

Joint Inspection Team (JIT) Report

Mission for Integrated Development of Horticulture

Tamil Nadu

(13.09.2015 to 19.09.2015)



**Department of Agriculture, Cooperation & Farmers Welfare
Ministry of Agriculture & Farmers Welfare, Government of India**

Joint Inspection Team (JIT) Report of Mission for Integrated Development of Horticulture for Tamil Nadu State



INDEX

Sl.No	Topic	Page No.
1.	General Observations/Recommendations of JIT	3
2.	Introduction	4-10
3.	Field Visits	
(i)	Visit to District Perambalur	11-19
(ii)	Visit to District Cuddalore	20-33
(iii)	Visit to District Ariyalur	34-44
(iv)	Visit to District Thanjavur	45-54

Dates of Visit: From 13.09.2015 To 19.09.2015

Team Members:

1. Dr. M. Tamil Selvan, Additional Commissioner (Hort.), DAC&FW, MOA&FW ,GOI, New Delhi
2. Dr. H V L Bathla, Chief Consultant (MIDH), DAC&FW, MOA&FW,GOI, New Delhi.
3. Dr. S V Kottiswaran, PI (PFDC), Agri. Engg. College Institute, TNAU, Coimbatore.
4. Dr. J. Rajangam, Professor and Head, HC&RI Periyakulam,Theni
5. Mr. Homey Cheriyan, Director, Director of Arecanut and Spices Development, Calicut, Kerala.
6. Mr. Ravindra Kumar, Deputy Director, Directorate of Cashew and Cocoa Development, Cochin.
7. Mr. R. Mahendrakumar, Assistant Director of Horticulture (NHM), TANHODA, Chennai (SHM Representative).

General Observations / Recommendations:

- In order to increase the production, the vegetables growers need to be motivated to introduce F1 hybrid.
- Regulated market need to be established for marketing of cashew produce.
- As moringa crop gives more profitability, the area under this crop can be increased.
- Rejuvenation of old and senile cashew and mango orchards need to be taken up on priority basis.
- There is need to introduce choice varieties i.e. Alphonso, Imampasand, Kalapada, Banganapalli, etc of Mango and Lucknow- 49, Banarasi and Red Flesh for Guava through HDP.
- Facilities for processing of raw cashew need to be increased.
- NHM assistance received in case of horticulture mechanization component need to be displayed on the machinery for which assistance obtained.
- It has been observed that due to mortality of plants there are gaps in the orchards. These need to be filled up on priority basis.
- Training in canopy management and pruning operations need be imparted to the beneficiaries.
- Structures and capacity of low cost onion storage need to be standardized.
- To meet the growing demand of Planting Material for vegetable crops, there is a need to increase the number of shadenets in the State.
- For optimum utilization of mulching materials the standard recommendations for seasonal, annual and perennial crops need to be followed.
- Wherever area expansion programme is implemented, the concept of formation of clusters need to be adhered.
- In places of area expansion under fruits and TC Banana, micro irrigation has to be emphasized.
- Protected cultivation needs to be taken up for Perambalur district for off season vegetables.
- Plastic crates for transportation and marketing of produces has to be used to reduce the cost of packaging materials.
- In water scarce areas farm ponds with plastic lining can be constructed to harvest water.

State-Tamil Nadu

Geography

Tamil Nadu covers an area of 130,058 km² (50,216 sq mi), and is the eleventh largest state in India. The bordering states are Kerala to the west, Karnataka to the North West and Andhra Pradesh to the north. To the east is the Bay of Bengal and the union territory of Puducherry. The southernmost tip of the Indian Peninsula is located in Tamil Nadu. At this point is the town of Kanyakumari which is the meeting point of the Arabian Sea, the Bay of Bengal, and the Indian Ocean. The south boundary of India is Kanyakumari, Tamil Nadu.



Physical Feature:

The State is parted broadly into two natural divisions i.e., (a) the coastal plains and (b) the hilly western areas. It is further classified as Coromandal plains consisting of Kancheepuram, Tiruvallur, Cuddalore, Villupuram, Thiruvannamalai and Vellore and alluvial plains of Cauvery Delta expanding to Thanjavur, Nagapattinam Thiruvarur and part of Trichy and dry southern plains in Madurai, Ramanathapuram, Sivagangai, and Kanyakumari Districts. The Western Ghats averaging 3000' to 8000' of height run along the western part with the hill groups of Nilgiris and Anamalais on either side of it. Palani hills, Varashanad and Andipatti ranges are the major off-shoots of Ghats. The other prominent hills comprise of Javadhu, Shervarayan, Kalrayans and Pachai Malais. These ranges continue south of river Cauvery. A Plateau is found between these hills and the Western Ghats with an average elevation of 1000 feet raising west-ward. The highest peak Doddabettah in the Nilgris is 8650' above M.S.L.

Western Ghats form a complete watershed and there is no river passes through them. The main streams i.e., Paraliyar, Vattasery Phazhayar etc., are of limited length and fall in the Arabian sea. All other rivers are east-flowing rivers. The main rivers of Tamil Nadu are Cauvery (with tributaries of Bhavani, Amaravathi, Noyyal) Vaigai, Tamaraparani, Palar, Ponniyar and Vellar. Tamil Nadu has a coastline of about 910 km (570 mi) which is the country's third longest coastline.

Climate:

The climate of Tamil Nadu is basically tropical. Due to its proximity to the sea, the summer is less hot and winter is less cold in plains, the maximum daily temperature is 44.4°C

and the minimum temperature is 4.4°C. Tamil Nadu is mostly dependent on monsoon rains, and thereby is prone to droughts when the monsoons fail. The climate of the state ranges from dry sub-humid to semi-arid. The state has three distinct periods of rainfall

- Advancing monsoon period, south west monsoon from June to September, with strong southwest winds;
- North east monsoon from October to December, with dominant north east winds;
- dry season from January to May.

The special feature of climatic conditions in Tamil Nadu is that the four seasons are not distinct and overlap with immediate next season. In the plains there is no winter season and in the hills summer is not severe allowing continuous production of horticultural crops in the state.

There are areas with temperate climate (above 2000 m), subtropical climate (1000 – 2000 m), humid tropical climate 500 – 1000m and tropical climate (upto 500 m) to accommodate all possible types of horticultural crops.

These overlapping seasons have made possible grapes to grow round the year, vegetables and spices in all possible crop rotations and systems of planting. Nearness to the equator and the presence of long stretch of Western Ghats, discontinuous Eastern Ghats and presence of hills and hillocks in the Plains help moderation of climate to ensure the required heat units and degree – days for growing different kinds of horticultural crops.

Broad classification of Horticultural Crops:

Horticulture crops are classified into six categories viz., Fruit Crops, Vegetable Crops, Spices and Condiments, Plantation Crops, Flower Crops and Medicinal and Aromatic Plants.

Based on the climatic preferences they are classified as:

Tropical fruit crops like Banana, Mango, Citrus, Grapes, Guava, Sapota, Papaya, Ber, Pomegranate, Fig, Amla, Custard apple and Pineapple and Sub-Tropical fruits like, Mangosteen, Phalsa, Avocado, etc., The state is the largest producer of bananas, flowers, tapioca, the second largest producer of mango, natural rubber, coconut, groundnut and the third largest producer of coffee, sapota and Tea.

Fruit crops:

Fruit crops which come up in cool temperatures and high altitudes are known as temperate fruits. In the hilly areas of Tamil Nadu, the commonly grown temperate fruit crops are Apple, Pear, Persimmons etc., Mango and banana are the leading fruit crops in Tamil Nadu accounting for over 87 percent of the total fruit production.

Out of about 11.08 lakh ha. of Horticulture Crops in Tamil Nadu fruit crops account for 29.96%.

Vegetable Crops:

In Tamil Nadu, the major vegetable crops are Tapioca, Onion, Tomato, Brinjal, Potato, Lablab, Drumstick, etc., Out of about 11.08 lakh ha. of Horticulture Crops in Tamil Nadu, vegetables crops are cultivated in 2.84 lakh ha. accounting for 25.63%.

Spices & condiments

Spices and Condiments constitute a very important group of horticultural crops. High income generation and foreign exchange earnings are possible through exports of spices. Spices and Condiments are grown in 1.73 lakh ha. In Tamil Nadu which is around 15.61% of total horticulture crops. The important spices crops are Chillies (dried), Pepper, Turmeric, Tamarind, Cardamom, Cloves, etc.,

Plantation crops

Plantation crops are ideally taken up on hill slopes or in valleys. The important plantation crops grown in Tamil Nadu are Tea, Coffee, Rubber, Cashew, Bamboo, Cocoa, etc., About 2.75 lakh ha of plantation crops are grown which account for 24.82% of total horticulture crops.

Flowers

The major area under flowers constitutes domestic flowers such as Jasmine, Crossandra, Tuberose, Chrysanthemum, etc., more than twenty different varieties of flowers are cultivated and all flowers are grown according to the prevailing climatic condition. With its varying climatic conditions in the hill ranges and plains, Tamil Nadu offers rich scope for production of various flower crops. Flower crops are grown in 0.32 lakh ha. in Tamil Nadu out of 11.08 lakh ha of total horticulture crops.

Medicinal & Aromatic Plants

Medicinal & Aromatic plants are grown in about 0.12 lakh ha. There is a positive approach for increasing the area in the forth coming years due to potential export value of medicinal and aromatic plants. The important medicinal and aromatic Plants grown in Tamil Nadu are lemon grass, senna, coleus, glory lilly, periwinkle and other plan.

