

## PART I - GENERAL INFORMATION ABOUT THE KVK

### 1.1. Name and address of KVK with phone, fax and e-mail

KVK Address	Telephone		E mail	Web Address
	Office	FAX		
Krishi Vigyan Kendra Sirugamani – 639115 Tiruchirappalli District Tamil Nadu	0431-2614417	0431-2614457	kvks gm@tnau.ac.in	www.tnau.ac.in

### 1.2. Name and address of host organization with phone, fax and e-mail

Address	Telephone		E mail	Web Address
	Office	FAX		
Tamil Nadu Agricultural University, Coimbatore –641 003	0422-6611201	0422-2431821	registrar@tnau.ac.in	www.tnau.ac.in

### 1.3. Name of the Programme Coordinator with phone & mobile No

Name	Telephone / Contact		
	Residence	Mobile	Email
Dr. A.Sakunthalai	0431- 2750176	09442273855	kvks gm@tnau.ac.in sakunthry@gmail.com

### 1.4. Year of sanction: 1977

1.5. Staff Position (as 31<sup>st</sup> March 2011)

Sl. No.	Sanctioned post	Name of the incumbent	Designation	M/F	Discipline	Highest Qualification (for PC, SMS and Prog. Asstt)	Pay Scale	Basic pay	Date of joining KVK	Permanent /Temporary	Category (SC/ST/OBC/Others)
1	Programme Coordinator	Dr.A.Sakunthalai	Assooc. Professor & Head	F	Agri.Extension	Ph.D	37400-67000 + AGP 9000	40240	12.04.10	Permanent	SC
2	Subject Matter Specialist	Dr.S.Easwaran	Asst.Professor (Sr.Scale)	M	Horticulture	Ph.D	15600-39100 + AGP 7000	22080	11.06.07	Permanent	SC
3	Subject Matter Specialist	Dr. A.Alagesan	Asst.Professor	M	Agronomy	Ph.D, PDF	15600-39100 + AGP 6000	19600	31.12.09	Permanent	MBC
4	Subject Matter Specialist	Dr.C.Cinthia Fernandaz	Asst.Professor	F	Agri. Extension	Ph.D	15600-39100 + GP 6000	19600	31.12.09	Permanent	BC
5	Subject Matter Specialist	Dr.M.Ravi	Asst.Professor	M	Agri. Entomology	Ph.D	15600-39100 + AGP 6000	19600	30.12.09	Permanent	MBC
6	Subject Matter Specialist	Dr.M.Malarkodi	Asst.Professor	F	Soil Science	Ph.D	15600-39100 + AGP 6000	19600	30.12.09	Permanent	BC
7	Subject Matter Specialist	Dr .L.Karpagapandi	Asst.Professor	F	Food Science & Nutrition	Ph.D	15600-39100 + AGP 6000	19600	08.02.10	Permanent	BC

Sl. No.	Sanctioned post	Name of the incumbent	Designation	M/F	Discipline	Highest Qualification (for PC, SMS and Prog. Asstt)	Pay Scale	Basic pay	Date of joining KVK	Permanent /Temporary	Category (SC/ST/OBC/Others)
8	Programme Assistant (Lab Tech.) / T-4	Dr.S.J.Vijayalalitha	Programme Assistant (Technical)	F	Horticulture	Ph.D	9300-34800 + AGP 4400	11600	04.06.07	Permanent	BC
9	Programme Assistant (Computer) / T-4	Selvi.P.Yamuna Devi	Programme Assistant (Computer)	F	Computer application	B.Sc (Horti), PGDCA	9300-34800 + AGP 4400	11130	03.12.08	Permanent	BC
10	Farm Manager	Tmt.P.Tamilselvi	Farm Manager	F	Horticulture	M.Sc (Horti)	9300-34800 + AGP 4400	11600	26.08.09	Permanent	BC
11	Assistant	Th.K.Panneer selvam	Superintendent	M	-	-	9300-34800 + AGP 4800	13560	18.08.06	Permanent	SC
12	Assistant	Tmt. S.Poongothai	Junior Assistant	F	-	-	5200-20200 + AGP 2000	6110	04.03.11	Permanent	SC
13	Driver	Th. M.Kannan	Driver	M	-	-	5200-20200 + AGP 2600	11900	14.09.05	Permanent	BC
14	Driver	Th.V. Arumugam	Driver	M	-	-	5200-20200 + AGP 2600	12340	04.03.11	Permanent	SC

Sl. No.	Sanctioned post	Name of the incumbent	Designation	M/F	Discipline	Highest Qualification (for PC, SMS and Prog. Asstt)	Pay Scale	Basic pay	Date of joining KVK	Permanent /Temporary	Category (SC/ST/OBC/Others)
15	Supporting staff	Th. P.Malayalam	Office assistant	M			4800-10000 +AGP 1650	8210	01.04.10	Permanent	BC
16	Supporting staff	Tmt. C.Chellam	Provisincialized Unskilled Mazdoor	F	-	-	4800-10000+ AGP 1400	6990	03.04.2000	Permanent	BC

