.98	5	0.98	25	4.88

Sl. No.	Interventions	Unit	Unit cost	Blocks covered	2017-2018		2018-2019		2019-2020		2020-2021		2021-2022		Total	
					Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.
H	**Capacity Building**															
1	Training to farmers within the State. 2 days Rs.1000/farmer/ day	No	0.02	All Blocks	230.0	4.60	295	5.90	345	6.90	395	7.90	435	8.70	1700.0	34.00
2	Training to farmers outside the state. 30 farmers/Batch	No	0.105	All Blocks	59.10	6.21	80	8.40	101	10.61	122	12.81	143	15.02	505.10	53.04
3	Exposure visit to farmers for 5 days. Rs.1000/farmer/ day	No	0.05	All Blocks except B1 & B8	30.05	1.50	36	1.80	42	2.10	48	2.40	54	2.70	210.05	10.50
4	Training to farmers at HTC	No	0.0025	B4 & B12	20.00	0.05	20	0.05	20	0.05	20	0.05	20	0.05	100.00	0.25
5	Exposure visit of farmers outside India	No	4	All Blocks except B1, B4, B5, B7 & B8	8	32.00	8	32.00	8	32.00	8	32.00	8	32.00	40	160.00
6	Training to staff outside the state / Batch of 5 members	No	0.04	All Blocks except B4, B5 & B8	18	0.72	18	0.72	19	0.76	19	0.76	19	0.76	93	3.72
7	Training to staff outside India	No	6	All Blocks except B4, B5 & B8	9	54.00	9	54.00	9	54.00	9	54.00	9	54.00	45	270.00
8	Computerization & governance	No	1	All Blocks except B5 & B8	10	10.00	1	1.00	1	1.00	0	0.00	0	0.00	12	12.00
9	Publicity and Documen -tation	No	0.5	All Blocks except B4 & B5	41	20.50	47	23.50	56	28.00	71	35.50	86	43.00	301	150.50

Sl. No.	Interventions	Unit	Unit cost	Blocks 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**															
	Crop Insurance	Ha	0.025	All Blocks except B1, B4, B5, B7 & B8	70	1.75	91	2.28	112	2.80	133	3.33	154	3.85	560	14.00
	Grand total					**3628.28**		**4565.15**		**5606.99**		**6643.05**		**7698.21**		**28141.69**

B1- Anaimalai, B2- Annur, B3- Karamadai, B4- Kinathukadavu, B5- Madukarai, B6- Periyanayakanpalayam, B7- Pollachi north, B8-Pollachi south B9- S.S. Kulam, B10- Sulthanpettai, B11- Sulur, B12- Thondamuthur

4.18. 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 output 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.

4.3.1.Strategies:

- Promotion and strengthening of Agricultural Mechanization through training, testing and demonstration in order to ensure performance testing of agricultural machinery and equipment, capacity building of farmers and end users and promoting farm mechanization through demonstrations covered in all blocks.
- Demonstration, Training and Distribution of Post-Harvest Technology and Management (PHTM) need to be done 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. Financial assistance for establishing PHT units is to cover in Annaimalai, Kinatukaduvu, Pollachi North and Pollachi South blocks.
- 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 covered in Annaimalai, Kinatukaduvu, Pollachi North and Pollachi South blocks.
- Provision of suitable financial assistance to establish farm machinery by banks for custom hiring for appropriate locations and crops covered in Kinatukaduvu block.

- 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 covered in Annaimalai, Kinatukaduvu, Pollachi North and Pollachi South blocks.
- 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, tube wells 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 solar pumps 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 High tech 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 covered in Annaimalai, Kinatukaduvu, Pollachi North and Pollachi South blocks.
- 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) 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 covered in all blocks in Coimbatore district.

4.3.2.Expected outcome

Implementation of the above strategies such as supply of farm implements to carry out mechanised cultivation operations and demonstration to farmers on 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.

4.3.3. 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 is capacity building of farmers and end users with the budget of ₹10.80 lakhs, Financial assistance for the procurement of Agricultural Machinery, Post-harvest machinery and equipments in rural areas with the budget of ₹4863.18 lakhs, Establishment of Farm Machinery Banks, Hi-tech productive equipment hub, Promotion of Farm Mechanization in Selected Villages with the budget of ₹3381.50 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 ₹5543.14 lakhs are needed Some other interventions such as Bio- mass gasifier, Construction of Agricultural Engineering Extension centres (AEECs) with the budget of ₹ 77.60 lakhs are required to implement in this district to enhance the Agricultural Productivity. The overall budget requirement for implementation of above interventions is ₹ 13876.22 lakhs .The details of budget requirement for each intervention across the blocks are shown in Table 4.19.

4.3.4. Implementing agency

The projects will be implemented by the Department of Agricultural Engineering.

Table.4.19. Budget requirement for Agricultural Engineering

(₹. 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
	Capacity Building															
1	Demonstration of Agricultural Machinery	All Blocks	No's/Ha	0.04	24	0.96	24	0.96	24	0.96	24	0.96	24	0.96	120	4.80
2	Training of farmers	All Blocks	No's/Ha	0.04	12	0.48	12	0.48	12	0.48	12	0.48	12	0.48	60	2.40
3	Training of Rural Youth in workshops	B1, B4, B7, B8	No's/Ha	0.04	12	0.48	12	0.48	12	0.48	12	0.48	12	0.48	60	2.40
4	Demonstration of Post Harvest Technologies	B1, B4, B7, B8	No's/Ha	0.04	6	0.24	6	0.24	6	0.24	6	0.24	6	0.24	30	1.20
5	Financial Assistance for Post Harvest Equipment	B1,B4,B7, B8	No's/Ha	4	1	4.00	0	0.00	0	0.00	0	0.00	0	0.00	1	4.00
6	Tractor (8-15 PTO HP)	All Blocks	No's/Ha	3	4	12.00	4	12.00	4	12.00	4	12.00	4	12.00	20	60.00
7	Tractor (15-20 PTO HP)	All Blocks	No's/Ha	4	22	88.00	22	88.00	22	88.00	22	88.00	22	88.00	110	440.00
8	Tractor (Above 20-40 PTO HP)	All Blocks	No's/Ha	6	22	132.00	22	132.00	22	132.00	22	132.00	22	132.00	110	660.00
9	Tractor (40-70 PTO HP)	All Blocks	No's/Ha	8.5	30	255.00	30	255.00	30	255.00	30	255.00	30	255.00	150	1275.00
	Power Tillers															
10	Power Tiller (below 8 BHP)	All Blocks	No's/Ha	1	10	10.00	10	10.00	10	10.00	10	10.00	10	10.00	50	50.00
11	Power Tiller (8 BHP & above)	All Blocks	No's/Ha	1.75	90	157.50	90	157.50	90	157.50	90	157.50	90	157.50	450	787.50

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
	Self Propelled Machinery															
12	Reaper cum Binder	All Blocks	No's/Ha	3	6	18.00	6	18.00	6	18.00	6	18.00	6	18.00	30	90.00
	Specialized Self Propelled Machinery															
13	Reaper	All Blocks	No's/Ha	1.1	2	2.20	2	2.20	2	2.20	2	2.20	2	2.20	10	11.00
14	Post Hole Digger / Augur	All Blocks	No's/Ha	0.63	2	1.26	2	1.26	2	1.26	2	1.26	2	1.26	10	6.30
	Tractor/ Power Tiller (below 20 BHP) driven equipments															
	a. Land Development, tillage and seed bed preparation equipments															
15	Cultivator	All Blocks	No's/Ha	0.2	10	2.00	10	2.00	10	2.00	10	2.00	10	2.00	50	10.00
16	Rotavator	All Blocks	No's/Ha	0.35	20	7.00	20	7.00	20	7.00	20	7.00	20	7.00	100	35.00
	c. Inter cultivation Equipments															
17	Power Weeder (engine operated below 2 BHP)	All Blocks	No's/Ha	0.25	5	1.25	5	1.25	5	1.25	5	1.25	5	1.25	25	6.25
	d. Equipment for residue management / hay and forage equipments															
18	Coconut Frond chopper	All Blocks	No's/Ha	0.8	1	0.80	1	0.80	1	0.80	1	0.80	1	0.80	5	4.00

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
	e. Harvesting and Threshing equipments															
19	Brush Cutter	All Blocks	No's/Ha	0.25	20	5.00	20	5.00	20	5.00	20	5.00	20	5.00	100	25.00
20	f. Chaff Cutter (Operated by engine / electric motor below 3 hp and by power tiller and tractor of below 20 BHP tractor)	All Blocks	No's/Ha	0.25	50	12.50	50	12.50	50	12.50	50	12.50	50	12.50	250	62.50
	a. Land Development, tillage and seed bed preparation equipments															
21	Disc Ploogh	All Blocks	No's/Ha	0.4	10	4.00	10	4.00	10	4.00	10	4.00	10	4.00	50	20.00
22	Cultivator	All Blocks	No's/Ha	0.25	22	5.50	22	5.50	22	5.50	22	5.50	22	5.50	110	27.50
23	Rotavator	All Blocks	No's/Ha	0.8	70	56.00	70	56.00	70	56.00	70	56.00	70	56.00	350	280.00
24	Reversible Hydraulic plough	All Blocks	No's/Ha	1.9	10	19.00	10	19.00	10	19.00	10	19.00	10	19.00	50	95.00
	b. Sowing, Planting, Reaping and Digging Equipments															
25	Zero till seed cum fertilizer drill	All Blocks	No's/Ha	0.6	5	3.00	0	0.00	0	0.00	0	0.00	0	0.00	5	3.00
26	Seed drill	All Blocks	No's/Ha	0.5	5	2.50	0	0.00	0	0.00	0	0.00	0	0.00	5	2.50

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
	c.Inter Cultivation Equipments															
27	Power Weeder (engine operated above 2 BHP)	All Blocks	No's/Ha	0.7	5	3.50	0	0.00	0	0.00	0	0.00	0	0.00	5	3.50
	d. Equipments for Residue management/ Hay and Forage Equipments															
28	Coconut Frond chopper	All Blocks	No's/Ha	0.9	21	18.90	21	18.90	21	18.90	21	18.90	21	18.90	105	94.50
	e.Harvesting & Threshing Equipments															
29	Brush Cutter	All Blocks	No's/Ha	0.3	20	6.00	20	6.00	20	6.00	20	6.00	20	6.00	100	30.00
	a.Land Development, tillage and seed bed preparation equipments															
30	Disc Plough	All Blocks	No's/Ha	0.6	10	6.00	10	6.00	10	6.00	10	6.00	10	6.00	50	30.00
31	Cultivator	All Blocks	No's/Ha	0.3	30	9.00	30	9.00	30	9.00	30	9.00	30	9.00	150	45.00
32	Rotavator	All Blocks	No's/Ha	0.95	100	95.00	100	95.00	100	95.00	100	95.00	100	95.00	500	475.00
33	Reversible Hydraulic plough	All Blocks	No's/Ha	2	6	12.00	6	12.00	6	12.00	6	12.00	6	12.00	30	60.00
	e.Equipments for Residue management/ Hay and Forage Equipments															