**Area, Production & Productivity of Horticultural Crops
from 1980 – 81 to 2014 – 15**

Sl.No.	Year	Area (Ha)	Prod. (MT)	Prodty. (MT/Ha)
1.	1980 – 81	461644	4477937	9.07
2.	1981 – 82	548175	4084025	7.45
3.	1982 – 83	568304	4321640	7.06
4.	1983 – 84	563153	4631285	8.22
5.	1984 - 85	595346	5470365	9.19
6.	1985 – 86	597261	5311432	8.89
7.	1986 - 87	583652	5384020	9.22
8.	1987 – 88	614713	5859205	9.53
9.	1988 – 89	598989	6302870	10.52
10.	1989 – 90	615230	7299993	11.87
11.	1990 – 91	603873	7087220	11.74
12.	1991 - 92	628789	7936149	12.62

13.	1992 - 93	676858	7395789	10.93
14.	1993 – 94	718428	9061152	12.61
15.	1994 – 95	717219	10142494	14.14
16.	1995 – 96	688478	9727361	14.13
17.	1996 - 97	722931	8779207	12.14
18.	1997 - 98	764127	11128371	14.56
19.	1998 - 99	786442	9837041	12.51
20.	1999 – 2000	834545	9927608	11.89
21.	2000 – 01	850222	11529792	13.56
22.	2001 – 02	852645	11715345	13.74
23.	2002 – 03	777172	9168424	11.79
24.	2003 – 04	824586	9945502	12.06
25.	2004 – 05	858552	12617300	14.70
26.	2005 – 06	890189	14126277	15.89
27.	2006 – 07	922017	16093071	17.45
28.	2007 – 08	930902	16203786	17.41
29.	2008 - 09	985591	16145197	17.4
30.	2009 – 10	922005	14309053	15.52
31.	2010 – 11	940395	14838629	15.78
32.	2011 - 12	1001380	15261744	15.24
33.	2012-13	943768	13607033	14.42
34.	2013-14 (P)	1094000	17164000	15.68
35.	2014-15 (E)			

Requirement and availability of Planting material in Tamil Nadu State during 2015-16

S.No.	Crop	Requirement for NHM 2015 -16 (No's in lakhs)	Availability (No's in lakhs)
1	Mango Grafts	4.996	6.518
2	Guava Layers	2.816	2.377
3	Papaya Seedlings	11.250	11.250
4	Pepper Cuttings	8.325	10.000
5	Clove Seedlings	0.102	0.120

6	Cashew Grafts	2.920	3.348
7	Loose Flowers Seedlings	17.000	17.000
8	Vegetable Seedlings	159.642	162.000
9	Spices Seedlings	93.325	100.000

ACCREDITATION POSITION OF STATE HORTICULTURE FARMS IN TAMIL NADU STATE				
S.No	Name of the Farm	Accreditation position	Star	Remarks
I	Coimbatore			
1	Anaikatty			To be applied after revival of farm activities.
2	Kannampalyam			
II	Cuddalore			
3	Vridhachalam	Accredited	2 star	
4	Neyveli	Accredited	2 star	
III	Kodaikanal			
5	SHF Kodaikanal	Accredited	No star	Recommended for improvement
6	Bryant Park			Parks and Gardens
7	Thandikudi	Accredited	No star	Recommended for improvement
IV	Dindigul			
8	Reddiarchatram			Indo isreal project-COE for Vegetables
9	Sirumalai			
10	Sandhaiyur			New farm - preliminary stage.
V	Kancheepuram			
11	Attur	Accredited	1 star	Recommended for improvement
12	Vichanthangal	Accredited	1 star	
13	Melkadirpur	Accredited	No star	
14	Melottivakkam	Accredited	No star	
15	Pitchivakkam			Not applicable
VI	Kanyakumari			
16	Kanniyakumari	Accredited	2 star	
17	Pechiparai	Accredited	2 star	
VII	Krishnagiri			
18	Thimmapuram	Accredited	2 star	
19	Jeenur	Accredited	1 star	
VIII	Trichy			
20	Thorakudi			Application will be sent during 2016-17
21	Mudalaipatti	Accredited	2 star	

IX	Namakkal			
22	Semmedu	Accredited	2 star	
23	Padasolai	Accredited	1 star	
X	Pudukottai			
24	Kudumianmalai	Accredited	2 star	
25	Vallathirakottai	Accredited	2 star	
26	Nattumangalam	Accredited	2 star	
XI	Salem			
27	Yercaud	Accredited	2 star	
28	G.O Karumandurai	Accredited	3 Star	
29	Maniyarkundram	Accredited	2 star	
30	SHF Karumandurai	Accredited	2 star	
32	Mulluvadi	Accredited	No star	Recommended for improvement
33	Sirumalai	Accredited	2 star	
34	GBG, Yercaud			Parks and Gardens
35	GHG. Yercaud			
XII	Sivagangai			
36	Devakottai	Accredited	2 star	
37	Nemam	Accredited	3 Star	
XIII	Thanjavur			
38	Marungulam	Accredited	2 star	
39	Aduthurai	Accredited	1 star	
XIV	Theni			
40	Periyakulam	Accredited	2 star	
XV	Chennai			
41	Madhavaram			Only ornamentals, Not applicable
42	Semmozhi poonga			Parks and Gardens
XV	Tirunelveli			
43	Courtalam			Parks and Gardens
XVI	Vellore			
44	Thagarakuppam			No production activity
45	Kudappattu	Accredited	1 star	
46	Navlok	Accredited	2 star	
XVII	Virudhunagar			
47	Poovani	Accredited	2 star	
48	Srivilliputhur	Accredited	1 star	
XVIII	Nilgiris			
49	Burilar	Application is in process by NHB		
50	Kallar	Application is in process by NHB		
51	Katteri	Application is in process by NHB		

52	Devala	Application is in process by NHB		
53	Doddabetta	Application is in process by NHB		
54	P.S.Coonoor	Application is in process by NHB		
55	Sims Park Coonoor			Parks and Gardens
56	Government Rose Garden	Application is in process by NHB		Parks and Gardens
57	Government Botanical garden			Parks and Gardens
58	Nanjanad			Only seed production, Not applicable
59	Thummanatty			Not applicable
60	FPU, Coonoor			Fruit products only, Not applicable
61	Colgraine			Only seed production, Not applicable
XIX	Madurai			
62	Poonjuthi			Report awaited from NHB
XX	Dhamapuri			
63	Polyampalli			Application will be sent to NHB during 2015-16
64	Vathalmalai			Parks and Gardens
XXI	Ramanathapuram			
65	Oriyur			Application will be sent to NHB during 2017-18.
XXII	Tiruvannamalai			
66	Jawadhu Hills			Application will be sent to NHB during 2017-18.

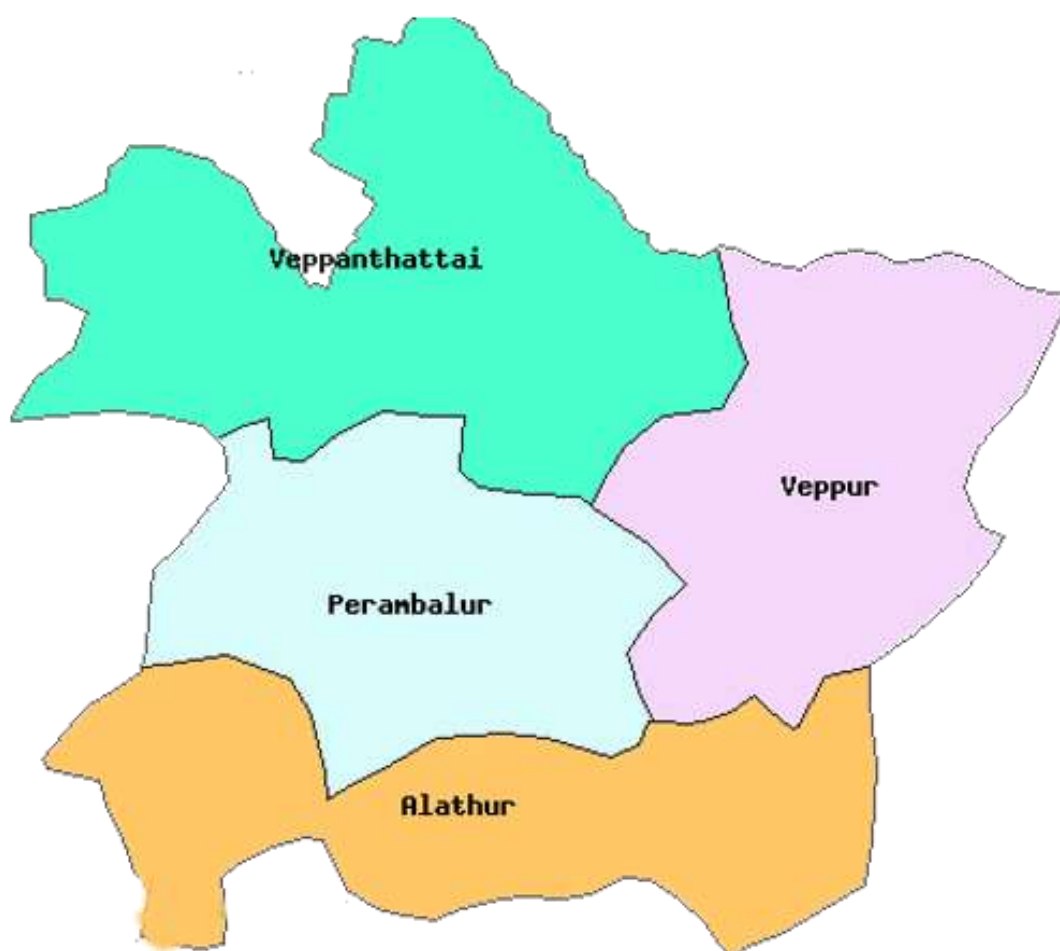
ABSTRACT

Total number of Farms/Parks & Gardens	66
Total farms Accredited	33
Not applicable	20
New Farms	5
Application in process by NHB	7
Report from NHB awaited	1

Star

Single star	7
Two star	19
Three star	2
No star	5
Total	28

DISTRICT: PERAMBALUR



LOCATION

Perambalur is an administrative district in the State of Tamil Nadu in India. The district headquarters are located at Perambalur. The district occupies an area of 1,752 km² and has a population of 5,54,511 (as of 2011), making it the least populous in the state.

Perambalur district is a centrally located inland district of Tamil Nadu, spread over 3,69,007 ha, which was trifurcated from the erstwhile composite Tiruchirappalli district and was formed on 1 November 1995. The district is bounded by Cuddalore district in the north, Tiruchirappalli district in the south, Ariyalur in the east and Salem and Tiruchirappalli districts in the west. The total geographical area of the district is 1,75,735 ha, and net sown area and gross sown area are 1,03,409 ha and 1,11,861 ha, respectively. The net area under irrigation is 29,268 ha.