**1.6. Total land with KVK (in ha) :**

S. No.	Item	Area (ha)
1.	Under Buildings	1.52
2.	Under Demonstration Units	0.40
3.	Under Crops	12.00
4.	Orchard/Agro-forestry	1.00
5.	Others	5.08

### 1.7. Infrastructural Development:

#### A) Buildings

S. No.	Name of building	Source of funding	Stage					
			Complete			Incomplete		
			Completion Date	Plinth area (Sq.m)	Expenditure (Rs.)	Starting Date	Plinth area (Sq.m)	Status of construction
1.	Administrative Building	TNAU	28 years old structure which has become weak					
2.	Farmers Hostel	ICAR	May 1999	241.36	26,64,000	-	-	-
3.	Staff Quarters (6)	ICAR	May 2008	400	29,60,000	-	-	-
	1							
	2							
	3							
	4							
	5							
	6							
	Demonstration Units (2)	ICAR	-		-	-	-	-
	1. Shade net	-	March 2006	131.0	90000	-	-	-
	2. Rabbit rearing shed	-	February 2006	24.45	32500	-	-	-
	3.							
	4.							
5	Fencing	-	-	-	-	-	-	-
6	Rain Water harvesting system	-	-	-	-	-	-	-
7	Threshing floor	-	-	-	-	-	-	-
8	Farm godown	-	-	-	-	-	-	-

**B) Vehicles**

Type of vehicle	Year of purchase	Cost (Rs.)	Total kms. run	Present status
Bolero Jeep	2004	4,38,700	143872	Good
Hero Honda Dawn	2004	30,899	27319	Good
Honda Activa	2009	48,332	10741	Good

**C) Equipments & AV aids**

Nature of the equipment	Year of purchase	Cost	Present status
Slide Projector	2000	11,500	Good working condition
Over Head Projector	2000	14,000	
Canon Camera with Flash	2001	32,560	
Portable Public Address system	2000	9,500	
Colour Television and VCR	1990	23,000	
Refrigerator	2000	18,790	
Magnetic Board with accessories	1995	9,990	
Display boards stands	1995	9,940	
Digital camera	2005	19,900	
Printer cum Xerox machine	2005	71,400	
LCD Projector	2006	53,500	
Lap top computer	2006	45,500	
All in one FAX machine	2009	14,000	
Inverter & UPS	2009	16,400	
LCD projector with accessoires	2011	99,940	
EPABX	2011	49,940	
Generator	2011	1,49,400	
Power tiller	2011	1,49,870	

**1.8. A). Details SAC meeting conducted in 2009-10 : NIL**

Date	Number of Participants	No. of absentees	Salient Recommendations	Action taken
-	-	-	-	-

## PART II - DETAILS OF DISTRICT

### 2.1 Major farming systems/enterprises (based on the analysis made by the KVK)

S. No	Farming system/enterprise
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1.	<b>FARMING SYSTEMS</b>
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a) <b>Command areas:</b>
--------------------------

- |  |
|--|
| 1. Rice – Rice – Pulses / cotton / Gingelly / vegetables |
| 2. Rice( Aug – Jan) – Pulses / sesame<br>(Feb – May)     |

b) <b>Well irrigated areas</b>
--------------------------------

- |                           |
|---------------------------|
| 1. Rice – cotton          |
| 2. Rice – Maize           |
| 3. Rice-Sunflower         |
| 4. Sugarcane – Ratoon (2) |
| 5. Banana – Ratoon (1)    |

c) <b>Rainfed areas</b>
-------------------------

- |                                   |
|-----------------------------------|
| 1. Groundnut – Rice               |
| 2. Groundnut – Redgram            |
| 3. Sorghum + Redgram (mixed crop) |
| 4. Sunflower                      |
| 5. Maize                          |

d) <b>Irrigated areas:</b>
----------------------------

- |  |            |
|--|------------|
| 1. Canal command                               | - 85967 ha |
| 2. Open well irrigation                        | - 51668 ha |
| 3. Tube wells, Bore wells<br>and filter points | - 5754 ha  |

### **ENTERPRISES**

- |                          |
|--------------------------|
| 1. Live stock production |
| 2. Inland aquaculture    |

**2.2. Description of Agro-climatic Zone & major agro ecological situations.  
(based on soil and topography)**

S. No	Agro-climatic Zone	Characteristics
1.	Tiruchirappalli district comes under three agro climatic zones viz., Sub zone II – North – Western zone	Uplands with Irrigated dry crops-Ground nut, Sunflower, millets
2.	Sub zone IV – Cauvery Delta zone	Irrigated lowlands with clayey soils Rice, banana and sugarcane are major crops
3.	Sub zone V – Southern zone	Rainfed crops like millets

Zone No.	Agro ecological situation	Characteristics
D3.4	Semi arid, hot - Tamil nadu upland	Growing period of 90-120 days and little to moderate moisture availability
D4.4	Semi arid, hot – Central penninsular plateau	Growing periods of 120-150 days with moderate moisture availability
Cd 5.5	Dry, sub humid-coastal plain of Tamil Nadu including cauvery delta	Growing periods of 150-180 days with moderate high moisture availability