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
34	Coconut Frond chopper	All Blocks	No's/Ha	1.05	23	24.15	23	24.15	23	24.15	23	24.15	23	24.15	115	120.75
	All Manual/animal drawn equipment/implements / Tools															
35	Tree climber	All Blocks	No's/Ha	0.07	20	1.40	20	1.40	20	1.40	20	1.40	20	1.40	100	7.00
	Plant protection equipments															
36	Manual sprayer: Knapsack/foot operated sprayer	All Blocks	No's/Ha	0.015	5	0.08	5	0.08	5	0.08	5	0.08	5	0.08	25	0.38
37	Powered Knapsack Sprayer/Power operated Taiwan sprayer (capacity 8-12 lts)	All Blocks	No's/Ha	0.06	120	7.20	120	7.20	120	7.20	120	7.20	120	7.20	600	36.00
38	Powered Knapsack Sprayer/Power operated Taiwan sprayer (capacity above 12-16 lts)	All Blocks	No's/Ha	0.08	10	0.80	10	0.80	10	0.80	10	0.80	10	0.80	50	4.00
39	Powered Knapsack Sprayer/Power operated Taiwan sprayer (capacity above 16 lts)	All Blocks	No's/Ha	0.1	5	0.50	5	0.50	5	0.50	5	0.50	5	0.50	25	2.50

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
40	Establishment of Farm Machinery Banks for Custom Hiring	All Blocks Except B2	No's/Ha	28	10	280.00	10	280.00	10	280.00	10	280.00	10	280.00	50	1400.00
41	Establishment of Hi-Tech, High Productive Equipment Hub for Custom Hiring	B1,B4,B7, B8	No's/Ha	112	3	336.00	2	224.00	3	336.00	2	224.00	3	336.00	13	1456.00
42	Promotion of Farm Mechanization in Selected Villages	B1,B4,B7, B8	No's/Ha	11.5	9	103.50	9	103.50	9	103.50	9	103.50	9	103.50	45	517.50
43	Financial assistance for promotion of Mechanized Farming operations	All Blocks	No's/Ha	0.04	40	1.60	40	1.60	40	1.60	40	1.60	40	1.60	200	8.00
	Tractor Hiring Scheme															
44	Purchase of Tractors for AED	All Blocks	No's/Ha	8	3	24.00	1	8.00	1	8.00	1	8.00	1	8.00	7	56.00
45	Purchase of Tractor drawn implemnets for AED	All Blocks	No's/Ha	0.5	6	3.00	2	1.00	2	1.00	2	1.00	2	1.00	14	7.00
46	Purchase of Bull Dozers for AED	All Blocks	No's/Ha	80	3	240.00	0	0.00	0	0.00	1	80.00	0	0.00	4	320.00
47	Purchase of Paddy Transplanter for AED		No's/Ha	18	0	0.00	0	0.00	1	18.00	0	0.00	0	0.00	1	18.00
48	Purchase of Balers for AED	All Blocks	No's/Ha	4.5	1	4.50	1	4.50	0	0.00	0	0.00	0	0.00	2	9.00

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
49	Purchase of Multi Crop Thresher for AED	All Blocks	No's/Ha	3.5	2	7.00	0	0.00	0	0.00	0	0.00	0	0.00	2	7.00
	Minor Irrigation Scheme															
	Purchase of Rotary Drill for AED	All Blocks	No's/Ha	72	1	72.00	0	0.00	0	0.00	0	0.00	0	0.00	1	72.00
	Purchase of Air Compressor 750 cfm for AED	All Blocks	No's/Ha	25	1	25.00	0	0.00	0	0.00	0	0.00	0	0.00	1	25.00
	Solar Energy															
50	5 hp	All Blocks	No's/Ha	3.75	55	206.25	55	206.25	55	206.25	55	206.25	55	206.25	275	1031.25
51	7.5 hp	All Blocks	No's/Ha	5.3	50	265.00	50	265.00	50	265.00	50	265.00	50	265.00	250	1325.00
52	10 hp	All Blocks	No's/Ha	6.75	30	202.50	30	202.50	30	202.50	30	202.50	30	202.50	150	1012.50
53	upto 400sq.ft	All Blocks	No's/Ha	4.25	2	8.50	3	12.75	3	12.75	3	12.75	2	8.50	13	55.25
54	400-600sq.ft	All Blocks	No's/Ha	6.5	3	19.50	3	19.50	2	13.00	2	13.00	2	13.00	12	78.00
	Any other innovative schemes of AED with Components & its unit cost															
55	Special Training for Coconut Growers. Special Training for Coconut Tree Climbing	All Blocks	No's/Ha	0.45	100	45.00	75	33.75	75	33.75	50	22.50	50	22.50	350	157.50

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
	Information Technology (IT) related items															
56	Computer & its accessories		No's/Ha	0.8	0	0.00	2	1.60	4	3.20	5	4.00	2	1.60	13	10.40
57	Tablet (Tab)		No's/Ha	0.25	0	0.00	0	0.00	0	0.00	5	1.25	5	1.25	10	2.50
58	Xerox machine		No's/Ha	1.5	0	0.00	1	1.50	2	3.00	2	3.00	3	4.50	8	12.00
	Sugarcane Infielder															
59	Bird Scarer		No's/Ha	0.4	0	0.00	0	0.00	0	0.00	0	0.00	10	4.00	10	4.00
60	Mecanized row crop cultivation-Pilot mechanization Demonstration		No's/Ha	0.04	0	0.00	0	0.00	1	0.04	0	0.00	0	0.00	1	0.04
61	Modernisation of Tractor workshops of AED		No's/Ha	50	1	50.00	1	50.00	1	50.00	1	50.00	1	50.00	5	250.00
62	Chain saw/ Wheel barrow/ Mango grader/ planter and other suitable self propelled machineries and equipments for horticulture Crops		No's/Ha	1	0	0.00	500	500.00	200	200.00	200	200.00	25	25.00	925	925.00
	Manual Horticultural Equipments															
63	Aluminium Ladder/ Ladder		No's/Ha	0.2	0	0.00	25	5.00	20	4.00	10	2.00	15	3.00	70	14.00

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
64	Aluminium pole		No's/Ha	0.03	0	0.00	0	0.00	20	0.60	10	0.30	20	0.60	50	1.50
65	Plucker		No's/Ha	0.02	0	0.00	0	0.00	20	0.40	20	0.40	20	0.40	60	1.20
	Post Harvest Equipments for food grains, oil seeds and Horticultural Equipments															
66	Mini dhalll Mill		No's/Ha	1.7	0	0.00	3	5.10	2	3.40	2	3.40	5	8.50	12	20.40
67	Millet Mill		No's/Ha	1.5	0	0.00	6	9.00	5	7.50	3	4.50	5	7.50	19	28.50
68	Oil mill with filter press (for all type of Horticulture / Food grain / Oil seeds crop)		No's/Ha	1.2	0	0.00	5	6.00	10	12.00	3	3.60	5	6.00	23	27.60
69	Packing Machines (for all types of Horticulture / Food grain / Oil seeds crop)		No's/Ha	3	0	0.00	2	6.00	0	0.00	0	0.00	2	6.00	4	12.00
70	All types of Power driven Dehusker/ sheller/ Threshers/ Harvesters/ De-spiking/ Deconing Machine/ Peeler/ Splitter/ Stripper (for all type of Horticulture / Food grain / Oil seeds crop)		No's/Ha	1.2	0	0.00	10	12.00	0	0.00	0	0.00	20	24.00	30	36.00

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
71	All types of Boiler/ Steamer/ Dryer solar (for all type of Horticulture / Food grain / Oil seeds crop)		No's/Ha	2	0	0.00	0	0.00	0	0.00	0	0.00	10	20.00	10	20.00
72	All types of Grinder/ Pulveriser/ Polisher (for all type of Horticulture / Food grain / Oil seed crop)		No's/Ha	0.3	0	0.00	5	1.50	0	0.00	0	0.00	10	3.00	15	4.50
73	Bio- mass gasifier		No's/Ha	1.2	0	0.00	0	0.00	0	0.00	0	0.00	2	2.40	2	2.40
74	Construction of Agricultural Engineering Extension centres (AEECs)		No's/Ha	75	0	0.00	1	75.00	0	0.00	0	0.00	0	0.00	1	75.00
75	Training of AED Engineers on " Agricultural Processing" and " Bio- Energy"		No's/Ha	0.04	0	0.00	1	0.04	2	0.08	0	0.00	2	0.08	5	0.20
	Grand total					**2878.55**		**3007.29**		**2737.77**		**2664.75**		**2587.88**		**13876.22**

B1- Anaimalai, B2- Annur, B3- Karamadai, B4- Kinathukadavu, B5- Madukkarai, B6- P.N. Palayam, B7- Pollachi(N), B8- Pollachi(S), B9- S.S. Kulam, B10- Sultanpet, B11- Sulur, B12- Thondamuthur

4.4. Agricultural Marketing

The Government is taking every effort to attain sustainable agricultural development by transforming agriculture into a commercial venture, by switching over to new scientific methods of cultivation so as to increase the productivity manifold. Besides, through value addition, processing and utilization of marketing opportunities, the marketing of such incremental output can be ensured. To further improve the marketing opportunities and to reduce the loss of agricultural produces, several measures have to be taken up by way of interventions like strengthening of shandies, construction of storage godown, provision of market accessories and capacity building of farmers.

The core problem however in Agribusiness development is the general failure in coordinating the decisions of the private stake holders *viz.,* farmers, traders and agricultural processors and service providers by the government and non-governmental sectors. In fact farmers fail to link themselves through effective producer-organizations to undertake joint decisions in production and marketing as well. Such weak linkages are also due to limited access to relevant market intelligence and inadequate market infrastructure. Farmers are also poorly linked to research and extension providers to address their specific technology and knowledge needs that would enable them into high-value production systems.