Geo Code

North Latitude : 11. 14' 6"

East Longitude : 78.52'59"

Agro Climatic Zone

Sub Zone -I North Eastern Zone

Sub Zone -II North western Zone

NINE FOLD LAND USE PATTERN

S.no	Land Classification	Area in ha
1	Forest	9242.385
2	Permanent and Unculturable waste	2786.46
3	Land put to non Agricultural uses	28538
4	Culturable wastes	4670.725
5	Permanent pasture	152.365
6	Land under trees not included under net area sown.	1296.55
7	Current fallows	6909.74
8	Other fallows	11690.02
9	Net Area Sown	103409.34
*	Reserve Forest	7039.46
*	Total Geographical Area.	175735
*	Area sown more than once	8452
*	Gross Sown Area	111861.34

SOIL TYPE AND BLOCK LEVEL FERTILITY INDEX

S. No	Block Name	Soil EC	Soil pH	Soil Texture	N	P		K
						Bray	Olsen	
1	Perambalur	0.5-1.9	7.2-8.7	CL to SCL	55 to 136	10 to 15	4 to 9	135 to 389
2	Alathur	0.3-1.8	8.0-9.4	CL to SCL	116 to 258	19 to 35	4 to 18	161 to 358
3	Veppur	0.5-1.7	8.0-8.4	CL to SCL	115 to 287	12 to 42	6 to 18	125 to 347
4	Veppanthattai	1.0-1.2	7.7-8.0	CL to SCL	86 to 315	15 to 55	7 to 24	115 to 445

Abbreviations

CL	Clay Loam
SCL	Sandy clay loam

CROPPING PATTERN

S. No	Cropping Pattern	Month
1	Turmeric+onion-/Paddy	April-July / August-January

2	Green-manure-Paddy/Chillies	July-August / September-January
3	Paddy-Gingelly/Onion	September-January / March-June
4	Tapioca./onion	September-January / March-June
5	Maize/chillies	September - February
6	Onion-Vegetables	September-January / March-June
7	Onion	July - Aug to Oct-Nov
8	vegetables	August - February
9	Sugarcane/Brinjal/Gourds	Dec -Jan to March- April
10	Onion-Ground nut	Jan-Feb to April -May
11	Brinjal-Gingelly	April-May / June - july

DETAILS OF BLOCK, TALUK, FIRKA AND REVENUE VILLAGES

S.No	Name of the Taluk	Block	No of Revenue Village	Name of the Firkka
1	Perambalur	Perambalur	27	Perambalur, Kurumbalur
2	Veppanthattai	Veppanthattai	39	Vengalam, Valikandapuram, Pasumbalur
3	Alathur	Alathur	39	Chettikulam, Kolakanatham, Koothur
4	Kunnam	Veppur	47	Varagoor, Vadakkalur, Keelapuliur

RAINFALL PATTERN IN PERAMBALUR DISTRICT (In mm)

Sl. No	Month	Normal Rainfall	Cumulative rainfall	2013		2014			2015		
				Rain fall Received	Rainy Days	Rain fall Received	cumulative rainfall	Rainy Days	Rainfall Received	cumulative rainfall	Rainy Days
1	Jan	16.00	16.00	0.60	0	0.00	0.00	0	38.8	38.80	1
	Feb.	12.00	10.00	12.8	2.0	0.00	0.00	0.0	3.60	42.40	1
	winter	28.00	26.00	13.4	2.0	0.00		0.0	42.4		2
2	March	12.00	12.00	11.2	1.0	0.00	0.00	0.0	0	42.40	0
	April	24.00	30.00	13.0	2.0	0.00	0.00	0.0	141	183.9	8
	May	55.00	57.00	39.4	4.0	192	192.6	9.0	81.	264.9	6

<i>summer</i>		91.00	99.00		63.7	7.0	192		9.0	222		14
3	June	42.00	32.00	157	30.8	1.0	24.0	216.6	2.0	33.6	298.6	6
	July	48.00	38.00	195	5.80	3.0	44.6	261.2	3.0	29.1	327.8	2
	Aug.	95.00	75.00	270	203	1.0	155	417.0	12.0	107	435.4	6
	Sep.	129.0	125.0	395	172	13	56	473.3	5.0		624.32	
<i>sw.monsoon</i>		314.0	270.0		412	18	280		22	170		14
4	Oct	172.0	173.0	568	136	9.0	239	713	17		435.4	
	Nov	223	223	791	144	13	92	805	8.0		435.4	
	December	80.00	70.00	861	44.4	6.0	66.76	872.56	8.0		435.	
<i>Nw.monsoon</i>		475	466		325	4.0	399		33			0
Total		908	861		814	31	872		64	435		30

IRRIGATION SOURCES

Sl. No	Sources/Block wise	No	Gross Area irrigated (Ha)	Net Area irrigated (Ha)	Irrigation Intensity
1	Tanks	265	10472	8523.42	122.86
2	Wells				
	1) Open wells	26908	24622	20630	119.35
	2) Bore wells	1140	80.525	60.49	133.12
	3) Tube wells	184	85	53.2	159.77
Total		28497	35259.525	29267.11	

AREA & PRODUCTION OF HORTICULTURE CROPS (2009-2010 to-2013-2014)

S. No	Name of the Crop	2009-10		2010-11		2011-12		2012-13		2013-2014	
		Area (Ha)	Prodn. (MT)	Area (Ha)	Prodn. (MT)	Area (Ha)	Prodn. (MT)	Area (Ha)	Prodn. (MT)	Area (Ha)	Prodn. (MT)
1	Mango	167	1094	209	1379	182.44	1188	198	1289	182	1189
2	Banana	184	9826	245	13095	234.3	12613	210	11305	234	12612
3	Guava	19	446	21	491	20.415	225	32	353	20	225
4	Tapioca	1743	73410	1766	72030	1297.38	54334	1373	57501	1297	54334
5	Onion	7795	62362	9278	67728	6513.26	61876	5621	53400	6513	61876
6	Brinjal	23	269.0	27	275	94.76	2029	46	985	95	2029

7	Tomato	70	908.0	23	1075	80.355	2001	67	1669	80	2001
8	Chillies	274	480.00	412	626	300.525	537	191	341	301	536
9	Coriander	114	40	56	20	18.26	6	16	5	18	6
10	Turmeric	1247	6983	1740	9570	1313.61	7502	958	5471	1314	7502
11	Tamarind	133	306	133	299	134.71	333	124	306	135	333
12	Jasmine	3	23	9	68	12.195	95	14	109	12	95
13	Marigold	43	241	27	151	40.27	242	21	126	20	122

PLACES OF HORTICULTURE IMPORTANCE IN THE DISTRICT

Sno	Name of the village	Horticulture crops
1	Elanthalapatty	Onion, Flowers
2	Irur	Onion
3	Ammapalayam	Onion, Tuberose
4	Malayalapatty	Tapioca,
5	Kadambur	Coleus
6	Annamangalam	Tuberose,
7	Veppanthattai	Tapioca, Turmeric
8	Keelapuliyur	Turmeric, Tapioca
9	Sillakudi	Vegetables (Tomato, Brinjal)
10	Kurumbalur	Vegetables

FIELD VISIT
Beneficiary No-1
Area Expansion / Rejuvenation

S.No.	Details	Remarks
1	Name & address of Beneficiary whose field visited.	J. Jayaraman S/o Jeganathan, Nochiyam , Perambalur Block, Perambalur District.
2	Total land available with the beneficiary (ha).	2.00 Ha.
3	Crop Cluster under which covered.	0.32Ha.
4	Name & variety of crop planted.	T .C. Banana
5	Source of planting material.	Tissue culture plants
6	Number of planting material.	1000 nos.
7	Number of plants planted/ rejuvenated.	1000 nos.
8	Date of plants which survived (also indicate percentage survival).	18/04/2015 & survival -95 %
9	Total amount of subsidy assistance due to the beneficiary as (Rs.)	Rs.9,964/-
10	Amount paid and date of payment.	Rs.9,964 & 30.04.2015
11	Mode of payment.	Though ECS
12	Source of Irrigation Water (Bore well/ Tube well/ Canel)	Open well
13.	Whether Drip/ Sprinkler System in use.	Drip system installed
14.	Other inputs provided.	-
15.	Whether assistance available for Organic Farming	-
16	If so, area covered	-
17.	Assistance available	-
18.	Available marketing facility for the crop.	Local market,
19.	Other infrastructure available in the vicinity.	
20.	General upkeep of the plot; Very good/ Good / Average/ Poor.	
21.	Any other relevant observation by the JIT.	

Observations:

1. The TC Banana Plants establishment is good.
2. The team appreciated the efforts made by the farmer pertaining to nutrient management.
3. Some incidence of potash deficiency was observed.

Beneficiary No-2

Area Expansion / Rejuvenation

Sr. No.	Details	Remarks
1	Name & address of Beneficiary whose field visited.	S. Krishnaraj S/o Srinivasan, Poolambadi, Veppanthattai Block, Perambalur.
2	Total land available with the beneficiary (ha).	3.25 Ha
3	Crop Cluster under which covered.	2.75 Ha
4	Name & variety of crop planted.	Guava- L-49
5	Source of planting material.	Guava Layers from State Horticulture Farm
6	Number of planting material.	3055 Nos.
7	Number of plants planted/ rejuvenated.	3055 Nos.
8	Date of plants which survived (also indicate percentage survival).	25.07.2014, survival 90%
9	Total amount of subsidy assistance due to the beneficiary as (Rs.)	Rs.48,372/-
10	Amount paid and date of payment.	Rs.48,372/- , 17.11.2014
11	Mode of payment.	Through ECS
12	Source of Irrigation Water (Bore well/ Tube well/ Canel)	Open well
13.	Whether Drip/ Sprinkle System in use.	Drip System installed
14.	Other inputs provided.	-
15.	Whether assistance available for Organic Farming	-
16	If so, area covered	-
17.	Assistance available	-
18.	Available marketing facility for the crop.	Local market,
19.	Other infrastructure available in the vicinity.	-
20.	General upkeep of the plot; Very good/ Good / Average/ Poor.	
21.	Any other relevant observation by the JIT.	