**2.3 Soil types**

S. No	Soil series	Characteristics	Area in ha
1.	Inugur	Red to dark red, deep fine loamy no calcareous, slightly acid to neutral soil (Typic ustorrhents)	70,707(16.0)
2.	Palaviduthi	Red to dark reddish brown, very deep fine loamy, slightly acid to neutral (Typic rhodustalf)	31,863( 7.2)
3.	Thulukanur	Reddish brown to dark greyish brown, moderately deep, very deep fine loamy soils (Typic haplustalf)	21,963 ( 5.0)
4.	Govindapuram	Deep to very deep, calcareous medium to heavy textured black soil (Typic haplusterts)	18,714(4.3)
5.	Mixed alluvium	River deposit along Cauvery and its channels	21,703(4.9)
6.	Vayalogam	Red, moderately deep to deep fine loamy non calcareous (Typic rhodustalf)	18,990(4.0)



7.	Thuraiyur	Shallow to moderately deep calcareous, fine loamy clayey, (Typic haplusterts)	17,361,(3.9)
8.	Association of series of Vertisols	Adhanur + Kalathur + Kolakudi + Periyanykkanpalayam + Pilamedu + Puvalur + Solampatti + Thinnakonam	50,146 (11.4)
9.	Association of series of Alfisols	Kallagam + Madukkur + Magaraipatti + Manmalai+Palathurai+Pudhukottai+ Thandipattai	28,710(6.5)
10.	Association of series of Inceptisols	Alathur +Kollanpatti+Omandur	22,644(5)
11.	Association of Entisols	Tholarpatti +Uppiliyapuram	20,415 (4.6)
12.	Others		76,502(22)
<b>Total</b>			<b>4,40,412(100 %)</b>

*(Values in parentheses indicate percent to total area of the district)*

#### 2.4. Area, Production and Productivity of major crops cultivated in the district

S. No	Crop	Area (ha)	Production (MT)	Productivity (kg/ha)
1.	Paddy	72250	298765.715	4092.71
2.	Cholam	30169	29556.19	850
3.	Cumbu	1699	1757.583	1111.50
4.	Ragi	15	28.7	1996.67
5.	Maize	8203	32224.937	3027.75
6.	Varagu	19	8.889	472.33
7.	Other millets	85	69.78	780
8.	Total millets	40190	63646.079	1439.979
9.	Redgram	2131	1461.686	587.538
10.	Greengram	1037	805.844	618.667
11.	Blackgram	20292	14807.443	693.462
12.	Horsegram	869	298.847	428.286
13.	Cowpea	1314	496.632	458
14.	Bengalgram	158	80.354	517.444
15.	Other pulses	871	496.782	550.375
16.	Total pulses	26672	18447.588	654.997
17.	Groundnut	18023	31774.025	1564.615
18.	Gingelly	4968	3535.889	677.643
19.	Sunflower	3205	5518.388	1761.545
20.	Castor	544	485.548	842.111
21.	Total oilseeds	26740	41313.85	1365.345
22.	Cotton	11099	106454.665	1494
23.	Sugarcane	6386	754729.15	113296.429

**Area (ha), production (tonnes) and productivity (kg/ha) of major Horticulture crops**

<b>S. No</b>	<b>Crop</b>	<b>Area (ha)</b>	<b>Production (ton)</b>	<b>Productivity (kg/ha)</b>
24.	Banana	8668	396994	45800
25.	Mango	2346	2416	1030
26.	Jack	22	413	18760
27.	Guava	226	1033	4570
28.	Grapes	2	0044	22000
29.	Sapota	71	1775	25000
30.	Papaya	2	364	182000
31.	pomegranate	13	325	25000
32.	Amla	78	1092	14000
33.	Other fruits	6	180	30000
34.	Orange	1	1	1000
35.	Lime	1094	1291	1180
36.	Other limes	8	200	25000
37.	Tapioca	5271	276728	52500
38.	Sweet potato	39	665	17060
39.	Onion	2900	25984	8960
40.	Brinjal	279	2330	8350
41.	Bhendi	63	534	8470
42.	Dolichus Beans	26	338	13000
43.	Tomato	280	2668	9530
44.	Pumpkin	12	276	23000
45.	Snakeguard	6	90	15000
46.	Ribbed guard	2	24	12000
47.	Bottleguard	9	126	14000
48.	Bitterguard	24	288	12000
49.	Ash guard	11	198	18000
50.	Cucumber	24	168	7000
51.	Beans	1	9	9000
52.	Moringa	43	2150	50000
53.	xanthosoma	22	176	8000
54.	Greens	15	240	16000
55.	Other vegetables	9	243	27000
56.	Chillies	1160	148	0990
57.	Clove	2	2	1000

S. No	Crop	Area (ha)	Production (ton)	Productivity (kg/ha)
58.	Curryleaf	4	800	200000
59.	Coriander	358	97	0270
60.	Turmeric	269	1345	5000
61.	Tamarind	1381	3397	2460
62.	Others	3	3	1000
63.	Cashewnut	781	328	420
64.	Coffee	5	4	75000
65.	Betlevine	168	3696	22000
66.	Arecanut	23	9	400
67.	Rose	50	363	7250
68.	Jasminum sambac	239	1852	7750
69.	Jasminum auriculatum	33	281	8500
70.	Jasminum grandiflorum	50	450	9000
71.	Crossandra	55	110	2000
72.	Marigold	153	1377	9000
73.	Chrysanthemum	110	1650	15000
74.	Nerium	34	264	7750