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

Agricultural produces are seasonal and perishable in nature. In a good season, there may be a local glut, but because of insufficient transport facilities, lack of good roads and poor availability of packaging materials, the surplus cannot be taken quickly enough to the near by urban markets. Moreover, the surplus often cannot be stored for sale in the off-season because of inadequate local storage facility; the farmers are often forced to market their produce at low price.Thus, the cultivators do not get a good price for their produce because of the glut, and some of it is spoiled resulting in complete loss. Currently pulses are processed manually using thirugu, ural, chakki, etc., which is laborious and time consuming. Due to existing problems in processing of pulses and millets, their market is not profitable for the farmers growing them. To reduce the loss of agricultural produce which are up to 30 per

cent, necessary provisions are needed to ensure remunerative price to the produce, encourage processing from the present level of 10 per cent of the total.

So, to accelerate the growth substantially, a new way of linking of Agribusiness development and promoting Agribusiness is needed. Promotion of commodity groups, farmer producer agencies, marketing organization and market linkage, encouraging of private players in marketing, value addition, more infrastructural facilities for processing and sensitizing the farmers for market-led agriculture by rendering crop advisory and market information are needed. Agri-business also contributes to the production of high-value products and diversification away from the staple foods. Through this diversification and the development of the value chain between producers and consumers, the rural economy benefits from innovation and the creation of non-farm employment.

4.4.1. Components

- Promotion of commodity groups and market information covered in Annur and Tiruppur block.
- Strengthening of uzhavar sandhai covered in all blocks.
- Formation of FPO/ strengthening of existing commodity groups covered in all blocks.
- Provision of market access and market activities covered in tirupur block for digital moisture metre and hand sprayer whereas and vending machine are implemented in Annur and Pongalur block.
- Capacity building programme covered in exposeure visit within state are covered in all blocks and outside the state are covered in all block except Pollachi South, Pongalur and Palladam block.

4.4.2 Budget

It is proposed to incur **₹.3604.75 lakhs** over a period of five years as given in Table 4.20**.**

4.4.3. Expected Outcome

The interventions will promote entrepreneurs by organizing trainings and exposure visits. Farmers are facilitated to use drying yards and cold storage to market good quality graded products. It will also avoid distress sale by storing their agricultural produce. It helps them to get loans during storage period and sell it when the market price is high. This will

strengthen the economic condition of the farmers as well as habituate them for grading, drying, sorting and storing.

4.4.4. Implementing Agency

Agricultural Marketing and Agri Business Department will implement the programs.

Table 4.20. Budget for strengthening of Agricultural Marketing and Agri-Business in Coimbatore District

(₹. in lakhs)

Sl. No.	Intervention	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
	Promotion of Commodity Groups and Market Information															
1	Farmers Information cum Training Centre	1	50	B2	1	50	0	0	0	0	0	0	0	0	1	50
2	Own building for AGMARK Lab	1	25	B16	1	25	0	0	0	0	0	0	0	0	1	25
3	Hot Air Oven	1	0.35	B16	0	0	1	0.35		0		0		0	1	0.35
4	Mufful furnace	1	0.2	B16	0	0	1	0.2		0		0		0	1	0.2
5	Hot Plate	3	0.05	B16	3	0.15		0		0		0		0	3	0.15
6	Water Bath	3	0.05	B16	3	0.15		0		0		0		0	3	0.15
7	Distillation unit	1	0.4	B16	0	0	1	0.4		0		0		0	1	0.4
	Strengthening of Uzhavar Sandhai and Regulated Market															
8	Upgradation of Uzhavar Shadhais	1	0.025	All Blocks	12030	300.75	1517	37.925	214	5.35	147	3.675	234	5.85	14142	353.55
	Formation of FPO / Strengthening of Existing Commodity Groups															
9	FPO	1	35	All Blocks	10	350	6	210	6	210	0	0	0	0	22	770
	Provision of Market Access and Market Activities															
10	Aluminium tray	1	10	All Blocks	4	40	4	40	4	40	4	40	4	40	20	200
11	Digital Moisture Meter	1	0.4	B16	0	0	1	0.4	0	0	0	0	0	0	1	0.4
12	Hand sprayer - to spray pesticide to control storage pest in Godowns	1	0.35	B16	0	0	1	0.35	0	0	0	0	0	0	1	0.35
13	Machinaries	1	40	B2, B10	2	80	0	0	0	0	0	0	0	0	2	80
14	Tarpaulin	4	0.8	All Blocks	250	200	250	200	250	200	250	200	250	200	1250	1000

Sl. No.	Intervention	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
15	Vending Cart	1	10	B2, B10, B13	6	60	4	40	4	40	4	40	4	40	22	220
	Post Harvest Infrastructure and Machinaries															
16	Turmeric boiler	1	1.2	B16	2	2.4	2	2.4	2	2.4	2	2.4	2	2.4	10	12
17	Turmeric grader	1	1.75	B16	1	1.75	1	1.75	1	1.75	1	1.75	1	1.75	5	8.75
18	Turmeric Polisher	1	0.1	B16	2	0.2	2	0.2	2	0.2	2	0.2	2	0.2	10	1
19	Turmeric pulvariser	0	32.82	B16	2	65.64	2	65.64	2	65.64	2	65.64	2	65.64	10	328.2
	Capacity building Programme															
20	Exposure Visits - within state	1	1.2	All Blocks	26	31.2	26	31.2	26	31.2	26	31.2	26	31.2	130	156
21	Exposure Visits - outside state - 3 days	1	1.75	All Blocks except B9, B10, B11	15	26.25	15	26.25	15	26.25	15	26.25	15	26.25	75	131.25
22	Training on Market led Extension, Agmark grading&Food safety, post harvest technology, Supply Chain Management, Grading-sorting-packing, Market linkages & Exports, Food processing and value addition at district level	38	0.1	All Blocks except B9, B10, B11	534	53.4	534	53.4	534	53.4	534	53.4	534	53.4	2670	267
	Grand total					**1286.89**		**710.465**		**676.19**		**464.5**		**466.69**		**3604.75**

B1-Anaimalai, B2-Annur, B3-Avinashi, B4-Karamadai, B5-Kinathukadavu, B6-Madukkarai, B7-P.N.Palayam, B8-Pollachi(N), B9-Pollachi (S), B10-Pongalour, B11-Palladam, B12-S.S.Kulam, B13-Sultanpet, B14-Sulur, B15-Thondamuthur, B16-Tiruppur, B17-Udumalpet, B18-Madathukulam, B19-Gudimangalam

4.5. 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 Tamil Nadu state are well aware of the benefits of using quality seeds which include foundation, certified and truthfully labelled seeds. In the 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.

4.5.1. Project components

- Strengthening of Seed Testing laboratories covered in all blocks of Coimbatore district.
- 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, Geyser, Heater, Trolley for Carriages, Generator 30KV, Induction Stove, Fabricated Display Racks, Conductivity Meter, Dehuller/ Scarifier, Seed Grinder, Blower, Hot Air oven, Incubator etc., are required.

- Strengthening of communication and networking facilities covered in all blocks of Coimbatore district.
- Information on quality seed production techniques would be disseminated among the farmers and seed growers.

4.5.2. Expected outcome

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

4.5.3. 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 Coimbatore district. The budget requirement for implementation of interventions such as strengthening seed testing laboratory is **₹. 4.33 lakhs** and Strengthening of communication and network facilities is **₹. 10.00 lakhs** The overall budget requirement for implementation of above interventions is **₹.36.72 lakhs.** The details of budget requirement for each intervention across the blocks are shown in Table 4.21.

4.5.4. Implementing agency

The projects will be implemented by the Directorate of Seed and Organic Certification.

Table 4.21. Budget Requirement for Seed Certification

(₹. 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**															
	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,	Nos	13.36	All Blocks	1.00	13.36	1.00	13.36	0.00	0.00	0.00	0.00	0.00	0.00	2.00	26.72
	Total	**0.00**	**13.36**	**0.00**	**1.00**	**13.36**	**1.00**	**13.36**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**2.00**	**26.72**

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
II	**Strengthening of communication and networking facilities**															
	Computer accessories	No's	0.20	All Blocks	50.00	10.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	50.00	10.00
	Total					**23.36**		**13.36**		**0.00**		**0.00**		**0.00**		**36.72**

B1- Anaimalai, B2- Annur, B3- Karamadai, B4- Kinathukadavu, B5- Madukkarai, B6- P.N. Palayam, B7- Pollachi(N), B8- Pollachi(S), B9- S.S. KULAM, B10- Sultanpet, B11- Sulur, B12- Thondamuthur

4.6. Animal Husbandry Sector

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 byproducts 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% of the agricultural labour force. The livestock sector has been growing faster than crop sector; however, in recent years, the growth of 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% of world's buffaloes, 12.5% cattle, 20.4% small ruminants, 2.4% camel, 1.4% equine, 1.5% pigs and 3.1% poultry. In 2010-11, livestock generated outputs worth Rs. 2075 billion which comprised 4% of the GDP and 26% 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 in view of this 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 covered in all blocks of Coimbatore district.
2. Livestock breeding management covered in all blocks of Coimbatore district.
3. Improving the livestock productivity covered in all blocks of Coimbatore district.
4. Improving the service delivery at veterinary institutions covered in all blocks of Coimbatore district.
5. Enhancing livestock management covered in all blocks of Coimbatore district.
6. Capacity building was covered in all blocks of Coimbatore district.

4.6.1. 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 the actual 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 provide 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. The budget requirement for fulfilling the below interventions is ₹ **1139.00** lakhs. To overcome these issues the following field level interventions are proposed to improve the fodder availability.

1. Establishment of vermicomposting unit covered in all blocks of Coimbatore district.
2. Distribution of Azolla trays and silage bags covered in all blocks of Coimbatore district.
3. Fodder plot development covered in all blocks of Coimbatore district.
4. Meikal land development was covered in all blocks of Coimbatore district.
5. Distribution of chaff cutter, grass cutter to the farmers covered in all blocks of Coimbatore district
6. Development of fodder seed production plots was covered in all blocks of Coimbatore district.

4.6.2. 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% 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 mismanaged 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 aged 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. Controlled internal drug release (CIDR) devices are used in livestock for the synchronization of oestrus. The budget requirement for fulfilling the below interventions is ₹ **42.00** lakhs. The following interventions will help to improve livestock breeding management, such as CIDR

4.6.3. 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 budget requirement for fulfilling the below interventions is ₹ **3575.00** lakhs. The intervention have been proposed are

1. Distribution of sheep, goat, buffalo, piggery, poultry units was covered in all blocks of Coimbatore district.
2. Establishment of modern poultry, rabbit , piggery, sheep, goat and bull shed was covered in all blocks of Coimbatore district.
3. Popularizing quail rearing was covered in all blocks of Coimbatore district.
4. Integrated farming was covered in all blocks of Coimbatore district.
5. Distribution of Milking machine was covered in all blocks of Coimbatore district.
6. Deep freezer facility for storage of vaccines and medicines was covered in all blocks of Coimbatore district.