Observations:

1. The training practices carried out by the farmer is appreciated.
2. Farmer has selected viable commercial guava varieties viz., Lucknow 49, Banarasi and Red Flesh.
3. Farmer has harvested first crop and the production was good.
4. It is a good model for Guava HDP.

Beneficiary No-3**Post Harvest Management****Pack House/Cold Storage/Ref Van/ primary processing**

Sr. No.	Details	Remarks
1	Name of the project	Low cost onion storage
2	Year of Implementation	2014-2015
3	Project Period	2014-2015
4	Name of Beneficiary	P. Sundaram S/o Pichai
5	Location of Project	Irur, Alathur Block, Perambalur District
6	Total Project Cost	Rs.1,75,000/-
7	Amount Released & date	Rs.87,500/- , 30.05.2015
8	Expenditure incurred	Rs.1,85,722/-
9	Status	
	Capacity of unit	25 M.T.
	Commodity	Onion
	Equipments purchased	
	Condition of infrastructure	
	Whether NHM logo displayed	
	Whether funds disbursed to agency	-

Observations:

1. Farmer is utilizing the storage structure with the harvested crop.
2. The team felt that more platforms need to be erected for storing onion
3. Optimum utilization of space for onion storage is needed.

PERAMBALUR DISTRICT - FIELD VISIT PHOTOGRAPHS



DISTRICT: CUDDALORE



INTRODUCTION

The District is predominantly Agriculture in nature coastal line of 57.7km stretching from Cuddalore in North.

- The boundaries of the district are
- Bay of Bengal in the East.
- Villupuram District in the West.
- Puducherry union Territory in the North.
- Nagapattinam District in the South

AGRO CLIMATE ZONE

Cuddalore district comes under North- Eastern and Cauvery Delta Zone (Part of Cuddalore district-5 Blocks).

SOIL TYPE

1. The soil permeation of the district is the combination of red soil, red loam, clay loam and sandy loam.
2. Red soil is found in Panruti taluk.
3. Clay loam & red loam are found in Chidambaram, Vridhachalam and Cuddalore taluk

GEOGRAPHICAL FEATURES:

Cuddalore district is predominantly agricultural district with the coastal line stretching from Puducherry Union Territory in the North to the mouth of the river Coleroon in the South. The total geographical area of the district is 4283 sq.km. with the coastal line of 68 Kms. The boundaries of the district are:

East: Bay of Bengal
West: Villupuram district
North: Union Territory of Puducherry

List of Taluks and Blocks in Cuddalore district

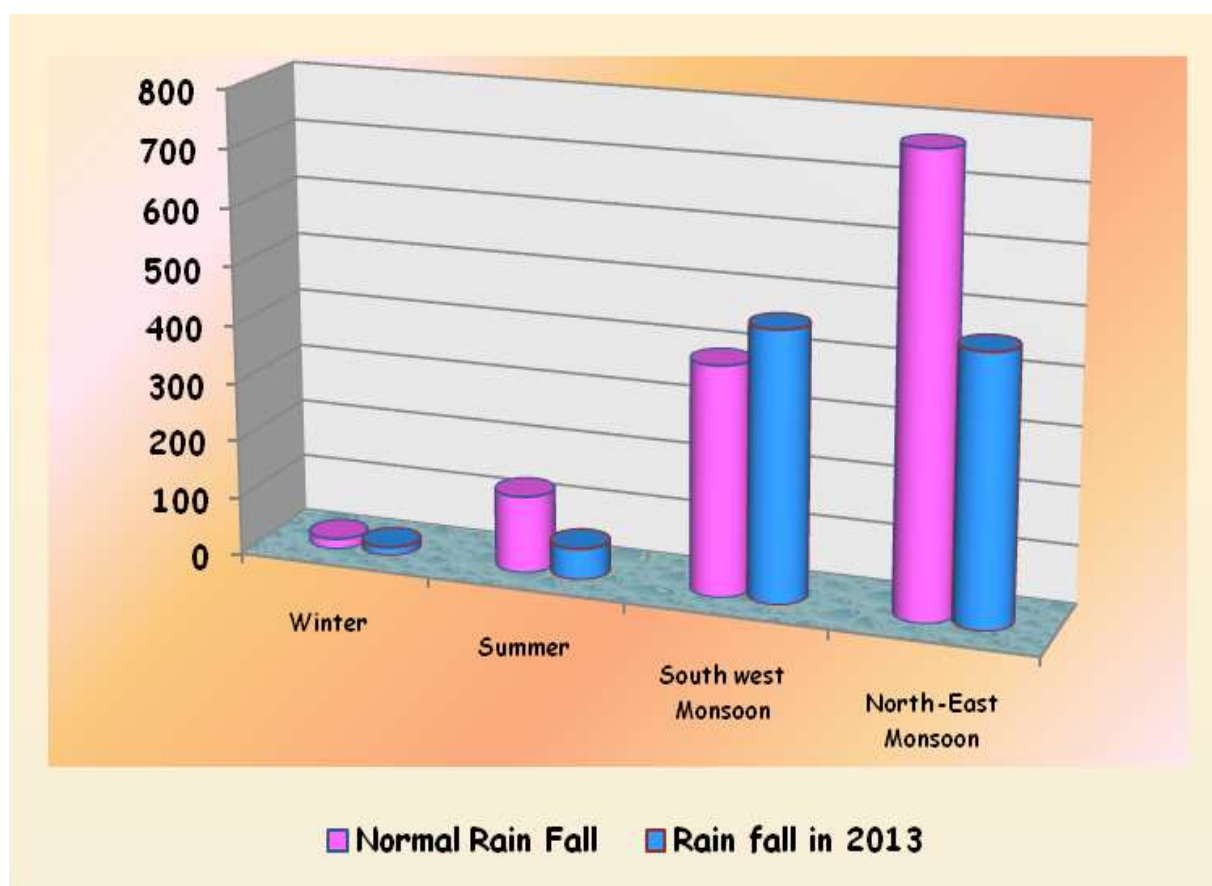
Taluks	Blocks
1. Chidambaram	1. Annagramam
2. Cuddalore	2. Melbhuvanagiri
3. Kattumannarkoil	3. Cuddalore
4. Panruti	4. Kammapuram
5. Tittakudi	5. Kattumannarkoil
6. Kurinjipadi	6. Keerapalayam
7. Virudhachalam	7. Kumaratchi
8. Veppur	8. Kurinjipadi
	9. Mangalore
	10. Nallur
	11. Panruti
	12. Parangipettai
	13. Virudhachalam

LAND USE PATTERN

Total Geographical Area (Ha.)		3,67,781
1	Forest	1,415
2.	Barren and uncultivable waste	14,647
3.	Land put to Non-Agri use	58,557
4.	Cultivable waste land	6,039
5.	Permanent pasture and other grass land	608
6.	Misc. tree crops and grooves not included in the net area sown	19,040
7.	Current fallow	36,164
8.	Other than current fallow	15,163
9.	Net area sown	2,16,148
	Total	3,67,781

RAINFALL PATTERN IN 2013(mm)

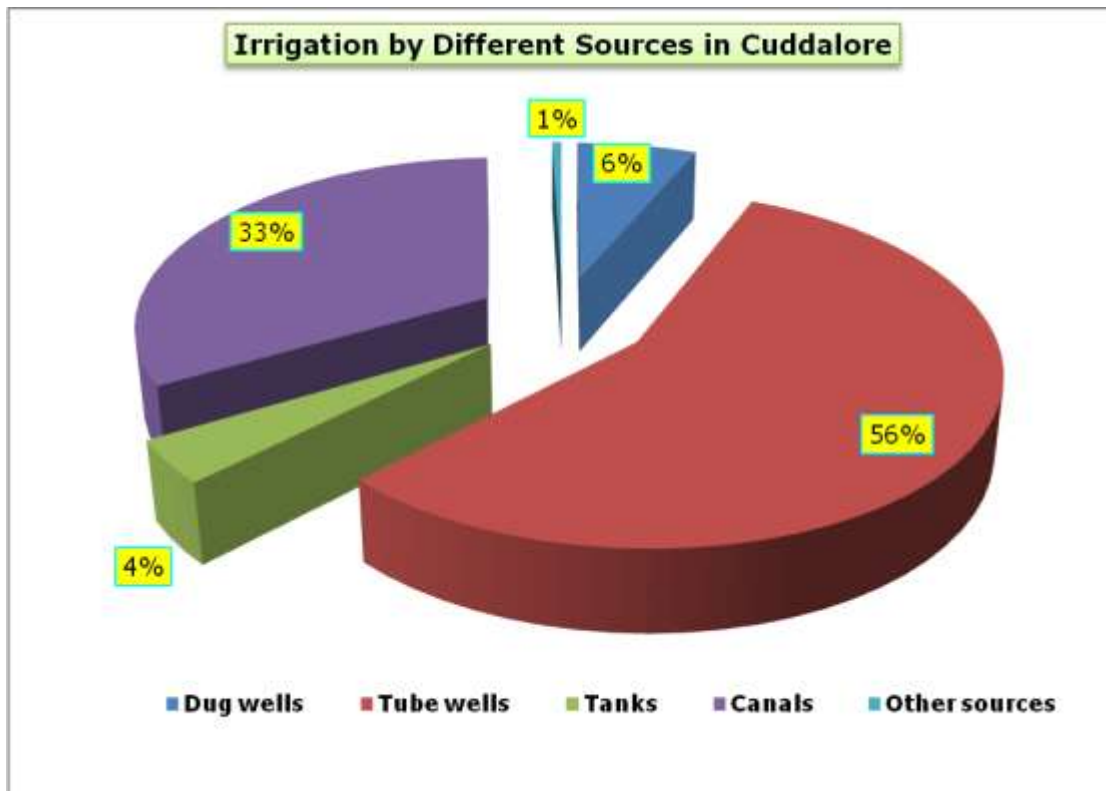
Sl.No.	Season	Normal	Percentage %
1.	Winter(Jan-Feb)	48.6	4
2.	Summer (Mar-May)	99.8	7
3.	South West monsoon(June-Sept)	392.4	30
4.	North East Monsoon(Oct-Dec)	773.7	59
Total		1314.5	100