(Source : Department of Agriculture, Govt.of TN)

## 2.5. Weather data

Month	Rainfall (mm)	Rainy days	Temperature ° C		Relative Humidity (%)
			Maximum	Minimum	
April 2010	0	0	39.0	25.3	57.1
May 2010	172	4	37.8	26.1	58.0
June 2010	60.3	5	36.4	25.5	59.1
July 2010	120	4	35.2	24.5	59.9
August 2010	88.6	6	35.1	24.5	60.5
September 2010	108.2	10	34.3	24.1	62.2
October 2010	96	10	34.0	24.3	67.4
November 2010	329	16	31.2	22.5	66.0
December 2010	99.6	12	30.3	20.2	71.9
January 2011	0	0	32.0	18.6	65.0
February 2011	7.6	3	33.0	18.7	67.3
March 2011	0	0	35.7	20.1	66.00

(Source: Sugarcane Research Station, TNAU, Sirugamani)

**Production and productivity of livestock, Poultry, Fisheries etc. in the district**

<b>Category</b>	<b>Population</b>	<b>Production</b>	<b>Productivity</b>
<b>Cattle</b>	3,54,301	2.4 lakh lot/ day	5-20 lit /day
<i>Crossbred</i>	-	-	-
<i>Indigenous</i>	-	-	-
<b>Buffalo</b>	4,03,878		8-16 lit/day
<b>Sheep</b>	2,57,271	20-30 kg in One year	1-25 lamps / ewe/annum
<i>Crossbred</i>	-	-	-
<i>Indigenous</i>	-	-	-
<b>Goats</b>	3,66,753	25-30 kg in One year	1-5 lamps /toe/annum
<b>Pigs (white)</b>	6000	16 kg in 6 months 25 piglets/sow/ annum	
<i>Crossbred</i>	-	-	-
<i>Indigenous</i>	-	-	-
<b>Rabbits</b>	6,000	-	1,50,000 meat / annum
<b>Poultry</b>			
Hens	75,000	75-85 eggs/ hen	40 chicks / hen / yr
Desi	60,000	60-80 eggs/ hen	30 chicks / hen / yr
<i>Improved</i>	-	-	-
Ducks	-	-	-
Turkey and others	-	-	-
Fish	-	-	-
<i>Marine</i>	-	-	-
<i>Inland</i>	17 farms	-	-
Prawn	3 farms	-	-
Scampi	-	-	-
Shrimp	-	-	-

**(Source: Veterinary University Training and Research Centre, Woraiyur, Tiruchirappalli)**

2.7 District profile has been prepared and submitted Yes / No: Yes

## 2.8 Details of Operational area / Villages

Sl. No.	Taluks	Name of the block	Name of the village	How long the village is covered under operational area of the KVK (specify the years)	Major crops & enterprises being practiced	Major problems identified	Identified Thrust Areas
1	Lalgudi	Lalgudi	Thirumangalam Valadi, Ariyur Abisekapuram Koohur mettupatti Manakal Poovalur Keela anbil	5years	Rice, Rice fallow Pulses & Sesame Banana	Low productivity in Rice due to non availability of quality seeds and severe incidence of pest and diseases	Popularising the rice Co (R) 49
						Low productivity in SRI due to insufficient fertilizer application	INM for SRI
						Low productivity in rice fallow pulses due to poor population and neglecting foliar nutrition leading to poor yield	Popularizing foliar feeding in pulses. Popularizing alternate high value crops for rice fallow
		Pullampadi	Pullampadi	4 years		Lack of irrigation during crop growth period and improving productivity in banana	i) irrigation management ii) High density planting
						Wind damage	Demonstration of stacking of banana
						Popularization of farm mechanization techniques due to non availability of labour. Drudgery of labour in cono weeding	Introduction of power operated farm machinery

Sl. No.	Taluks	Name of the block	Name of the village	How long the village is covered under operational area of the KVK (specify the years)	Major crops & enterprises being practiced	Major problems identified	Identified Thrust Areas
						Lack of awareness on weather based cropping	weather based agro advisory service
						Low income from crop alone	Inland Aquaculture
						Lack of knowledge on IPM techniques in rice	Popularization of IPM techniques in rice
						Low realization of by-products from rice & pulses	Value addition in rice and pulses and their by products
2.	Mannachanallur	Mannachanallur	Pachur Pichandarkovil Athani	3 years	Rice, Maize, Amla	Non availability of quality seeds at right time.	Introduction of Rice Co (R) 49
						Lack of marketing information about sale price	Updating the farmers on current market prices through Market Intelligence
						Low realization of produces	Value addition methods
3.	Manapparai	Marungapuri	Vadukapatti Chakarapatti Kalingapatti Thopampatti Suriyapatti	5 years	<b>Vegetables</b>	Lack of knowledge on latest techniques of vegetable cultivation	Popularizing the local varieties with improved techniques
						Lack of awareness on value addition in vegetables	Popularizing the value addition methodologies
		Marungapuri	Marungapuri Valanadu kovilpatti Sevalpatti		Cotton	Low production in cotton Pest and disease incidents	Improved cultivation techniques IPM in cotton
					Groundnut	Low yield due to pest and disease incidence in Groundnut	Introduction of IPM concept with latest pesticides