4.6.4. 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 be helpful to enhancing livestock management. The budget requirement for fulfilling the below interventions is ₹ **92.00** lakhs. The intervention have been proposed are:

1. Animal identification and traceability was covered in all blocks of Coimbatore district.
2. Conservation of indigenous breeds was covered in all blocks of Coimbatore district.

4.6.5. 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. The budget requirement for fulfilling the below interventions is ₹ **212.00** lakhs.

1. Establishment of farmer's training Centre was covered in all blocks of Coimbatore district.
2. Conducting demonstrations camps and campaigns was covered in all blocks of Coimbatore district.
3. Creating awareness of livestock management to the farmers through training programmes was covered in all blocks of Coimbatore district.

4.6.6. Budget allocation

The major themes proposed in the plan for animal husbandry sector with a total budget out lay of ₹. **5060.00 lakhs**

4.6.7. Project implementing agency

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

Table 4.22. Budget requirement for Animal Husbandry

(₹. in lakhs)

Sl. No	Inter- ventions	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	120	6.00	120	6.00	120	6.00	120	6.00	120	6.00	600	30.00
2	Fodder production to the farmers by Hydrophonic methods	Nos	0.1	All Blocks	12	1.20	12	1.20	12	1.20	12	1.20	12	1.20	60	6.00
3	Distrbution of Azolla trays	Nos	0.03	All Blocks	420	12.60	420	12.60	420	12.60	420	12.60	420	12.60	2100	63.00
4	Distribution of Silage bags for conservation of fodder crops	Nos	0.005	All Blocks	600	3.00	600	3.00	600	3.00	600	3.00	600	3.00	3000	15.00
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	Meikal land development (incl infrastructure development)	acre	6	All blocks	20	120.00	30	180.00	30	180.00	20	120.00	20	120.00	120	720.00
7	Distribution of Chaff Cutter to farmers	Nos	0.25	All Blocks	120	30.00	120	30.00	120	30.00	120	30.00	120	30.00	600	150.00
8	Distribution of Grass Cutter to farmers	Nos	0.2	All Blocks	60	12.00	60	12.00	60	12.00	60	12.00	60	12.00	300	60.00
9	Developemnt of Seed Production plots	acre	0.25	All Blocks	12	3.00	12	3.00	12	3.00	12	3.00	12	3.00	60	15.00
	Livestock Breeding Management															
10	CIDR (Controlled Internal Drug Release) for increasing Fertility in Cattle	Nos	0.01	All Blocks	840	8.40	840	8.40	840	8.40	840	8.40	840	8.40	4200	42.00
	Improving the Livestock Productivity															
11	Distibution of Sheep/Goat units -semi intensive system	Nos	0.6	All Blocks	12	7.20	12	7.20	12	7.20	12	7.20	12	7.20	60	36.00
12	Distribution of Buffalo units(5 Buffaloes)	Nos	4.5	All Blocks	12	54.00	12	54.00	12	54.00	12	54.00	12	54.00	60	270.00
13	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

Sl. No	Inter- ventions	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
14	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
15	Establishment of disposal pits for poultry unit	Nos	1	All Blocks	200	200.00	300	300.00	300	300.00	200	200.00	200	200.00	1200	1200.00
16	Milking Mechine	Nos	0.25	All Blocks	60	15.00	60	15.00	60	15.00	60	15.00	60	15.00	300	75.00
17	Distribution of Piggery units (fattening-5 Nos)	Nos	1.25	All Blocks	12	15.00	0	0.00	0	0.00	0	0.00	0	0.00	12	15.00
	Improving the Service Delivery at Veterinary Institutions															
18	Deep freezer facility for Storage of vaccines and Medicines	Nos	10	All Blocks	0	0.00	0	0.00	12	120.00	0	0.00	0	0.00	12	120.00
19	Establishment of Infrastructure facilities for Veterinary Institutions	Nos	30	All Blocks	2	60.00	3	90.00	3	90.00	2	60.00	2	60.00	12	360.00
20	Establishment of Mobile Disease Diagnostic Labs	Nos	20	All Blocks	2	40.00	3	60.00	3	60.00	2	40.00	2	40.00	12	240.00
21	Establishment of Mobile Veterinary Units	Nos	10	All Blocks	2	20.00	3	30.00	3	30.00	2	20.00	2	20.00	12	120.00
22	Establishment of surgical theatres at veterinary institution	Nos	30	All Blocks	3	90.00	3	90.00	2	60.00	2	60.00	2	60.00	12	360.00
23	Providing solar lighting panels at veterinary institution	Nos	1	All Blocks	14	14.00	21	21.00	21	21.00	14	14.00	14	14.00	84	84.00
24	Package of Modern Veterinary Diagnostic Aids to Veterinary Institutions such as Computerised X rays, Ultrasound, Diathermy etc.	Nos	30	All Blocks	3	90.00	3	90.00	2	60.00	2	60.00	2	60.00	12	360.00
25	Establishment of Ambulance facility for animals	Nos	80	B1	1	80.00	1	80.00	0	0.00	0	0.00	0	0.00	2	160.00
	Livestock Management															
26	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
27	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	Inter- ventions	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															
28	Establishment of Farmer's training Centre	Nos	200	B1	0	0.00	1	200.00	0	0.00	0	0.00	0	0.00	1	200.00
29	Conducting Demonstrations, Camps and Campaigns	Nos	0.1	All Blocks	12	1.20	12	1.20	12	1.20	12	1.20	12	1.20	60	6.00
30	Creating awarness of livestock management to the farmers through Training Programmes	Nos	0.1	All Blocks	12	1.20	12	1.20	12	1.20	12	1.20	12	1.20	60	6.00
	Grand total					**978.80**		**1363.80**		**1143.80**		**786.80**		**786.80**		**5060.00**

B1- Anaimalai, B2- Annur, B3- Karamadai, B4- Kinathukadavu, B5- Madukkarai, B6- P.N. Palayam, B7- Pollachi (N), B8- Pollachi (S), B9- S.S. Kulam, B10- Sultanpet, B11- Sulur, B12- Thondamuthur

4.7. 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 socio-economic 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 more. To fulfill the shortage in dairy sector the following interventions have been suggested.

4.7.1. 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 is also required to provide proper storage facilities.

The major interventions are,

1. Milk storage tanks of various capacities are covered in all blocks of Coimbatore district.
2. Milk tankers are covered in all blocks of Coimbatore district.
3. Milk pumps are covered in all blocks of Coimbatore district.
4. Processing equipments are covered in all blocks of Coimbatore district.
5. Pasteurizers are covered in all blocks of Coimbatore district.
6. Heaters and chillers are covered in all blocks of Coimbatore district.
7. Washer and conveyors are covered in all blocks of Coimbatore district.
8. Pipes and fittings are covered in all blocks of Coimbatore district.
9. Cleaning equipments are covered in all blocks of Coimbatore district.
10. Electrical installations (UPS, generators, stabilizers, control panel) are covered in all blocks of Coimbatore district

4.7.2. 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. To get a better improvement in milk production than before the following inputs have been suggested.

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

4.7.3. 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 smallholders 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 make the farmers as scholars in particular thing some trainings and camps has to be conducted. To make sure this the following intervention has been proposed.

1. Training of personnel of MPCS, Union and federation was conducted in all blocks of Coimbatore district
2. Infertility camps was conducted in all blocks of Coimbatore district

4.7.4. 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 marketing. 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 the suitable marketing structure is vital. For that the following structures have been suggested

1. Parlour structure were covered in all blocks of Coimbatore district
2. Milk product storage cabinets were covered in all blocks of Coimbatore district
3. Product billing system were covered in all blocks of Coimbatore district

4.7.5. 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 following interventions have been suggested

1. Adulteration detection equipment’s were covered in all blocks of Coimbatore district
2. Milk testing equipment and laboratory was covered in all blocks of Coimbatore district

4.7.6. 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 were covered in all blocks of Coimbatore district
2. Dairy processing plants were covered in all blocks of Coimbatore district
3. Water and effluent treatment plants were covered in all blocks of Coimbatore district
4. Steam raisning plant were covered in all blocks of Coimbatore district

4.7.7. 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 central may be the ideal solution. The following buildings have been proposed for better storage and improvement

1. Ware house for dairy products were covered in all blocks of Coimbatore district
2. Ware house for dairy consumables were covered in all blocks of Coimbatore district

4.7.8. Budget allocation

An outlay of **Rs.6379.00** lakhs is proposed to fulfill the aforementioned interventions for five years. Out of this, Rs. 607.00 lakhs allocated for strengthening of milk storage and processing equipments, Rs. **4208.00** lakhs have been proposed for enhancing milk productions and processing units, Rs. **1165.00** lakhs have been proposed marketing, quality control and processing of value addition for Coimbatore district. By constructing dairy unit in rural areas more and more beneficiaries belonging to the weaker sections of the District are baled out of poverty, thus ensuring equitable growth and development. This foresighted implementation of developmental schemes in Dairy Sector has enabled to increase the per capita income of rural households in backward Districts. The details of budget requirement for each intervention across the blocks are shown in Table 4.23.