DIFFERENT SOURCES OF IRRIGATION IN CUDDALORE

S.No	Sources	Number	Net Area Irrigated (ha)	Percentage	Gross Area Irrigated (ha)
1	Dug wells	10643	9217	6.45	9365
2	Tube wells	36305	80220	56.11	100736
3	Tanks	592	5723	4.00	6690
4	Canals	270	47099	32.94	50119
5	Other sources	21	704	0.49	1151
	Total		1,42,963	100.00	1,68,061

Source: Season and crop report, department of economics and statistics Tamil Nadu



TOTAL CULTIVABLE AREA UNDER HORTICULTURE

1.	Total geographical area	3,67,781 Ha.
2.	Net area sown	2,16,148 Ha.
3.	Total area under horticulture crops	44,830 Ha.
4.	% of Horticulture crops to total geographical area	12.19 %
5.	% of Horticulture crops to net area sown	20.74 %

AREA COVERAGE UNDER HORTUCULTURE CROPS FOR THE LAST FOUR YEARS

Area Coverage 2011-12, 2012-13, 2013-14 & 2014-15						
Sl. No	Name of the Crop	Normal Area	Area Coverage (in Ha.)			
			2011-12	2012-13	2013-14	2014-15
I	VEGETABLES					
1	Brinjal	350	507	350	424	445
2	Bhendi	925	155	925	415	365
3	Bittergourd	25	122	25	163	158
4	Snakergourd	20	108	20	34	29
5	Onion	10	7	10	9	60
6	Lablab	-	18	-	0	0
7	Drumstick	-	124	-	24	32
8	Tomato	-	-	-	0	3
	Total	1330	1041	1330	1069	1092
II	FRUITS					
1	Banana	4000	4400	4000	3937	3486
2	Mango	850	669	850	918	729
3	Jackfruit	650	840	650	0	0
4	Guava	700	512	700	1186	1251
5	Lemon	50	18	50	0	0
6	Sapota	10	-	10	0	0
	Total	6260	6439	6260	6041	5466

AREA COVERAGE UNDER HORTUCULTURE CROPS FOR THE LAST FOUR YEARS

Area Coverage 2011-12, 2012-13, 2013-14 & 2014-15						
Sl. No	Name of the Crop	Normal Area	Area Coverage (in Ha.)			
			2011-12	2012-13	2013-14	2014-15
III	FLOWERS					
1	Mullai	475	583	475	280	313
2	Crossandara	30	6	30	62	44
3	Marigold	45	15	45	32	76
4	Tuberose				28	32
	Total	550	604	550	402	465
IV	PLATATION CROPS AND OTHER CROPS					
1	Cashew	32300	30418	32300	32788	33077
2	Betelvine	-	36	-	0	0
3	Bamboo	-	48	-	0	0
4	Medicinal Plants	-	86	-	0	0
5	Cocoa	-	-	-	0	44
6	Tamarind	-	-	-	211	161
	Total	32300	30588	32300	32999	33282
V	SPICES AND CONDIMENTS					
1	Chillies	130	60	130	124	211
2	Turmeric	160	658	160	310	332
3	Coriander	30	12	30	6	0
4	Tapioca	3950	4182	3950	3566	3892
5	Sweet potato	-	-	-	0	90
6	Watermelon	120	194	120	0	0
	Total	4390	5106	4390	4006	4525
	Grand Total	44830	43778	44830	44517	44830

FIELD VISIT
Beneficiary No-1
Area Expansion / Rejuvenation

Sl. No.	Details	Remarks
1	Name & Address of Beneficiary whose field visited	K. Sivaganam S/o.Krishnan, Mathakilirmanickam, Kattumannorkoil Block
2	Total land available with the beneficiary (Ha.)	1.00Ha.
3	Crop Culster under which covered	Flowers
4	Name & Variety of crop planted	Tuberose
5	Source of planting material	Owen
6	Number of planting material	
7	Number of plants planted/ rejuvenated	
8	Date of plants which survived (also indicate percentage survival)	
9	Total amount of subsidy asistance due to the beneficiary as (Rs.)	Rs.37,500/- (back-ended)
10	Amount paid and date of payment	Apr-15
11	Mode of payment	ECS to Bank farmer account
12	Source of irrigation water (borewell/ Tubewell/Canel)	Bore well
13	Whether Drip/ Sprinkle System in use	Drip
14	Other inputs provided	No
15	whether assistance available for organic farming	No
16	If so, area covered	
17	Assistance available	
18	Available marketing facility for the crop	Flower market nearby town
19	Other infrastructure available in the vicinity	
20	General upkeep of the plot Very good/ Good/ Average/ Poor	Very good
21	Any other relevant observation by the JIT	

Observations:

1. The field has been maintained well
2. Thicker size mulch sheets should be laid for long life.
3. Bio control measures for crop protection to be taken up.

**Beneficiary No-2
Micro Irrigation**

Sl. No.	Details	Remarks
1	Name & Address of Beneficiary whose field visited	C. Iyyappan S/o.Chinnathambi, Oriyur, Annagrammam Block
2	Total land available with the beneficiary (Ha.)	2.00ha.
3	Type of MI system availed Drip/ Sprinkler	Drip
4	Crop(s) Covered	Flowers & Vegetables
5	Total area covered(ha)	2.00ha.
6	Crop spacing (for drip)	1.5m x 0.6m
7	Year of establishment	2013-14
8	Name of Manufacture/ Supplier	Netafim Irrigation Ltd.,
9	Total subsidy paid & date of payment	Rs.60,840/- June 2014
10	Mode of payment	ECS to Bank
11	Status of crop	Flowers @ flowering stage
12	General upkeep (Very good/ Good/ Average/ Poor)	Very Good
13	Any other relevant observation by the JIT	

Observations:

1. Four farmers are jointly marketing marigold which is highly appreciated.
2. The drip system was installed as per the norms.
3. Farmer has changed the traditional paddy cultivated land to horticultural cropping system with marigold, moringa and cucurbitaceous vegetables.

**Beneficiary No-3
Micro Irrigation**

Sl. No.	Details	Remarks
1	Name & Address of Beneficiary whose field visited	R. Vaithyanathsamy S/o.Ramachandran, Keezhur, Kurinjipadi Block
2	Total land available with the beneficiary (Ha.)	4.00ha.
3	Type of MI system availed Drip/ Sprinkler	Drip

4	Crop(s) Covered	HDP - Cashew
5	Total area covered(ha)	4.00ha.
6	Crop spacing (for drip)	5m x 4m
7	Year of establishment	2014-15
8	Name of Manufacture/ Supplier	Netafim Irrigation Ltd.,
9	Total subsidy paid & date of payment	Rs.1,50,213/- June 2015
10	Mode of payment	ECS to Bank
11	Status of crop	One year old crop - vegetative growth
12	General upkeep (Very good/ Good/ Average/ Poor)	Very Good
13	Any other relevant observation by the JIT	

Observations:

1. The layout and drip system installed is good
2. Short duration vegetable crops may be cultivated as intercrop for effective utilization of land.

**Beneficiary No-4
Protected cultivation**

Sl. No.	Details	Remarks
1	Name & Address of Beneficiary whose field visited	M. Vetrivel S/o.Muthu, Mathakalirmanickam, Kattumannorkoil Block
2	Total land available with the beneficiary (Ha.)	2.00 Ha.
3	Type of protected cultivation activity (Mulching)	Mulching
4	Year of establishment	2014-15
5	Size of structure (Sq.m)	1.00 Ha
6	Total cost	Rs.32,000/-

8	Total subsidy paid and date of payment	Rs.10,000/-
9	Crop being grown	Tuberose
11	Condition of Crop	Good
12	Tie up with market	Yes
13	General upkeep (Very good/ Good/ Average/ Poor)	Very Good
14	Any other relevant observation by the JIT	

Observations:

1. The establishment is well
2. Selection quality and nematode free planting material should be used in future.

Beneficiary No-5

FARM MECHANISATION

Sl. No.	Details	Remarks
1	Name of the project	NHM - Farm Mechanisation
2	Year of implementation	2014-15
3	Name of beneficiary	T. Latha W/o.Thirumalai
4	Location of project	Vazhapattu, Annagrammam Block
5	Name of Machinery	Tractor < 20 hp
6	Make	Mitsubsi
5	Total cost of machinary	Rs.3.30 lakhs
6	Amount released & date	Rs.1.00 lakhs/ June 2015

Observations:

1. The mini tractor is effectively utilized for horticultural crops cultivation (Banana and Tapioca).
2. For optimum utilization of machinery the farmer is planning to go for custom hiring.

Beneficiary No-6

FARM MECHANISATION

Sl. No.	Details	Remarks
1	Name of the project	NHM - Farm Mechanisation

2	Year of implementaiton	2014-15
3	Name of beneficiary	A. Pasupathy S/o.Arunachalam
4	Location of project	Nathamedu, Annagrammam Block
5	Name of Machinery	Tractor < 20 hp
6	Make	Mitsubsi
5	Total cost of machinary	Rs.3.30 lakhs
6	Amount released & date	Rs.1.00 lakhs/ June 2015

Observations:

1. The farmer is completely utilizing the tractor in his own fields and this has solved his problem pertaining to non availability of farm labourers.
2. The farmer was suggested to get trailer and bund former for effective utilization.

Beneficiary No-7

FARM MECHANISATION

Sl. No.	Details	Remarks
1	Name of the project	NHM - Farm Mechanisation
2	Year of implementation	2013-14
3	Name of beneficiary	P. Babu S/o.Perumal
4	Location of project	Chinnakanadi, Kurinjipadi Block
5	Name of machinery	Tractor < 40 hp
6	Make	HMT-Tractor
5	Total cost of machinery	Rs.5.210 lakhs
6	Amount released & date	Rs.1.50 lakhs/ April 2015

Observations:

1. The tractor is effectively utilized for banana and cassava cultivation.
2. The assistance provided to farmer under NHM need to be displayed on the tractor.