Sl. No.	Taluks	Name of the block	Name of the village	How long the village is covered under operational area of the KVK (specify the years)	Major crops & enterprises being practiced	Major problems identified	Identified Thrust Areas
		Vaiyampatti	Vaiyampatti Meenakshipuram Purathakudi Palayankottai Kalathupatti		Elm Mushroom	Employment opportunity for rural women by growing mushroom in farm shed & low keeping quality.	Assessment of ELM mushroom along with value addition techniques
4	Musiri	Musiri	Gunaseelam Siruganoor Thadalaipudur Vellore Moovanur Yeavor Amoor	3 years	Maize, Sunflower, Vegetables	Non availability of seeds of high value crops	i) Introduction of Hybrid Maize COH (M)5 and vegetable seeds and local manaparai brinjal to increase the farm income.
						Yield loss due to heavy weed menace	Popularizing different mulches
		T. Pettai	Thatankarpetta i Mahadevi			Low quality seedlings and poor field withstand	Popularising portray method for uniform field stand
5.	Srirangam	Manikandam	Inamkulathur Paganoor Somarasampettai Nachikurichi Ammampettai lyavor Panchapatti	7 years	Rice, Banana, Sugarcane, Rice fallow pulses, Vegetables, Mango and fodder crops	Low Productivity of Black gram in Rice fallows due to non availability of quality seeds and non adoption of recommended packages.	Popularizing foliar nutrition with Mono Ammonium Phosphate (MAP).
						Lack of water during crop growth period	Popularising mini mobile sprinkler
						Low yield due to poor zinc use efficiency in Rice	Popularising zinc enrichment technology
		Andhanallur	Kodiyalam			Labour problem for cane harvesting	Introducing of wide spaced planting for mechanical harvest.

Sl. No.	Taluks	Name of the block	Name of the village	How long the village is covered under operational area of the KVK (specify the years)	Major crops & enterprises being practiced	Major problems identified	Identified Thrust Areas
			Tiruparaithurai Koppu Tiruvalarsolai Pandiyapuram Kodaiyampatti Allur Kulumani			Low yield due to Sigatoka leaf spot, wilt and pseudostem weevil in Nendran	Introduction of IPM module as recommended by NRCB
						Lack of awareness on high yielding fodder grass	Popularization of Co 4 fodder
						Low yield with poor quality of banana	Popularizing high density planting banana special mineral mixture and bunch cover
						Loss of body weight due to micro mineral deficiency	Introduction of micro mineral cakes in goat shed
					Jasmine	No productivity during off season	Introduction of off season production technologies
					Betel vine	Low yield and poor quality leaf production in betel vine due to wilt and improper nutrient application	Popularising INM and IPM packages for betel vine
					Sugarcane	Labour scarcity	Farm mechanization
						Sole crop	Green manure Intercropping
						Non availability of quality sugar cane juice Low storage stability of juice	Selection of suitable variety for quality juice
					Poultry	Low income from back yard poultry	Introducing Cauvery cross breeds



Sl. No.	Taluks	Name of the block	Name of the village	How long the village is covered under operational area of the KVK (specify the years)	Major crops & enterprises being practiced	Major problems identified	Identified Thrust Areas
							Popularising Oral pellet vaccine for control of ranikhet
6.	Thuraiyur	Thuraiyur	Sikathambur Nagalapuram Venkatesapuram Renganathapuram Maruhur Ammapatti Venkadathur Senkattupatti	7years	Sunflower,	Lack of awareness on Sunflower and Maize hybrids,	Increasing the area under Sunflower and Maize hybrids under contractual farming since the yields of these crops are higher in this block.
						Low seed set in Sunflower	Demonstration of Supplementary pollination and bee keeping
		Uppiliyapuram	Koppampatti Kolapalayam Aathampatti Karupoor Sukulampatti Alathulayanpatti Erakudi	3 years	Chillies	Low yield due to improper nutrient management	Soil test based fertilizer recommendation for Chillies
					Maize	Low yield due to improper nutrient management	Popularizing INM
					Onion	Severe incidence of thrips and leaf spot in onion	Control of thrips through IPM technology with latest chemicals
7	Trichy	Thiruvarambur	Thiruvarambur	4 years	Rice	Low productivity in SRI due to insufficient fertilizer application	Popularizing INM for SRI

## 2.9 Priority thrust areas

S. No	Thrust area
1	Decision support system for market information to increase the farmers' income.
2	Augmenting additional income through non crop options such as fisheries, goat rearing, Dairy, Poultry etc.
3	Processing and Value addition of fruits and vegetables by adopting different technologies
4	Equipping farmer through e – linkage
5	Sustaining the yield of predominant crops viz., Rice, Sugarcane, Banana through varietal introduction and technological intervention.
6	Augmenting net income of farmers, creation of off season employment through alternate crops via Sunflower, Maize, Pulses, Vegetables,
7	Improving water and nutrient use efficiency through drip fertigation for Vegetables and Banana and reduce o cost of fertilizer.
8	Improving soil health through soil organic carbon build up and management of problem soils and poor quality water.
9	Imparting vocational training to unemployed rural youth, SHGs on mushroom production, vermi compost production and apiculture.
10	Promoting farming system through Inland aquaculture in cauvery deltaic areas.
11	Popularising “Hitech cultivation” techniques for Vegetables, Flower & Fruit crops in Trichy district.
12	Skill development in using the labour saving gadgets in Farming.
13	Group approach viz., Commodity groups and use of ICT technology transfer
14	Creation of digital database of the district in collaboration with district administration / nic.net.