4.7.9.Implementing agency

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

Table. 4.23. 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 Tranformer, UPS, Stabilisers, Control Panel MCC etc.,	1	25	All blocks	0	0.00	0	0.00	1	25.00	0	0.00	1	25.00	2	50.00
2	Milk Storage Tanks of various capacities	1	15	All blocks	0	0.00	0	0.00	0	0.00	5	75.00	0	0.00	5	75.00
3	Tub washer, Can washers, Crate conveyor systems.	1	10	All blocks	0	0.00	0	0.00	0	0.00	0	0.00	2	20.00	2	20.00
4	Point of Sale Machines and billing systems	1	0.25	All blocks	0	0.00	25	6.25	25	6.25	100	25.00	100	25.00	250	62.50
5	SS pipes and fittings	1	5	All blocks	0	0.00	1	5.00	1	5.00	1	5.00	1	5.00	4	20.00
6	Solar system for water heating	1	2	All blocks	0	0.00	0	0.00	1	2.00	1	2.00	1	2.00	3	6.00
7	Packing Machineries for milk, Butter, Ghee, SMP and Other Milk products	1	18	All blocks	0	0.00	2	36.00	0	0.00	2	36.00	2	36.00	6	108.00
8	Plate Heat type Chillers and pasteurizers	1	10	All blocks	0	0.00	0	0.00	0	0.00	2	20.00	1	10.00	3	30.00
9	Milk Tankers of various capacities	1	25	All blocks	0	0.00	0	0.00	2	50.00	0	0.00	2	50.00	4	100.00
10	Milk Pumps of Vaious capacities	1	0.5	All blocks	0	0.00	5	2.50	5	2.50	0	0.00	10	5.00	20	10.00
11	Curd processing equipments	1	50	All blocks	0	0.00	0	0.00	1	50.00	0	0.00	0	0.00	1	50.00
12	Cleaning In Place equipments with accessories	1	75	All blocks	0	0.00	0	0.00	0	0.00	1	75.00	0	0.00	1	75.00

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
	Procurement and Input															
13	Veterinary Medicine	1	2	All blocks	10	20.00	10	20.00	10	20.00	10	20.00	10	20.00	50	100.00
14	Two wheeler for AI technician	1	0.5	All blocks	5	2.50	5	2.50	5	2.50	5	2.50	10	5.00	30	15.00
15	Computer system with accessories	1	0.5	All blocks	5	2.50	5	2.50	5	2.50	5	2.50	5	2.50	25	12.50
16	Fodder seed materials	1	0.25	All blocks	10	2.50	15	3.75	20	5.00	10	2.50	30	7.50	85	21.25
17	Fodder development equipments like chaff cutter, Mower etc.,	1	0.2	All blocks	25	5.00	25	5.00	50	10.00	25	5.00	30	6.00	155	31.00
18	Bulk Milk coolers of Various capacities	1	15	All blocks	0	0.00	2	30.00	5	75.00	5	75.00	5	75.00	17	255.00
19	Milk cans	1	0.035	All blocks	500	17.50	500	17.50	1000	35.00	1000	35.00	1000	35.00	4000	140.00
20	Electronic weighing scales of various capacities.	1	0.3	All blocks	20	6.00	30	9.00	30	9.00	50	15.00	50	15.00	180	54.00
21	Electronic milk testing equipments	1	1.25	All blocks	20	25.00	20	25.00	30	37.50	30	37.50	50	62.50	150	187.50
22	Milking machine	1	0.8	All blocks		0.00		0.00	50	40.00		0.00	50	40.00	100	80.00
23	Cow shed	1	5	All blocks	50	250.00		0.00		0.00		0.00		0.00	50	250.00
24	Society Buildings	1	20	All blocks	25	500.00	25	500.00	25	500.00	25	500.00	50	1000.00	150	3000.00
25	Cryogenic containers	1	0.35	All blocks	25	8.75	25	8.75	25	8.75	50	17.50	50	17.50	175	61.25
	Capacity building															
26	Training of personnel of MPCS, Union and Federation.	1	0.05	All blocks	50	2.50	50	2.50	200	10.00	200	10.00	200	10.00	700	35.00
27	Infertility Camps	1	0.2	All blocks	50	10.00	50	10.00	50	10.00	100	20.00	0	0.00	250	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
	Marketing															
28	Parlour structures	1	5	All blocks	20	100.00	20	100.00	20	100.00	20	100.00	20	100.00	100	500.00
29	Milk product storage cabinets	1	0.3	All blocks	50	15.00	50	15.00	100	30.00	100	30.00	200	60.00	500	150.00
30	Product Billing systems	1	0.3	All blocks	100	30.00	100	30.00	100	30.00	100	30.00	100	30.00	500	150.00
	Quality control															
31	Adulteration detection equipments	1	4	All blocks	0	0.00	2	8.00	0	0.00	3	12.00	0	0.00	5	20.00
32	Milk testing equipment and Laboratory.	1	5	All blocks	0	0.00	1	5.00	0	0.00	0	0.00	1	5.00	2	10.00
	Processing															
33	Water Treatment Plants. Reverse Osmosis plant	1	100	All blocks	0	0.00	0	0.00	1	100.00	0	0.00	0	0.00	1	100.00
34	Steam raising plant with accessories	1	100	All blocks	0	0.00	0	0.00	0	0.00	1	100.00	0	0.00	1	100.00
35	Dairy equipments	1	50	All blocks	0	0.00	1	50.00	0	0.00	0	0.00	0	0.00	1	50.00
	Civil work Infrastructure															
36	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
37	Ware house for Dairy consumables	1	200	All blocks	0	0.00	0	0.00	0	0.00	1	200.00	0	0.00	1	200.00
	Grand total					**997.25**		**894.25**		**1366.00**		**1452.50**		**1669.00**		**6379.00**

B1-Anaimalai, B2-Annur, B3-Karamadai, B4-Kinathukadavu, B5-Madhukarai, B6-PN Palayam, B7-Pollachi North, B8-Pollachi South, B9-SS Kulam, B10-Sultanpet, B11-Sulaur, B12-Thondamuthur

4.8. Fisheries

Fisheries have emerged as an important food production sector in the district contributing to the livelihood as well as food security of a large section of the people. Fishing activity, starting as a traditional livelihood activity in early fifties has now transformed into commercial enterprise contributing to the State and National economy, livelihood and nutritional security, rural employment generation and foreign exchange earnings significantly.

4.8.1. Encouraging fish production

4.8.1.1. Project rationale

Aquatic weeds are the most important obstacle for rearing of fishes in the lakes and ponds. The eradication or control of aquatic weeds is essential to improve the fish production. There are only a few biological agents available which are expected to be of real importance in the near future, i.e. phytophagous fishes, such as grass carp, and arthropods which feed especifically on water hyacinth. Possibly, biological agents in combination with mechanical/manual methods, or to a lesser extent chemical means of control, could offer a promising perspective for the control of aquatic weeds in the tropics. Mopped ice boxes are the modern tools to maintain the quality of the fish products. So supply of ice boxes to the fishermen helps them to maintain the quality of fish.

4.8.1.2. Project goal

The main objective of the project is to increase the fish production through assured supply of IMC fish seeds and distribution of mopped ice box for fish handling and dissemination of technologies through organizing fish festival. These activities will increase the livelihood of the fishermen and fish catchers.

4.8.1.3. Project components

The major components of the fish production are

- Biological Control of Aquatic Weeds by Stocking of Grass Carps was covered in Kinatukadavu, S.S.Kulam and Thondamathur blocks of Coimbatore district
- Introduction of IMC seeds in riverine check dams and weirs was covered in Pollachi North and Pollachi South blocks.
- Fish production in irrigation tanks and Panchayat tanks by stocking fish seeds was covered in Annamalai and Karamadai blocks.
- Promotion of quality fish marketing by providing moped with ice box was covered in all blocks except Madukarai and P.N.Palayam blocsk.
- Organization of Fish festival was conducted in Madukarai blocks.

4.8.1.4. Project area

The proposed interventions are planned to be implemented in the major fish production blocks such as Thondamuthur, S.S. Kulam, Kinathukadavu, Anaimalai, Annur, Pollachi North, Pollachi South and Karamadai.

4.8.1.5. Project implementing agency

The project will be implemented by the Department of Fisheries. The progress of the work will be monitored by the heads of officials of the district headquarters.

4.8.1.6. Expected out come

The implementation of the above interventions will improve the fish production in the district and helps in sustainable fish production. The distribution of IMC seeds will increase the production of varieties of fishes. Also the supply of mopped ice boxes to the fish catchers will ensure supply of quality fishes.

4.8.2. Creation of infrastructure facilities for fish production

4.8.2.1. Project rationale

Varieties of freshwater, brackish water and marine fish along with crabs and lobsters would be sold in hygienic condition; the fishery products like dry fish, canned fish and fish pickle would also be sold to the consumers in a good condition. This can be achieved by creating infrastructures like modern fish kiosk and installation of modern fish marketing vehicles.

4.8.2.2. Project goal

The program involves coordinated efforts for establishment of modern fish selling Kiosks with Air-conditioning to cater to the fish loving population of the district.

4.8.2.3. Project components

- Establishment of modern mobile fish marketing vehicles
- Improvement of hygienic fish marketing by establishing modern fish kiosk TNFDC

4.8.2.3. Project area

The model mobile fish marketing vehicle will be established in the Karamadai block and modern fish kiosk will be established at Anaimalai block.

4.8.2.4. Project cost

The total cost of the project for creating above infrastructure will work out to ₹.88.00 lakhs.

4.8.2.5. Project implementing agency

The proposed infrastructures will be established by the Department of Fisheries. The progress of the work will be monitored by district level officials.

4.8.2.6. Expected outcome

By the establishment of modern marketing vehicle and fish kiosk, assured quality of supply fish products can be delivered to the consumers.

4.8.3. Popularization of fishing technologies

Popularization of fishing technologies among fishermen is done through the provision of training. The development of knowledge and skills of small-scale fishers, traders and processors, as well as extension workers and public sector staff, is a fundamental aspect of most interventions to improve standards, fish handling, management and ultimately improved business. Training on fish rearing technology and exposure visits to the fishermen will help them to increase their income by rearing new fish varieties and adoption of advanced fishing technologies. The trainings and exposure visit are planned to train for the fisher folks in all the blocks of Coimbatore district except in S.S Kulam and Kinathukadavu. The proposed interventions will be implemented with a budget outlay of ₹.4.80 lakhs.

4.8.4. Overall budget

The total cost for implementation of the above project will arrive to ₹.214.15 lakhs as shown in Table 4.24.