Beneficiary No-8
FARM MECHANISATION

Sl. No.	Details	Remarks
1	Name of the project	NHM - Farm Mechanisation
2	Year of implementation	2013-14
3	Name of beneficiary	R. Dhanachnamurthy S/o.Ramanujam
4	Location of project	Chinnakanadi, Kurinjipadi Block
5	Name of machinery	Tractor < 40 hp
6	Make	HMT-Tractor
5	Total cost of machinery	Rs.5.210 lakhs
6	Amount released & date	Rs.1.50 lakhs/ April 2015

Observations:

1. The tractor is effectively utilized for vegetables cultivation.
2. The details of assistance provided to farmer under NHM need to be displayed on the tractor.

CUDDALORE DISTRICT - FIELD VISIT PHOTOS



DISTRICT: ARIYALUR

Ariyalur District

Taluks



District Profile

Ariyalur district lies in the South Indian state of Tamil Nadu, located at a distance of 310 km from the state capital Chennai. Ariyalur was a part of the Tiruchirappalli district until 1995, Perambalur district until 2007 and subsequently a part of the newly formed Ariyalur district.

It is bounded on the North by Cuddalore, South by Thanjavur, East by Cuddalore and Thanjavur and West by Perambalur and Tiruchirappalli districts. It is an inland district without any coast line. The District has Vellar River in the North and Kollidam River in the South and it

has no well marked natural divisions. Ariyalur district situated at between 11°8'14" North Latitude and 79°4'40" East Longitude.

Climate

Ariyalur District has dry weather with maximum and minimum temperature ranging between 40° C and 22°C

Soil Types:

Loamy soil, Black soil, Alluvial soil, Sandy loam and Sandy clay are the soil types found in the district

Rainfall:

Season	Rainfall (mm)
Winter	16.80
Summer	109.50
South West Monsoon	238.40
North East Monsoon	602.20
Grand Total	966.90

Major Horticulture Crops:

Major Horticulture crops cultivated in this district are fruits crops like Mango, Banana, Guava, Aonla And Jack, Plantation Crops Like Cashew, Vegetables Like Tomato, Brinjal, Bhendi, Onion, Chillies, Tapioca And Watermelon, Spices Like Turmeric, Medicinal Plants Like Gloriosa And Flowers Like Tube Rose, Jasmine, Crossandra And Chrysanthemum

The total fallow land in the district stood as 24974 ha. as stated below:

1	Fallow lands suitable for agriculture	3218 Ha.
2	Current fallow	13413 Ha
3	Other fallows	8343 Ha
	Total	24974 Ha

The Net area sown works out to be 102067 lakhs hectares. Among this total area horticulture crops area is 34317 ha. The details are furnished as below:

Sl.No.	Crop	Area in Ha.
1	Fruits	858

2	Vegetables	2346
3	Flowers	142
4	Plantation crops	30098
5	Spices & condiments	745
6	Medicinal & aromatic plants	128
	Total	34317

FIELD VISIT
Beneficiary No-1

Area Expansion / Rejuvenation - 1

S. No.	Details	Remarks
1	Name & address of beneficiary whose field visited.	P. Paramasivam S/o Periyasamy Govindhapuram
2	Total land available with the beneficiary (ha).	2.00 Ha
3	Crop cluster under which covered.	NHM
4	Name & variety of crop planted.	TC Banana – Grand naine
5	Source of planting material.	Grow more Biotech, Hosur
6	Number of planting material.	1675 Nos
7	Number of plants planted/ rejuvenated.	1675 Nos
8	Date of plants which survived (also indicate percentage survival).	90%
9	Total amount of subsidy assistance due to the beneficiary as (Rs.)	Rs. 18,720/-
10	Amount paid and date of payment.	07.09.2015
11	Mode of payment.	RTGS
12	Source of Irrigation Water (Bore well/ Tube well/ Canel)	Bore well
13.	Whether Drip/ Sprinkle System in use.	NO
14.	Other inputs provided.	NO
15.	Whether assistance available for Organic Farming	NO
16	If so, area covered	-
17.	Assistance available	
18.	Available marketing facility for the crop.	Local market
19.	Other infrastructure available in the vicinity.	-
20.	General upkeep of the plot; Very good/ Good / Average/ Poor.	
21.	Any other relevant observation by the JIT.	

Observations:

1. The initiative of TC Banana introduction by the farmer is appreciated.
2. 30 percent mortality to be made good with gap filling.
3. The field to be irrigated and fertilized as per the schedule.

Beneficiary No-2

Area Expansion / Rejuvenation

S. No.	Details	Remarks
1	Name & address of Beneficiary whose field visited.	K. Meenakumari W/o Krishnan Keelapalur
2	Total land available with the beneficiary (ha).	4.00 Ha
3	Crop Cluster under which covered.	NHM
4	Name & variety of crop planted.	Mango – Banganapalli, Bangalura Acidlime - Kodur
5	Source of planting material.	Mango – SHF, Marunkulam Acidlime - Own
6	Number of planting material.	Mango – 200 Acidlime - 220
7	Number of plants planted/ rejuvenated.	Mango – 200 Acidlime - 220
8	Date of plants which survived (also indicate percentage survival).	90%
9	Total amount of subsidy assistance due to the beneficiary as (Rs.)	NHM - Rs. 16800/- (Mango & acidlime)
10	Amount paid and date of payment.	-
11	Mode of payment.	RTGS
12	Source of Irrigation Water (Bore well/ Tube well/ Canel)	Farmpond
13.	Whether Drip/ Sprinkle System in use.	Yes
14.	Other inputs provided.	NO
15.	Whether assistance available for Organic Farming	NO
16	If so, area covered	-
17.	Assistance available	
18.	Available marketing facility for the crop.	Local market
19.	Other infrastructure available in the vicinity.	-
20.	General upkeep of the plot; Very good/ Good / Average/ Poor.	
21.	Any other relevant observation by the JIT.	

Observations:

1. Proper training operations to be carried out for mango and acid lime.
2. The team suggested that gap filling should be completed to maintain the population.

Beneficiary No-3

Area Expansion / Rejuvenation

S. No.	Details	Remarks
1	Name & address of Beneficiary whose field visited.	K. Selvarasu S/o Karupan Melakarupur
2	Total land available with the beneficiary (ha).	1.00 Ha.
3	Crop Cluster under which covered.	NHM
4	Name & variety of crop planted.	Brinjal - Darpan

5	Source of planting material.	Through Department
6	Number of planting material.	Seeds – 50gm
7	Number of plants planted/ rejuvenated.	
8	Date of plants which survived (also indicate percentage survival).	98%
9	Total amount of subsidy assistance due to the beneficiary as (Rs.)	NHM - Rs.5,000/-
10	Amount paid and date of payment.	-
11	Mode of payment.	RTGS
12	Source of irrigation water (Bore well/ Tube well/ Canel)	Bore well
13.	Whether Drip/ Sprinkle system in use.	No
14.	Other inputs provided.	Fertilizers & Plant protection chemicals
15.	Whether assistance available for Organic Farming	NO
16	If so, area covered	-
17.	Assistance available	
18.	Available marketing facility for the crop.	Local market
19.	Other infrastructure available in the vicinity.	-
20.	General upkeep of the plot; Very good/ Good / Average/ Poor.	
21.	Any other relevant observation by the JIT.	

Observations:

1. The effort done by the farmer pertaining to introduction of F1 hybrid in brinjal is appreciated.
2. The farmer has to take effective plant protection measures for pest and diseases.

Beneficiary No-4

Area Expansion / Rejuvenation

S. No.	Details	Remarks
1	Name & address of Beneficiary whose field visited.	N. Selvarasu S/o Natesan Valaivettikupam
2	Total land available with the beneficiary (ha).	1.50 Ha.
3	Crop Cluster under which covered.	NHM
4	Name & variety of crop planted.	Cashew – VRI 3
5	Source of planting material.	Through Department, SHF
6	Number of planting material.	100 Nos.
7	Number of plants planted/ rejuvenated.	100 Nos.
8	Date of plants which survived (also indicate percentage survival).	95%
9	Total amount of subsidy assistance due to the beneficiary as (Rs.)	NHM - Rs.6,000/-
10	Amount paid and date of payment.	-
11	Mode of payment.	RTGS
12	Source of Irrigation Water (Bore well/ Tube well/ Canel)	Bore well
13.	Whether Drip/ Sprinkle System in use.	No

14.	Other inputs provided.	Fertilizers & Plant protection chemicals
15.	Whether assistance available for Organic Farming	NO
16.	If so, area covered	-
17.	Assistance available	
18.	Available marketing facility for the crop.	Local market
19.	Other infrastructure available in the vicinity.	-
20.	General upkeep of the plot; Very good/ Good / Average/ Poor.	
21.	Any other relevant observation by the JIT.	

Observations:

1. The planted VRI3 cashew is established well.
2. JITsuggested to follow canopy management for initial framework.

Beneficiary No-5

Area Expansion / Rejuvenation - 5

Sr. No.	Details	Remarks
1	Name & address of Beneficiary whose field visited.	R. Maharajan S/o. Rathinam Silal
2	Total land available with the beneficiary (ha).	1.50 Ha.
3	Crop Cluster under which covered.	NHM
4	Name & variety of crop planted.	Papaya – Red Lady & mortality replaced by local variety
5	Source of planting material.	By own
6	Number of planting material.	1,250 Nos.
7	Number of plants planted/ rejuvenated.	1,250 Nos.
8	Date of plants which survived (also indicate percentage survival).	98%
9	Total amount of subsidy assistance due to the beneficiary as (Rs.)	NHM - Rs.11,550/-
10	Amount paid and date of payment.	-
11	Mode of payment.	RTGS
12	Source of Irrigation Water (Bore well/ Tube well/ Canel)	Bore well
13.	Whether Drip/ Sprinkle System in use.	No
14.	Other inputs provided.	No
15.	Whether assistance available for Organic Farming	NO
16.	If so, area covered	-
17.	Assistance available	
18.	Available marketing facility for the crop.	Local market
19.	Other infrastructure available in the vicinity.	-
20.	General upkeep of the plot; Very good/ Good / Average/ Poor.	
21.	Any other relevant observation by the JIT.	