## PART III - TECHNICAL ACHIEVEMENTS

### 3.A. Details of target and achievements of mandatory activities

OFT				FLD			
1				2			
Number of OFTs		Number of farmers		Number of FLDs		Number of farmers	
Targets	Achievement	Targets	Achievement	Targets	Achievement	Targets	Achievement
11	10	49	41	12	12	126	127

Training				Extension Programmes			
3				4			
Number of Courses		Number of Participants		Number of Programmes		Number of participants	
Targets	Achievement	Targets	Achievement	Targets	Achievement	Targets	Achievement
143	81	3500	2726	400	407	5000	5372

Seed Production (Qtl.)		Planting materials (Nos.)	
5		6	
Target	Achievement	Target	Achievement
65	55	350000	279056

Livestock, poultry strains and fingerlings (No.)		Bio-products (Kg)	
7		8	
Target	Achievement	Target	Achievement
-	150	2000	2000

## 3.B1. Abstract of interventions undertaken based on thrust areas identified for the district as given in SI.No.2.7

S. No	Thrust area	Crop/ Enterprise	Identified Problem	Interventions										
				Title of OFT if any	Title of FLD if any	Number of Training (farmers)	Number of Training (Youths)	Number of Training (extrn. personnel)	Extension activities (No.)	Supply of seeds (Qtl.)	Supply of planting materials (No.)	Supply of livestock (No.)	Supply of bio products	
													No	Kg
1	Problem soil management	Rice	Lower productivity due to soil sodicity	-	Reclamation of sodic soil for rice cultivation	-	-	1	1	0.12	-	-	-	-
2	INM	Banana	Ignorance of micronutrient fertilization leads to lower productivity	Performance assessment of micronutrient mixtures on Banana	-	1	-	1	2	-	-	-	-	20
3	ICMP	Banana	Low productivity and quality	HDP in banana	ICMP in banana	1			3					35
4	Processing & value addition	Fruits, vegetables	Low income	-	-	2	4	1	6					
5	ICMP	Vegetables	Low productivity and quality	-	Crop regulation in chillies ICMP for chillies	15	2	1	10					
6	ICMP	Maize	Imbalanced fertilization leads to lower productivity	--	ICMP	1		1	2					
7	ICMP	Cotton	Square fall and poor boll filling	Performance assessment of	--	14			15					

S. No	Thrust area	Crop/ Enterprise	Identified Problem	Interventions										
				Title of OFT if any	Title of FLD if any	Number of Training (farmers)	Number of Training (Youths)	Number of Training (extn. personnel)	Extension activities (No.)	Supply of seeds (Qtl.)	Supply of planting materials (No.)	Supply of livestock (No.)	Supply of bio products	
													No	Kg
			leads to lower productivity	Cotton Plus on irrigated cotton										
8	INM	Betel vine	Lower surface area and poor vine growth leads to lower productivity	Effect of micronutrient and growth promoters on the productivity of Betel vine	--	2		1	3					
9	Mushroom	Mushroom	Low productivity in tropical climate	Performance assessment of elm and oyster mushroom in Tiruchirappalli district	-	1	2			0.02				
	Processing and value addition	Sugarcane	Low availability of quality juice and low storage stability of juice	Assessment of sugarcane varieties for quality juice	-	1			1					
11	Additional income through non crop options	Poultry	Ranikhet disease	Control of Ranikhet disease in Desi chicken	-	2			4			150		
12	Additional income	Inland aquaculture	Low income in Delta region	--	Popularization of Inland	1	1		3			1000		

S. No	Thrust area	Crop/ Enterprise	Identified Problem	Interventions										
				Title of OFT if any	Title of FLD if any	Number of Training (farmers)	Number of Training (Youths)	Number of Training (extn. personnel)	Extension activities (No.)	Supply of seeds (Qtl.)	Supply of planting materials (No.)	Supply of livestock (No.)	Supply of bio products	
													No	Kg
	through non crop options				aquaculture									
13	idm	Betelvine	Low productivity	Management of footrot in betelvine		2			3					10
14	INM	Azolla	Insufficient nutrient in the soil	-	Popularization of bio inoculants	1			1	0.5				
15	ICMP	Maize	Non availability of quality seeds at right time		Popularizing Integrated Crop Management Practices in Maize	1			1	0.75				
16	Production technology	Onion	Low Productivity		Popularization of onion variety - Arka kalyan	2			2	0.01				
17	ICMP	Redgram	Low Productivity	Assessment of planting method in Redgram		1			1	0.015				
18	ICMP	Paddy	Low Productivity		Popularization of Co(R)H3 under SRI	5		1	7	0.04				
19	ICMP	Sesame	Low Productivity		Popularization of INM in sesame	3		1	5	0.025				