Table 4.24. Budget Requirement for Fisheries

(₹. 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
	Enhancement of fisheries															
1	Promotion of quality fish marketing by traditional fishers by providing moped with	All Blocks Except Madukkarai; P.N.Palayam	Nos	0.5	0	0.00	10	5.00	10	5.00	10	5.00	0	0.00	30	15.00
2	Introduciton of IMC seeds in riverine check dams and weirs (ha.) (2000 AFL/ha. @Rs.2/seed-100% subsidy)	Pollachi North, Pollachi South	Nos	0.00004	0	0.00	50000	2.00	50000	2.00	50000	2.00	50000	2.00	200000	8.00
3	Increasing fishing efficiency of inland fishermen and	All Blocks	Nos	0.05625	312	17.55	132	7.43	132	7.43	132	7.43	132	7.43	840	47.25
4	Improvement of hygenic fish handling by providing ice boxes	All Blocks Except Madukkarai; P.N.Palayam	Nos	0.065	0	0.00	10	0.65	10	0.65	10	0.65	10	0.65	40	2.60
5	Improvement of hygienic fish marketing by establishing modern fish kiosk TNFDC	Anaimalai	Nos	66	0	0.00	0	0.00	1	66.00	0	0.00	0	0.00	1	66.00

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
6	Enhancement of Fish production in irrigation tanks and Panchayat tanks by stocking fish seeds	Anaimalai; Karamadai	Nos	0.00004	0	0.00	100000	4.00	100000	4.00	100000	4.00	100000	4.00	400000	16.00
7	Biological Control of Aquatic Weeds by Stocking of Grass Carps in Aquatic Weed Infested water bodies	Kinathukadavu, S.S.Kulam, Thonda -muthur	Nos	0.00004	137500	5.50	137500	5.50	137500	5.50	137500	5.50	137500	5.50	687500	27.50
	Programme															
8	Establishment of modern mobile fish marketing vehicles	Karamadai	Nos	11	0	0.00	0	0.00	2	22.00	0	0.00	0	0.00	2	22.00
9	Exposure visit to farmers to other states	All Blocks Except Kinathukadavu; S.S.Kulam	Nos	0.06	0	0.00	20	1.20	20	1.20	0	0.00	0	0.00	40	2.40
10	Organisation of Fish festivel	Madukkarai	Nos	5	0	0.00	0	0.00	1	5.00	0	0.00	0	0.00	1	5.00
11	Training to fish farmers	All Blocks Except Kinathu kadavu; S.S.Kulam	Nos	0.03	0	0.00	20	0.60	20	0.60	20	0.60	20	0.60	80	2.40
	Grand total					**23.00**		**26.00**		**119.00**		**25.00**		**20.00**		**214.15**

B1-Anaimalai; B2-Annur; B3-Karamadai; B4-Kinathukadavu; B5--Madukkarai; B6-P.N.Palayam; B7-Pollachi North; B8-Pollachi South; B9-S.S.Kulam; B10-Sultanpet; B11-Sulur; B12-Thondamuthur

4.9 FISHERES RESEARCH

State Agriculture Plan for NADP - Fisheries (TNFU)

The Tamil Nadu Fisheries University, Nagapattinam (TNFU) is the unitary professional University in fisheries established in June 2012 by the Government of Tamil Nadu. NFU offers B.F.Sc and B.E (Fisheries Engineering) at Undergraduate level, M.F.Sc in the disciplines of Aquaculture, Fisheries Resource Management, Fish Processing Technology, Fish Quality Assurance and Management, Fisheries Engineering and Technology, Aquatic Environment Management, Fish Biotechnology, Aquatic Animal Health, Fish Pharmacology, Fisheries Extension, and Fisheries Economics at Postgraduate level and Ph.D. in the disciplines of Aquaculture, Fisheries Resource Management, Fish Processing Technology, Fish Quality Assurance and Management, Aquatic Environment Management, Aquatic Animal Health, Fisheries Extension, and Fisheries Economics at doctoral level.

Guided increase of aquaculture produce through networked disease surveillance and health certification of cultured fish and shellfish in Tamil Nadu

Indian aquaculture has been growing considerably over the last two decades. There is substantial potential to improve its productivity, diversification of the species, optimum system management and sustainable disease free aquaculture development. In Tamil Nadu, the development of fisheries and aquaculture has seen very rapid growth in the last one decade. Due to several factors including varied agro-climatic parameters and anthropogenic incursions, the freshwater and marine cultivable fish and shellfish are prone to disease problems in aquaculture systems and several disease problems are being reported from the fish and shrimp farms of the State. As the data is fragmented and unrecorded in many instances, there is an imperative need to put the entire aquaculture activities in the State under continuous surveillance, detecting emergence of epizootics and new diseases. A record of our aquaculture activities and the incidence of diseases and its management measures through treatment and prophylactics has to be documented as a prime requirement for the export of many fish and shrimp products according to the WTA guidelines.

TNFU has developed the expertise and basic infrastructure to investigate the fish and shellfish disease diagnosis and remedial measures, over the last one and half decades, at Fisheries College and Research Institute, Thoothukudi and disease diagnostic laboratories at Madhavaram and Nagapattinam. These laboratories would serve as the

backbone of the current proposal to bring the entire state under a network platform development. Fisheries College and Research Institute, Thoothukudi of Tamil Nadu Fisheries University has been a participating centre in the National Surveillance programme for Aquatic Animal Diseases. This national programme is covering only select districts of Tamil Nadu and request queries are received from among the fish and shellfish farmers across the state for the diagnosis of infections in the aquaculture systems.

In the light of the above, Tamil Nadu Fisheries University propose to set up a State level network platform of aquaculture farms to record the disease incidence for an effective surveillance system with the establishment of three laboratories spread across South, Central and North Tamil Nadu. These laboratories would target and cater to the entire State by forming three clusters of districts according to their geographic distribution. The present proposal is therefore submitted for strengthening the existing infrastructure for achieving this aim.

Budget

The budget requirement for fulfilling the above interventions is ₹ **241.60 lakhs.**

Implementing agency

Tamil Nadu Fisheries University will be implementing the project. The project will be monitored by Vice-Chancellor & Director of Research.

Table 4.25. Budget requirement for Fisheries Research

(₹. in lakhs)

Sl. No.	Interventions	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	**Harvest and Post harvest**														
a	**fish processing technology**														
b	**Branding of fish products and institutional marketing**														
c	Creation of institutional fish retail outlets with the participation of stakeholders	100	Coimbatore	1	100.00	0	0.00	0	0.00	0	0.00	0	0.00	1	100.00
d	**Enhancement of per capita consumption of fish**														
2	Awareness campaign on health beneficial attributes of fish	0.005	Coimbatore	52	0.26	52	0.26	52	0.26	52	0.26	52	0.26	260	1.30
3	Production of short films on nutritive value of fish and screening in theatres and television channels	50	Coimbatore	0	0.00	0	0.00	1	50.00	0	0.00	0	0.00	1	50.00
e	**Ensuring nutritional security through fish and fishery products**														
4	Supply of preserved ready to eat and ready to cook fish products through public distribution sytems	12.9	Coimbatore	0	0.00	1	12.90	0	0.00	0	0.00	0	0.00	1	12.90
5	Supply of fish and fish products in mid day meal programme	12.9	Coimbatore	0	0.00	1	12.90	0	0.00	0	0.00	0	0.00	1	12.90
6	Supply chain management to promote consumption of farmed freshwater fishes	64.5	Coimbatore	0	0.00	1	64.50	0	0.00	0	0.00	0	0.00	1	64.50
	Grand total				**100.26**		**90.56**		**50.26**		**0.26**		**0.26**		**241.60**

4.10. Public Works Department

4.9.1. Increasing the ground water level

With the declining and erratic rainfall, it has become necessary to go in for *in situ* water conservation. Further the loss of top soil through erosion needs to be controlled to maintain the soil fertility. The reduction of water storage facilities and the conversion of water bodies for non-agricultural purposes result in the rainwater run-off. The *in situ* water conservation will help in reducing the water and soil erosion and also improve the ground water recharge which is the need of the day. 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.

4.9.2. Project components

- Construction of a check dam across covered in Pollachi North block.
- Rehabilitation and Restoration of rivers and anicuts covered in Thondamathur block.
- Repairs and restoration of tank bunds covered in Thondamathur block.
- Strengthening and standardization of Tanks was covered in Kinathukadavu block.
- Construction and Improvement of infrastructure facilities was covered in Kinathukadavu block, Pollachi North, Pollachi South, Sultanpet and Sulur blocks.

4.9.3. Budget

It is proposed to incur ₹.**171282 lakhs** over a period of five years as shown in Table 4.25

4.9.4. 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.

4.9.5. Implementing agency

Public Works Department will be implementing the project.

Table. 4.26. Budget Estimate for PWD (Rs. in lakhs)

Sl. No.	Inter-ventions	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
1	Construction of a checkdam across Solasulahalli river in SF.No.545 of Puravipalayam village in Pollachi taluk of Coimbatore District	Pollachi north	Ha	23.9468	4	94.43	0	0.00	0	0.00	0	0.00	0	0.00	4	94.43
2	Construction of a checkdam in SF.No.574 J.Krishnapuram village in Sulur taluk of Coimbatore District	Sultanpet	Ha	6.09406	30	182.97	0	0.00	0	0.00	0	0.00	0	0.00	30	182.97
3	Rehabilitation and Restoration of Neeli Anicut and its system tank in Noyyal River System in Coimbatore District	Thonda-muthur	Ha	3.59849	408	1467.07	0	0.00	0	0.00	0	0.00	0	0.00	408	1467.07

Sl. No.	Inter-ventions	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
4	Rehabilitation and Restoration of Pudukadu Anicut and its system tank in Noyyal River System in Coimbatore District	Thonda-muthur	Ha	2.46846	237	584.63	0	0.00	0	0.00	0	0.00	0	0.00	237	584.63
5	Rehabilitation and Restoration of Chitrachavadi Anicut and its system tank in Noyyal River System in Coimbatore District	Thonda-muthur	Ha	1.72265	1562	2690.68	0	0.00	0	0.00	0	0.00	0	0.00	1562	2690.68
6	Rehabilitation and Restoration of Odderpalayam Anicut and its system tank in Noyyal River System in Coimbatore District	Maduk-karai	Ha	3.88999	333	1294.55	0	0.00	0	0.00	0	0.00	0	0.00	333	1294.55

Sl. No.	Inter-ventions	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
7	Rehabilitation and Restoration of Irugur Anicut and its system tank in Noyyal River System in Coimbatore District	Sulur	Ha	4.61871	280	1293.98	0	0.00	0	0.00	0	0.00	0	0.00	280	1293.98
8	Repairs and restoration of Annur tank bund, sluice and supply channel of Annur Taluk of Coimbatore District.	Annur	Ha	1	48	48.18	0	0.00	0	0.00	0	0.00	0	0.00	48	48.18
9	Rehabilitation of Parambikulam main canal from LS 14.000 km to 22.600 Km	Pollachi South	No	333.3333	1	333.33	1	333.33	1	333.33	0	0.00	0	0.00	3	1000.00
10	Rehabilitation of Parambikulam main canal from LS 22.600 km to 28.600 Km	Pollachi South	No	333.3333	1	333.33	1	333.33	1	333.33	0	0.00	0	0.00	3	1000.00
11	Rehabilitation of Parambikulam main canal from LS 28.600	Pollachi North	No	666.6667	1	666.67	1	666.67	1	666.67	0	0.00	0	0.00	3	2000.00