Observations:

1. The new introduction of papaya by the farmer is highly appreciated.
2. The production and the earnings by the grower are very good.

Beneficiary No-6**Protected Cultivation**

S. No.	Details	Remarks
1	Name & address of Beneficiary whose field visited.	R. Selvi W/o Ramalingam Silal
2	Total land available with the beneficiary (ha).	2.00 Ha.
3	Type of Protected cultivation activity (Hi-tech / Normal GH, Shade net, Plastic tunnel)	Shadenet
4.	Year of establishment	2013-14
5.	Size of Structure (Sq. m)	1000 Sq.m
6.	Total cost	Rs.6,00,000/-
7.	Agency involved in fabrication and installation	-
8.	Total subsidy paid and date of payment.	Rs.3,55,000/-
9.	Crop being grown	Brinjal, Chillies nursery
10.	Condition of Structure	
11.	Condition of Crop	
12.	Tie up with market	
13.	General upkeep (Very good/ Good/ Average/ Poor)	
14	Any other relevant observation by JIT.	

Observations:

1. The shade net has been constructed as per the norms.
2. The farmer produces quality planting material of chillies and brinjal.
3. In future, other F1 hybrids of commercial vegetable seedlings may be produced.

Beneficiary No-7**Protected Cultivation**

S. No.	Details	Remarks
1	Name & address of Beneficiary whose field visited.	V. Devasena W/o Viswanathan Sila
2	Total land available with the beneficiary (ha).	2.00 Ha.
3	Type of Protected cultivation activity (Hi-tech / Normal GH, Shade net, Plastic tunnel)	Plastic Mulching
4.	Year of establishment	2014-15
5.	Size of Structure (Sq. m)	1 Ha
6.	Total cost	Rs.39,000/-
7.	Agency involved in fabrication and installation	-
8.	Total subsidy paid and date of payment.	Rs.16,000/-
9.	Crop being grown	Tuberose
10.	Condition of Structure	
11.	Condition of Crop	
12.	Tie up with market	
13.	General upkeep (Very good/ Good/ Average/ Poor)	
14	Any other relevant observation by JIT.	

Observations:

1. The farmer get remunerative price for tuberose flowers under mulching.

Beneficiary No-8

Post Harvest Management

Pack House/Cold Storage/Ref Van/ Primary processing

Sr. No.	Details	Remarks
1	Name of the project	Pack house
2	Year of Implementation	2014-15
3	Project Period	6 months

4	Name of Beneficiary	K. Meenakumari, W/o. Krishnan, Keelapalur.
5	Location of Project	Keelapalur, Thirumanur Block
6	Total Project Cost	Rs.5,50,000/-
7	Amount Released & date	Under construction
8	Expenditure incurred	
9	Status	
	Capacity of unit	
	Commodity	
	Equipments purchased	
	Condition of infrastructure	
	Whether NHM logo displayed	
	Whether funds disbursed to agency	

Observations:

1. The pack house is under construction.
2. It should be constructed as per the approved design and norms.

Beneficiary No-9

Mechanization

Power tiller

Sr. No.	Details	Remarks
1.	Name of the Implement	Power tiller
2.	Year of Implementation	2014-15
3.	Name of Beneficiary	S. Arumugam, S/o. Subburayan, Thelur
4.	Total Cost	Rs.1,62,750/-
5.	Amount Released & date	Rs.50,000/-
6.	Status	
	Capacity of unit	
	Commodity	

	Equipments purchased	
	Condition of infrastructure	
	Whether NHM logo displayed	
	Whether funds disbursed to agency	

Observations:

1. The power tiller is effectively utilized for horticultural crops cultivation and other related activities.

Beneficiary No-10

Micro Irrigation

Sr. No.	Details	Remarks
1	Name & address of beneficiary visited.	K. Meenakumari, W/o. Krishnan, Keelapalur.
2	Total land available with the beneficiary (ha).	4.00 Ha.
3	Type of MI system availed Drip/ Sprinkler	Drip
4	Crop(s) covered	Mango, Amla, Acidlime, Vegetables
5.	Total area covered (ha)	4.00 ha.
6	Crop Spacing (for drip)	According to the crop
7	Year of establishment	2013-14
8	Name of Manufacturer/ Supplier	Premier Irrigation
9	Total subsidy paid & date of payment	Rs.1,45,200/-
10	Mode of payment	RTGS
11	Status of crop	
12	General upkeep (Very good/ Good/ Average/ Poor)	
13.	Any other relevant observation by JIT.	

Observations:

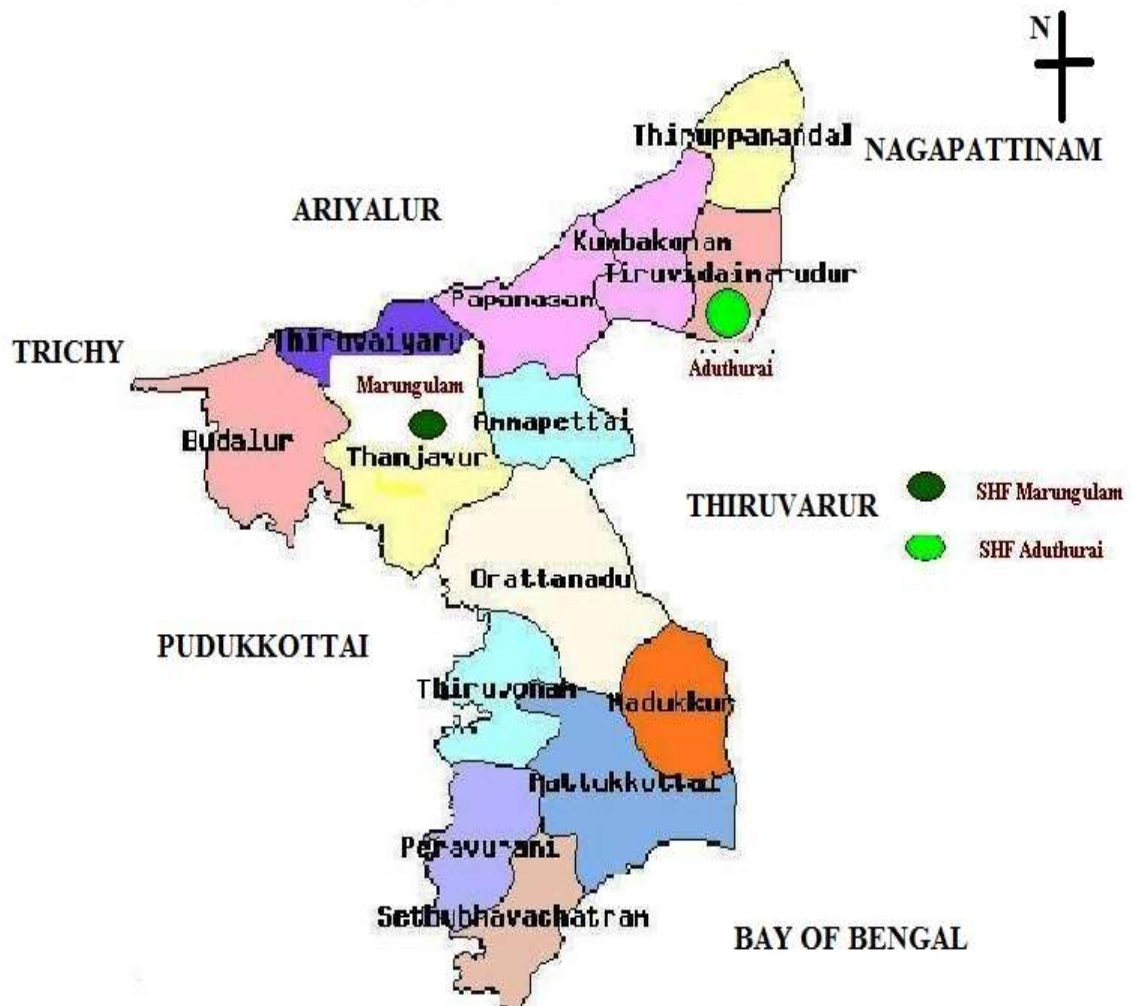
1. Drip system is installed well.

2. Gap filling to be done in fruit crops.

Ariyalur District - Field Visit Photographs



DISTRICT: THANJAVUR



THANJAVUR DISTRICT PROFILE:

- ❖ Thanjavur being the foremost district of the Cauvery Delta
- ❖ Stands unique from time immemorial for its agricultural activities
- ❖ Coastal district abounds in green paddy fields, coconut groves, vast gardens of mango and banana
- ❖ Primarily agrarian in nature with very few industrial units.

- ❖ The district lies in the East coast of Tamil Nadu. The district is bounded on the north-west by Cauvery River which demarcates itself from Tiruchirapalli, Ariyalur and Cuddalore districts and on the north and east it is bounded by Nagapattinam and Thiruvavarur districts and on the south by the Palk Strait and Pudukkottai district and west by Pudukkottai, Tiruchirapalli districts
- ❖ The district has its head quarters at Thanjavur which was once the Kingdom Capital of Raja Raja Cholan.

❖ **CANALS IN THE DISTRICT**

- **Cavery** – It covers Thiruvaiyaru, Papanasam, Kumbakonam and Thiruvudaimaruthur.
- **Vennar** – It covers Thanjavur and Papanasam.
- **Grand Anaicut Canal** – It covers Thanjavur, Orathanadu, Pattukottai and Peravurani.