## 3.B2. Details of technology used during reporting period

S.No	Title of Technology	Source of technology	Crop/ enterprise	No.of programmes conducted			
				OFT	FLD	Training	Others (Specify)
1	2	3	4	5	6	7	8
1.	Assessment of micro-sprinkler irrigation in Rice fallow pulses (Black gram)	TNAU	Black gram	1		1	
2	Assessment of planting method in red gram	TNAU	red gram	1		1	
3	Performance assessment of 'Micronutrient mixtures' on Banana	TNAU,NRCB, IIHR	Banana	1		1	
4	Assessment of food baits for the management of African giant snail ( <i>Achatina fulica</i> ) in Jasmine	TNAU	Jasmine	1		2	
5	Management of foot rot in betelvine	TNAU	betelvine	1		1	
6	Assessment of micronutrients and growth promoters requirement on the productivity of Betel vine	TNAU	betelvine	1		1	
7	Performance assessment of elm and oyster mushroom in Tiruchirappalli district	IIHR	mushroom	1		4	
8	Assessment of sugarcane varieties for quality juice	TNAU	sugarcane	1		1	
9	Effect of polythene mulch in watermelon production and quality under precision farming	TNAU	watermelon	1		5	
10	Control of ranikhet disease in desi chicken	TANUVAS	desi chicken	1		3	
11	Standardization of High density planting methods for wet land Banana var. Nendran (R)	TNAU	Banana	1		2	

S.No	Title of Technology	Source of technology	Crop/ enterprise	No.of programmes conducted			
				OFT	FLD	Training	Others (Specify)
1	2	3	4	5	6	7	8
12	Popularization of CO(R) H 3 under SRI	TNAU	Paddy		1	1	
13	Use of transplanter , Power weeder, Combined harvester	TNAU	Paddy		1	1	
14	Reclamation of sodic soil for rice cultivation	TNAU	Paddy		1	2	
15	Popularizing Integrated Crop Management Practices in Maize	TNAU	Maize		1	1	
16	Popularization of Bio-inoculants – Azolla	TNAU	Azolla		1	1	
17	Popularizing Integrated Crop Management Practices in Chillies	TNAU	Chillies		1	1	
18	Popularization of Onion variety Arka kalyan	IIHR	Onion		1	1	
19	Popularization of machineries in Sugarcane	TNAU	Sugarcane		1	2	
20	Popularizing ICMP in banana	TNAU, NRCB	Banana		1	1	
21	Popularizing Integrated Crop Management Practices in Acid lime	TNAU	Acid lime		1	1	
22	Popularization of Inland Aquaculture	TANUVAS	Aquaculture		1	2	
23	Popularization of INM in sesame	TNAU	sesame		1	1	



## 3.B2 contd..

No. of farmers covered															
OFT				FLD				Training				Others (Specify)			
General		SC/ST		General		SC/ST		General		SC/ST		General		SC/ST	
M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
19	8	4	2	98	10	16	3	1797	499	217	39	-	-	-	-

## PART IV - ON FARM TRIAL

## 4.A1. Abstract on the number of technologies assessed in respect of crops

Thematic areas	Cereals	Oilseeds	Pulses	Commercial Crops	Vegetables	Fruits	Flower	Plantation crops	Tuber Crops	Total
Integrated Nutrient Management				1		1				2
Varietal Evaluation				1						1
Integrated Pest Management							1			1
Integrated Crop Management			1							1
Integrated Disease Management				1						1
Small Scale Income Generation Enterprises										
Weed Management										
Resource Conservation Technology			1		1					2
Farm Machineries										
Integrated Farming System										
Seed / Plant production										
Value addition										
Drudgery Reduction										
Storage Technique										
Mushroom cultivation				1						1
<b>Total</b>			<b>2</b>	<b>4</b>	<b>1</b>	<b>1</b>	<b>1</b>			<b>9</b>

#### 4.A2. Abstract on the number of technologies refined in respect of crops

Thematic areas	Cereals	Oilseeds	Pulses	Commercial Crops	Vegetables	Fruits	Flower	Plantation crops	Tuber Crops	Total
Integrated Nutrient Management										
Varietal Evaluation										
Integrated Pest Management										
Integrated Crop Management						1				1
Integrated Disease Management										
Small Scale Income Generation Enterprises										
Weed Management										
Resource Conservation Technology										
Farm Machineries										
Integrated Farming System										
Seed / Plant production										
Value addition										
Drudgery Reduction										
Storage Technique										
Mushroom cultivation										
<b>Total</b>						<b>1</b>				<b>1</b>

#### 4.A3. Abstract on the number of technologies assessed in respect of livestock enterprises

Thematic areas	Cattle	Poultry	Piggery	Rabbitry	Fisheries	Total
Evaluation of Breeds						
Nutrition Management						
Disease of Management		1				1
Value Addition						
Production and Management						
Feed and Fodder						
Small Scale income generating enterprises						
<b>Total</b>		<b>1</b>				<b>1</b>