Sl. No.	Inter-ventions	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
12	Rehabilitation of Thondamuthur branch canal and distributories taking off at LS 16.400 km of PMC	Pollachi South	Ha	0.279947	1429	400.00	1429	400.00	1429	400.00	0	0.00	0	0.00	4287	1200.00
13	Rehabilitation of Kanjampatti branch canal and distributories taking off at LS 19.200km(L) of PMC.	Pollachi South	Ha	0.21070	633	133.33	633	133.33	633	133.33	0	0.00	0	0.00	1898	400.00
14	Rehabilitation of Direct distributory at LS20.400 km,21.600km,22.600km and 23.600km of PMC.	Pollachi South	Ha	0.31437	212	66.67	212	66.67	212	66.67	0	0.00	0	0.00	636	200.00
15	Rehabilitation of Poosaripatty branch canal and distributories taking off at LS 30.210km of PMC	Pollachi North/ South	Ha	0.29515	1129	333.33	1129	333.33	1129	333.33	0	0.00	0	0.00	3388	1000.00
16	Rehabilitation of Devambadi valasu distributory off taking at LS	Pollachi North	Ha	2.44623	1090	2666.67	1155	2824.52	2047	5006.65	0	0.00	0	0.00	4291	10497.83

Sl. No.	Inter-ventions	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
	10.080km of Poosaripatty branch canal at LS 30.210 km of PMC															
17	Rehabilitation of Boliyampatti distributory off taking at LS 31.590km of PMC	Pollachi North	Ha	0.26147	127	33.33	1403	366.83	2964	775.02	0	0.00	0	0.00	4494	1175.19
18	Rehabilitation of Sengutupalayam branch canal and distributories taking off at LS 32.600Km (L) of PMC.	Pollachi North/Kinathukadavu	Ha	0.26427	1261	333.33	1651	436.38	3881	1025.74	0	0.00	0	0.00	6794	1795.45
19	Rehabilitation of Chinnerypalayam distributory off taking at LS35.600 km(L) of PMC	Pollachi North	Ha	0.22463	148	33.33	1899	426.70	4799	1077.95	0	0.00	0	0.00	6846	1537.98
20	Rehabilitation of Kovilpalayam branch canal and distributories taking off at LS 37.800 Km (L) of PMC	Pollachi North/Kinathukadavu	Ha	0.15991	1042	166.67	2148	343.46	5716	914.06	0	0.00	0	0.00	8906	1424.18

Sl. No.	Inter-ventions	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
21	Rehabilitation of Vadachitturbranach canal and distributories taking off at LS 42.860 Km (L) of PMC	Kinathu-kadavu	Ha	0.24383	1367	333.33	2396	584.24	6633	1617.41	0	0.00	0	0.00	10396	2534.99
22	Strengthening and standardization of Devampadivalasu Tank in Pollachi Taluk, Coimbatore District.	Pollachi North	Ha	1.123217	30	33.33	2644	2970.14	7551	8480.86	0	0.00	0	0.00	10225	11484.34
23	Strengthening and standardization of Kothavadi Tank in Kinathukadavu Taluk, Coimbatore District.	Kinathu-kadavu	Ha	0.79020	42	33.33	2893	2285.74	8468	6691.28	0	0.00	0	0.00	11403	9010.35
24	Construction of a Checkdam across Ramapattinam Odai in SF No:263 near Gnanvel gounder land at Sellandigoundenpudur, Pollachi Taluk, Coimbatore	Pollachi North	Ha	2.06611	36	75.00	36	75.00	0	0.00	0	0.00	0	0.00	73	150.00

Sl. No.	Inter-ventions	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
25	Construction of a Checkdam across Ramapattinam Odai in SF No: 265 near Sivasubramanian land at Sellandigoundenpudur, Pollachi Taluk, Coimbatore District.	Pollachi North	Ha	2.06611	36	75.00	36	75.00	0	0.00	0	0.00	0	0.00	73	150.00
26	Construction of a Checkdam across Varattar river in Puravipalayam village, Pollachi Taluk, Coimbatore District.	Pollachi North	Ha	1.99468	38	75.00	38	75.00	0	0.00	0	0.00	0	0.00	75	150.00
27	Construction of a Checkdam across Varattar river in Kinathukadavu village, Pollachi Taluk, Coimbatore District.	Kinathu-kadavu	Ha	1.96206	38	75.00	38	75.00	0	0.00	0	0.00	0	0.00	76	150.00

Sl. No.	Inter-ventions	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
28	Pumping of water to the Devambadi valasu Tank from storm water at Jalathur during surplus of flood in Aliyar dam	Pollachi North	Ha	5.61608	45	250.00	45	250.00	0	0.00	0	0.00	0	0.00	89	500.00
29	Renovation of Puliparai check dam in Puravipalayam village in Pollachi Taluk ,Coimbatore District	Pollachi North	Ha	2.01612	12	25.00	12	25.00	0	0.00	0	0.00	0	0.00	25	50.00
30	Rehabilitation of Distributories and Direct Sluices at LS 33/790km, 34/920km, 35/370km and 37/360km of PMC.	Pollachi	Ha	0.31246	213	66.67	213	66.67	213	66.67	0	0.00	0	0.00	640	200.00
31	Rehabilitation of Parambikulam main canal from LS 46/000 km to 52/000 km.	Sultanpet	No	300	1	300.00	1	300.00	1	300.00	0	0.00	0	0.00	3	900.00
32	Rehabilitation of Distributories and Direct	Sultanpet	Ha	0.11623	287	33.33	287	33.33	287	33.33	0	0.00	0	0.00	860	100.00

Sl. No.	Inter-ventions	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
	Sluices at LS 50.000km and 51.245km of PMC.															
33	Rehabilitation of Parambikulam main canal from LS 52/000 km to 68/000 km.	Sultanpet	No	866.666	1	866.67	1	866.67	1	866.67	0	0.00	0	0.00	3	2600.00
34	Rehabilitation of Distributories and Direct Sluices from LS 52/000km to 68/000km of PMC.	Sultanpet	Ha	0.10701	467	50.00	467	50.00	467	50.00	0	0.00	0	0.00	1402	150.00
35	Rehabilitation of Parambikulam main canal from LS 73/000 km to 78/000 km.	Pongalur	Ha	0.23736	702	166.67	702	166.67	702	166.67	0	0.00	0	0.00	2106	500.00
36	Rehabilitation of Distributories and Direct Sluices from LS 68/000km to 78/000km of PMC.	Sultanpet	Ha	0.12580	2650	333.33	2650	333.33	2650	333.33	0	0.00	0	0.00	7949	1000.00

Sl. No.	Inter-ventions	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
37	Construction of check dam across at a junction of Sempallam odai and uppar odai in sF.No.534 of J.Krishnapuram village in Sulur taluk in Coimbatore District.	Sultanpet	Ha	1.37222	182	250.00	0	0.00	0	0.00	0	0.00	0	0.00	182	250.00
38	Construction of check dam across uppar odai in SF No.219 of S.Ayyampalayam village in Sulur taluk in Coimbatore District.	Sultanpet	Ha	1.82963	109	200.00	0	0.00	0	0.00	0	0.00	0	0.00	109	200.00
39	Providing Micro Irrigation facilities to the command area of Parambikulam Aliyar Project in Coimbatore District.	Pollachi South, Pollachi North, Kinathukadavu, Sulthanpet, Sulur	Ha	1.48256	5914	8767.40	5914	8767.40	5914	8767.40	5914	8767.40	5914	8767.40	29568	43837.00

Sl. No.	Inter-ventions	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
40	Water shed development programme in command area of Parambikulam Aliyar Project system	Pollachi South, Pollachi North, Kinathukadavu, Sulthanpet, Sulur	Ha	0.03382	5914	200.00	5914	200.00	5914	200.00	5914	200.00	5914	200.00	29568	1000.00
41	Construction and Improvement of infrastructure facilities for capacity building and water management training for Water Users, Association in Parambikulam Aliyar Project system	Pollachi South, Pollachi North, Kinathukadavu, Sulthanpet, Sulur	Ha	0.03382	5914	200.00	5914	200.00	5914	200.00	5914	200.00	5914	200.00	29568	1000.00
42	Rehabilitation of Vettaikarampudur Canal and its Distributaries (Left out in IAM WARM Project) from LS 0/000 km to 17/400 km in Pollachi Taluk of Coimbatore	Anaimalai	Ha	0.16574	1508	250.00	1508	250.00	1508	250.00	0	0.00	0	0.00	4525	750.00

Sl. No.	Inter-ventions	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
43	Rehabilitation of Sethumadai Canal from LS 0/000 km to 8/400 km in Pollachi Taluk of Coimbatore District.	Anaimalai	Ha	0.29397	680	200.00	680	200.00	680	200.00	0	0.00	0	0.00	2041	600.00
44	Rehabilitation of Distributaries of Sethumadai Canal in Pollachi Taluk of Coimbatore District.	Anaimalai	No	133.333	1	133.33	1	133.33	1	133.33	0	0.00	0	0.00	3	400.00
45	Rehabilitation of Pollachi Canal and its Distributaries (Left out in IAM WARM Project) from LS 0/000 km to 20/000 km in Pollachi Taluk of Coimbatore District	Anaimalai	Ha	0.23896	1465	350.00	1465	350.00	1465	350.00	0	0.00	0	0.00	4394	1050.00

Sl. No.	Inter-ventions	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
46	Rehabilitation of Pollachi Canal and its Distributaries (Left out in IAM WARM Project) from LS 20/000 km to 48/000 km in Pollachi Taluk of Coimbatore District	Pollachi south and Pollachi North	Ha	0.24457	1704	416.67	1704	416.67	1704	416.67	0	0.00	0	0.00	5111	1250.00
47	Rehabilitation of Aliyar Feeder Canal from LS 6/000 km to 13/400 km and its distributaries in Pollachi Taluk of Coimbatore District	Anaimalai	Ha	1.58814	630	1000.00	630	1000.00	630	1000.00	0	0.00	0	0.00	1889	3000.00
48	Rehabilitation of Pallivilangal Channel in Pollachi Taluk of Coimbatore District	Anamalai	Ha	17.8571	89	1583.33	89	1583.33	89	1583.33	0	0.00	0	0.00	266	4750.00