DETAILS OF BLOCK, TALUK, FIRKA AND REVENUE VILLAGES			
District : THANJAVUR			
S.No	Name of the Taluk	Name of the Block	No. of Panchayat Villages
1	Thanjavur	Thanjavur	61
2	Thiruvaiyaru	Thiruvaiyaru	40
3	Budalur	Budalur	42
4	Orathanadu	Orathanadu	58
		Thiruvonam	30
5.	Papanasam	Papanasam	34
		Ammapettai	46
		Thiruppanandal	44
6	Kumbakonam	Kumbakonam	47

7.	Thiruvidaimaruthur	Thiruvidaimaruthur	48
8.	Pattukottai	Pattukottai	43
		Madukkur	33
9.	Peravurani	Peravurani	26
		Sethubhavachatram	37

SOILS AND TOPOGRAPHY

i) Geology:-

The geological formation of Thanjavur district is made up of cretaceous, tertiary and alluvial deposits and the major area is occupied by the alluvial and tertiary deposits.

ii) Soil Type:

Clay soil, Sandy Loam and Sandy Clay Loam.

iii) Soil Colour

Brown coloured soil	-	65%
Red soil	-	19.3%
Black soil	-	15.77%

In Thanjavur district, 13 soil series were identified of which Madukkur, Kalathur, Padugai, Pattukkottai, Adhanur, Vallam series constitute 84% at the extent of 2,76,600 Ha out of 3,23,506 ha

MAJOR SOIL SERIES AND CROPS GROWN

Soil Series	Crops Grown
Madukkur	Groundnut, Gingelly, Paddy, Millets & Chillies
Kalathur	Paddy, Sugar cane, Cotton, Pulses
Padugai	Banana, Sugarcane, Vegetable, flowers, Groundnut, Gingelly
Pattukkottai	Groundnut, Gingelly, Vegetable, Chillies , Coconut, Fruit trees
Adhanur	Paddy, Sugarcane and Cotton
Vallam	Groundnut, Millets, Cashew and Eucalyptus

Among the soil series, the two soil series viz. Padugai series, Pattukkottai series are suitable for Horticulture crops

LAND AND LAND USE PATTERN

The total geographical area of the district is 3,39,657 hectares. The break-up of the total geographical area by land use and their percentage are given below:

Sl.No.	Land Use	Area in Hectares	Percentage of area under Thanjavur District
I	Total geographical area	3,39,657	100%
1.	Forest	3,426	1.0%
2.	Barren and uncultivable waste	2,201	0.6%
3.	Permanent pastures and other grazing lands	1,746	0.5%
4.	Land put to non-agricultural use	77,122	22.8%
5.	Cultivable waste	10,647	3.1%
6.	Land under miscellaneous tree crop and groves/not included in one sown	6,288	1.8%
7.	Current fallows	8,396	2.5%
8.	Other fallows	26,656	7.9%
9.	Net area sown	2,03,175	59.8%
10.	Area sown more than once	64,675	19.0%
11.	Gross cropped area	2,67,850	78.9%

It is noted that 59.8% of the area falls under the net area sown. It is also obvious that Land under forest is much below the state average but this ecological imbalance has to some extent set aside by the land under miscellaneous tree crops and groves of 1.8% which is equal to the state percentage of 1.8.

AVERAGE MONTH-WISE RAINFALL IN THANJAVUR DISTRICT

(In Millimetres)

Name of Season	Month	Normal Rainfall	Average Number of rainy days
South-West Monsoon	June	39.3	1.3
	July	61.1	1.1
	August	113.9	4.6
	September	106.6	2.6
	Total	320.9	9.6
North-East	October	185.6	12.5

Monsoon	November	210.1	10.1
	December	129.5	4.9
	Total	525.2	27.5
Winter	January	44.4	4.4
	February	15.0	4.1
	Total	59.4	8.5
Hot Weather	March	18.2	0.3
	April	40.4	2.8
	May	55.5	2.5
	Total	114.1	5.6
All seasons		1019.6	51.2

SOURCES OF IRRIGATION

Source of irrigation	Extent in Ha	% of the Gross area irrigated
Canals	136762	56.82
Tanks	345	0.14
Tube wells	42647	17.72
Ordinary wells	1214	0.50
Ordinary wells (Supp)	29948	12.44
Net area irrigated	210916	87.62
Area irrigated more than once	29792	12.38
Gross area irrigated	240708	100

Status of land Holding	Number	Total Area
1) 1Ha.	235753	80733.61
2) 1-2 Ha.	39367	55593.45
3) 2-3 Ha.	13823	33587.51
4) 3-4 Ha.	6033	20184.94
5) more than 4 hectare	8545	59578.34

CROPPING PATTERN

S. no	Cropping Pattern	Month
-------	------------------	-------

1	Green-manure-Paddy/Chillies / Vegetables	July-August / September-January
2	Paddy-Gingelly/Bhendi	September-January / March-June
3	Tapioca/Brinjal / Bhendi	September-January / March-June
4	Maize/Chillies	September - February
5	Onion-Vegetables/Gourds	September-January / March-June
6	Banana / Vegetables	July - Aug to Oct-Nov
7	Vegetables	August - February
8	Paddy / Sugarcane / Brinjal / Gourds / Banana / Bhendi	Dec -Jan to March- April
9	Onion-Ground nut / Vegetables/ Banana	Jan-Feb to April -May
10	Brinjal-Gingelly/ Bhendi / Gourds	April-May / June - July

AREA OF MAJOR HORTICULTURE CROPS 2014-15

Sl.No	Name of the crop	Area (Ha.)
1	Banana	3306
2	Mango	895
3	Guava	107
4	Other fruits	164
5	Brinjal	242
6	Tapioca	214
7	Other vegetable	294
8	Chillies	55

9	Pepper	39
10	Onion	47
11	Turmeric	7
12	Tamarind	177
13	Cashew	1529
14	Arecanut	14
15	Cocoa intercrop in coconut	444
16	Betelvine	177
17	Medicinal plants	16
18	Jasmine	45
19	Crossandra	5
20	Marigold	3
21	Other flowers	136

**FIELD VISIT
Beneficiary No-1**

Area Expansion / Rejuvenation

Sr. No.	Details	Remarks
1	Name & address of Beneficiary whose field visited.	A. Sathiyathan, S/o. Arockiasamy, Thirukkanoorpatty
2	Total land available with the beneficiary (ha).	1.00 Ha.
3	Crop Cluster under which covered.	NHM
4	Name & variety of crop planted.	Tuberose - Prajwal
5	Source of planting material.	By own
6	Number of planting material.	1,12,000 Nos.
7	Number of plants planted/ rejuvenated.	1,12,000 Nos.
8	Date of plants which survived (also indicate percentage survival).	95%
9	Total amount of subsidy assistance due to the beneficiary as (Rs.)	NHM - Rs.37,500/-
10	Amount paid and date of payment.	Rs. 37,500/-
11	Mode of payment.	RTGS

12	Source of Irrigation Water (Bore well/ Tube well/ Canal)	Bore well
13.	Whether Drip/ Sprinkle System in use.	Drip and Sprinkle
14.	Other inputs provided.	No
15.	Whether assistance available for Organic Farming	NO
16	If so, area covered	-
17.	Assistance available	
18.	Available marketing facility for the crop.	Local market
19.	Other infrastructure available in the vicinity.	-
20.	General upkeep of the plot; Very good/ Good / Average/ Poor.	
21.	Any other relevant observation by the JIT.	

Observations:

1. The tuberos field is well maintained.
2. The micro sprinklers and mulching have been laid out and working well.

**FIELD VISIT
Beneficiary No-2**

Micro Irrigation

Sr. No.	Details	Remarks
1	Name & address of beneficiary visited.	S. Arulsamy, S/o. Sebasthiyar, Thirukkanoorpatty.
2	Total land available with the beneficiary (ha).	2.63 Ha.
3	Type of MI system availed Drip/ Sprinkler	Drip System
4	Crop(s) covered	Tapioca
5.	Total area covered (ha)	2.63 ha.
6	Crop Spacing (for drip)	1.2 x 0.6 m
7	Year of establishment	2014-15
8	Name of Manufacturer/ Supplier	Kothari Agritech Pvt. Ltd.,
9	Total subsidy paid & date of payment	Rs. 1,59,767/-
10	Mode of payment	RTGS
11	Status of crop	Harvesting stage
12	General upkeep (Very good/ Good/ Average/ Poor)	
13.	Any other relevant observation by JIT.	

Observations:

1. Drip irrigation installed and working properly.
2. The cassava mosaic virus disease in the adjacent field was noticed, it is to be monitored to control the spread.
3. The frequency of irrigation to be increased with reduction in duration.

Beneficiary No-3

Area Expansion / Rejuvenation

Sr. No.	Details	Remarks
1	Name & address of Beneficiary whose field visited.	R. Anjammal, W/o. Ravindran, Kollangarai
2	Total land available with the beneficiary (ha).	1.00 Ha.
3	Crop Cluster under which covered.	NHM – Mango HDPE
4	Name & variety of crop planted.	Mango –Banganapalli, Sendura, Kalapad, Alphonso & Bangalora
5	Source of planting material.	From SHF
6	Number of planting material.	400 Nos.
7	Number of plants planted/ rejuvenated.	400 Nos.
8	Date of plants which survived (also indicate percentage survival).	95%
9	Total amount of subsidy assistance due to the beneficiary as (Rs.)	NHM - Rs.9,840/-
10	Amount paid and date of payment.	---
11	Mode of payment.	---
12	Source of Irrigation Water (Bore well/ Tube well/ Canel)	Bore well
13.	Whether Drip/ Sprinkle System in use.	Drip System
14.	Other inputs provided.	No
15.	Whether assistance available for Organic Farming	No
16	If so, area covered	-
17.	Assistance available	
18.	Available marketing facility for the crop.	Local market
19.	Other infrastructure available in the vicinity.	-
20.	General upkeep of the plot; Very good/ Good / Average/ Poor.	
21.	Any other relevant observation by the JIT.	

Observations:

1. The mango planting was completed with varieties like alphonso, banganapalli, sendura, bangalora, kalapad and the growth is satisfactory.
2. Inter crop with short duration vegetables can be raised.
3. The farmer has established drip irrigation at his own expanse.

Beneficiary No-4

FARM MECHANISATION

Sl. No.	Details	Remarks
1	Name of the project	NHM - Farm Mechanisation
2	Year of implementation	2014-15
3	Name of beneficiary	R. Anjammal, W/o. Ravindran, Kollangarai

4	Location of project	Kollangarai, Thanjavur Block
5	Name of Machinery	Power Tiller
6	Make	VST - Shakthi
5	Total cost of machinery	Rs.1.61 lakhs
6	Amount released & date	Rs.0.50 lakhs/ March 2015

Observations:

1. Beneficiary is utilizing the power tiller for his own use and planning to have custom hiring whenever he gets time.

Photographs