Sl. No.	Inter-ventions	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
49	Rehabilitation of Ariyapuram Channel in Pollachi Taluk of Coimbatore District	Anamalai	Ha	17.8075	168	2991.67	168	2991.67	168	2991.67	0	0.00	0	0.00	504	8975.00
50	Rehabilitation of Karaipatti Channel in Pollachi Taluk of Coimbatore District	Anamalai	Ha	17.9430	105	1890.00	105	1890.00	105	1890.00	0	0.00	0	0.00	316	5670.00
51	Rehabilitation of Periyanai Channel in Pollachi Taluk of Coimbatore District	Anamalai	Ha	11.6753	257	2996.67	257	2996.67	257	2996.67	0	0.00	0	0.00	770	8990.00
52	Rehabilitation of Vadakkalur Channel in Pollachi Taluk of Coimbatore District	Anamalai	Ha	8.47222	240	2033.33	240	2033.33	240	2033.33	0	0.00	0	0.00	720	6100.00
53	Rehabilitation of Left out reaches of contour canal from LS 0/000 km to 25/490 km including TunneLS, Bridges,	Anamalai	No	2166.66	1	2166.67	1	2166.67	1	2166.67	0	0.00	0	0.00	3	6500.00

Sl. No.	Inter-ventions	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
	Aqueduts Parapet walLS Approach Roads to Contour Canal in Pollachi Taluk of Coimbatore District.															
54	Rehabilitation of Elavakkarai Tank and its supply channel in Pollachi Taluk of Coimbatore District.	Pollachi South	Ha	1.48514	51	75.00	51	75.00	0	0.00	0	0.00	0	0.00	101	150.00
55	Rehabilitation of KolapathuTank and its supply channel in Pollachi Taluk of Coimbatore District.	Anamalai	Ha	1.17460	126	148.00	0	0.00	0	0.00	0	0.00	0	0.00	126	148.00
56	Rehabilitation and Restoration of Kuniyamuthur Anicut and its system tank in Noyyal River System in Coimbatore District	Thonda-muthur	Ha	3.03155	0	0.00	848	2570.06	0	0.00	0	0.00	0	0.00	848	2570.06

Sl. No.	Inter-ventions	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
57	Rehabilitation and Restoration of Coimbatore Anicut and its system tank in Noyyal River System in Coimbatore District	Thonda-muthur	Ha	0.11168	0	0.00	998	111.46	0	0.00	0	0.00	0	0.00	998	111.46
58	Rehabilitation and Restoration of Vellalur Anicut and its system tank in Noyyal River System in Coimbatore District	Madukkarai	Ha	5.18458	0	0.00	250	1295.11	0	0.00	0	0.00	0	0.00	250	1295.11
59	Rehabilitation and Restoration of Singanallur Anicut and its system tank in Noyyal River System in Coimbatore District	Madukkarai	Ha	1.66075	0	0.00	534	886.18	0	0.00	0	0.00	0	0.00	534	886.18
60	Repairs and restoration of Kunnathur tank bund, sluice and supply channel of	Annur	Ha	1.00019	0	0.00	51	51.42	0	0.00	0	0.00	0	0.00	51	51.42

Sl. No.	Inter-ventions	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
	Annur Taluk of Coimbatore District.															
61	Rehabilitation and Restoration of Sulur Anicut and its system tank in Noyyal River System in Coimbatore District	Sulur	Ha	2.20785	0	0.00	0	0.00	298	656.99	0	0.00	0	0.00	298	656.99
62	Rehabilitation and Restoration of Rasipalayam Anicut and its system tank in Noyyal River System in Coimbatore District	Sulur	Ha	4.92080	0	0.00	0	0.00	130	637.49	0	0.00	0	0.00	130	637.49
63	Rehabilitation and Restoration of Madhapur Anicut and its system tank in Noyyal River System in Coimbatore District	Sulur	Ha	11.8469	0	0.00	0	0.00	41	484.42	0	0.00	0	0.00	41	484.42

Sl. No.	Inter-ventions	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
64	Restoration and Rejuvenation of Noyyal River from LS 0 to 34.00 KM in Coimbatore District	Thonda-muthur	Ha	0.34748	0	0.00	0	0.00	4258	1479.68	0	0.00	0	0.00	4258	1479.68
65	Construction of Check Dam 4 Nos in Noyyal Tributaries from LS 0 to 34.00 KM of Noyyal River in Coimbatore District	Thondamuthur	No	902.2	0	0.00	0	0.00	1	902.20	0	0.00	0	0.00	1	902.20
66	Repairs and restoration of Sarkar samakulam tank bund, sluice and supply channel of Annur Taluk of Coimbatore District.	Annur	Ha	1	0	0.00	0	0.00	44	44.13	0	0.00	0	0.00	44	44.13

Sl. No.	Inter-ventions	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
67	Rehabilitation and Restoration of Karumathampatti Anicut and its system tank in Noyyal River System in Coimbatore District	Sulur	Ha	15.7907	0	0.00	0	0.00	0	0.00	28	434.72	0	0.00	28	434.72
68	Rehabilitation and Restoration of Pallapalayam Anicut and its system tank in Noyyal River System in Coimbatore District	Somanur	Ha	8.96273	0	0.00	0	0.00	0	0.00	48	428.15	0	0.00	48	428.15
69	Rehabilitation and Restoration of Semmandampalayamp alayam Anicut and its system tank in Noyyal River System in Coimbatore District	Somanur	Ha	17.26031	0	0.00	0	0.00	0	0.00	37	635.87	0	0.00	37	635.87

Sl. No.	Inter-ventions	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
70	Repairs and restoration of Chinnaved empatti tank bund, sluice and supply channel of Coimbatore North Taluk of Coimbatore District.	P.N. Palayam	Ha	1	0	0.00	0	0.00	0	0.00	236	236.35	0	0.00	236	236.35
71	Rehabilitation and Restoration of Kurichi Anicut and its system tank in Noyyal River System in Coimbatore District	Maduk karai	Ha	2.84966	0	0.00	0	0.00	0	0.00	0	0.00	206	587.23	206	587.23
72	Restoration and Rejuvenation of Noyyal River from LS 34.00 to 67.70 KM in Coimbatore District	Madhapur, Somanur, Sulur & Palladam.	No	3506.75	0	0.00	0	0.00	0	0.00	0	0.00	1	3506.75	1	3506.75

Sl. No.	Inter-ventions	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
73	Construction of Check Dam 4 Nos in Noyyal Tributaries from LS 34 .00 to 67.60 KM of Noyyal River in Coimbatore District	Sulur, Somanur & Palladam.	No	1196.75	0	0.00	0	0.00	0	0.00	0	0.00	1	1196.75	1	1196.75
	Grand total					**41800.22**		**45064.63**		**59056.28**		**10902.49**		**14459.00**		**171282.00**

4.11.Co-operation

In Tamil Nadu, Cooperatives play a prominent role in the day to day affairs of the common man. They help the farmer to improve agricultural production by providing crop loans and by supplying agricultural inputs such as fertilizers and insecticides. They also enable the farmer to store and market his produce. In most districts, cooperatives run the fair price shops which provide the rural and urban poor essential commodities at highly subsidized prices. The policy of the State Government is to ensure adequate availability of essential commodities of acceptable quality at an affordable price to the general public particularly the poor. Public Distribution System has been one of the most crucial elements in food policy and food security system in the country.

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, price support for agricultural commodities through Cooperative Wholesale stores, Public Distribution system etc. The office infrastructure has to be improved. The intervention is proposed for creating of infrastructure facilities.

4.10.1.Project components

- Office Infrastructure
- Capital Asset Creation

4.10.2. Budget

It is proposed to incur **Rs. 2275.07** lakhs over a period of five years as shown in Table 4.26.

4.10.3. Implementing agency

Department of Cooperation will be implementing the project.

Table. 4.27. Budget requirement for Co-operative

(Rs . in lakhs)

Sl. No.	Interventions	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 Compound wall	All blocks	3	70.00	2	46.25	53	389.11	0	0.00	14	109.00	72	614.36
2	Construction of Godown	B11	0	0.00	2	19.20	0	0.00	0	0.00	0	0.00	2	19.20
3	Construction of Godown Keepers Office	B7	0	0.00	0	0.00	0	0.00	1	8.00	0	0.00	1	8.00
4	Construction of Office Building	All blocks except B5	9	189.60	0	0.00	2	40.00	18	322.90	11	239.56	40	792.06
5	Establishment of Auction yard	B11	1	10.00	0	0.00	0	0.00	0	0.00	0	0.00	1	10.00
6	Establishment of Processing unit	B5, B6	2	48.00	0	0.00	0	0.00	0	0.00	1	40.00	3	88.00
7	Renovation of Godown	B1, B4, B8, B9	0	0.00	4	27.63	1	15.00	2	11.65	0	0.00	7	54.28
8	Renovation of Office Building	All blocks except B11 & B12	11	280.00	9	56.40	3	19.00	2	5.00	0	0.00	25	360.40
9	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	All Blocks	0	0.00	29	241.67	2	16.10	9	50.00	4	21.00	44	328.77

Sl. No.	Interventions	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
	Machine, Packing Machine, Purchase of computer and peripherals, Hand Billing machine, LED 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)													
	Grand total			**597.60**		**391.15**		**479.21**		**397.55**		**409.56**		**2275.07**

Table 4.28 Budget Abstract for Coimbatore District

(₹. in lakhs)

Sl. No.	Components	2017-18	2018-19	2019-20	2020-21	2021-22	Total
1	Agriculture	1704.10	4087.22	2764.36	2843.09	2067.78	13466.56
2	Agricultural Research	2390.00	2676.92	2891.92	1060.88	1501.00	10520.72
3	Horticulture	3628.28	4565.15	5606.99	6643.05	7698.21	28141.70
4	Agricultural Engineering	2878.55	3007.29	2737.77	2664.75	2587.88	13876.20
5	Agricultural Marketing	1286.89	710.47	676.19	464.50	466.69	3604.75
6	Seed Certification & Organic Certification	23.36	13.36	0.00	0.00	0.00	36.72
7	Animal Husbandry	978.80	1363.80	1143.80	786.80	786.80	5060.00
8	Animal Science Research (TANUVAS)	0.00	0.00	0.00	0.00	0.00	0.00
9	Dariy Development	997.25	894.25	1366.00	1452.50	1669.00	6379.00
10	Fisheries	23.00	26.00	119.00	25.00	20.00	214.15
11	Fisheries Research (TNFU)	100.26	90.56	50.26	0.26	0.26	241.60
12	Public Works Department (WRO)	41800.20	45064.60	59056.30	10902.50	14459.00	171282.00
13	Civil Supplies & Co-Operation	597.60	391.15	479.21	397.55	409.56	2275.07
	Grand total	**56408.29**	**62890.77**	**76891.80**	**27240.88**	**31666.18**	**255098.47**


KARNATAKA
ANDHRA PRADESH
KERALA
SRI LANKA