#### 4.A4. Abstract on the number of technologies refined in respect of livestock enterprises : Nil

Thematic areas	Cattle	Poultry	Piggery	Rabbitry	Fisheries	Total
Evaluation of Breeds						
Nutrition Management						
Disease of Management						
Value Addition			Nil			
Production and Management						
Feed and Fodder						
Small Scale income generating enterprises						
<b>Total</b>						

#### 4.B. Achievements on technologies Assessed and Refined

##### 4.B.1. Technologies Assessed under various Crops

Thematic areas	Crop	Name of the technology assessed	No. of trials	Number of farmers	Area in ha
Integrated Nutrient Management	Banana	Performance assessment of micronutrient mixtures on Banana	3	3	1.8
	Betel vine	Assessment of micronutrients and growth promoters on the productivity of Betel vine	2	2	0.8
Varietal Evaluation	sugarcane	Assessment of sugarcane varieties for quality juice	3	3	-
Integrated Pest Management	Jasmine	Assessment of food baits for the management of African giant snail ( <i>Achatina fulica</i> ) in Jasmine	5	5	1.0
Integrated Crop Management	Watermelon	Effect of polythene mulch in watermelon production and quality under precision farming	2	2	1.0
	Red Gram	Assessment of planting method in red gram	3	3	1.2
Integrated Disease Management	Betel vine	Management of foot rot in betelvine	5	5	1.0
Small Scale Income Generation Enterprises					
Weed Management					
Resource Conservation Technology	Black gram	Assessment of micro-sprinkler irrigation in Rice fallow pulses	-	-	-
Farm Machineries					
Integrated Farming System					
Seed / Plant production					
Value addition					
Drudgery Reduction					
Storage Technique					
Mushroom cultivation	mushroom	Performance assessment of elm and oyster mushroom in Tiruchirappalli district	4	4	-
<b>Total</b>			<b>27</b>	<b>27</b>	<b>6.8</b>

#### 4.B.2. Technologies Refined under various Crops

Thematic areas	Crop	Name of the technology assessed	No. of trials	Number of farmers	Area in ha
Integrated Nutrient Management					
Varietal Evaluation					
Integrated Pest Management					
Integrated Crop Management	Banana	Standardization of High density planting methods for wet land Banana var. Nendran (R)	4	4	0.4
Integrated Disease Management					
Small Scale Income Generation Enterprises					
Weed Management					
Resource Conservation Technology					
Farm Machineries					
Integrated Farming System					
Seed / Plant production					
Value addition					
Drudgery Reduction					
Storage Technique					
Mushroom cultivation					
<b>Total</b>			<b>4</b>	<b>4</b>	<b>0.4</b>

#### 4.B.3. Technologies assessed under Livestock and other enterprises

Thematic areas	Name of the livestock enterprise	Name of the technology assessed	No. of trials	No. of farmers
Evaluation of breeds				
Nutrition management				
Disease management	Desi chicks	Oral Pellet vaccine for ranikhet disease management	2	10
Value addition				
Production and management				
Feed and fodder				
Small scale income generating enterprises				
<b>Total</b>			<b>2</b>	<b>10</b>

#### 4.B.4. Technologies Refined under Livestock and other enterprises : NIL

Thematic areas	Name of the livestock enterprise	Name of the technology assessed	No. of trials	No. of farmers
Evaluation of breeds				
Nutrition management				
Disease management				
Value addition				
Production and management				
Feed and fodder				
Small scale income generating enterprises				
<b>Total</b>				

#### 4.C1. Results of Technologies Assessed

##### OFT-1 Assessment of micro-sprinkler irrigation in Rice fallow pulses (Black gram)

The OFT will be conducted in the year 2011-2012

##### OFT-2 Assessment of planting method in Redgram

Crop/ enterprise	Farming situation	Problem definition	Title of OFT	No. of trials	Technology Assessed	Parameters of assessment	Data on the parameter			Results of assessment	Feedback from the farmer	Any refinement needed	Justification for refinement
1	2	3	4	5	6	7	8			9	10	11	12
							Seed Dibbling,	Raising seedling through nursery bed	Seedling raised in poly bag and transplanted				
Pulses (Redgram)	Garden Land	Low Productivity	Assessment of planting method in Redgram	3	1)Seed Dibbling, 2)Raising seedling through nursery bed and 3)Seedling raised in poly bag and transplanted	population/m <sup>2</sup>	7.4	7.4	7.4	Transplanting of 20 days old red gram seedling raised in poly bag performed well	Farmers are very much satisfied	Not Necessary	
						Root length at 20 DAS (cm)	26	24	28				
						Shoot length at 20 DAS (cm)	33	33	36				
						Yield (kg/ha)	924	704	1054				
						B:C ratio	1.74	1.23	1.92				



Contd..

Technology Assessed	Source of Technology	Production	Please give the unit (kg/ha, t/ha, lit/animal, nuts/palm, nuts/palm/year)	Net Return (Profit) in Rs. / unit	BC Ratio
13	14	15	16	17	18
Technology option 1 (Seed Dibbling)	Farmers practice	924	Kg/ha	9925	1.74
Technology option 2 (Raising seedling through nursery bed and transplanted at 20 days)	TNAU, Coimbatore	704	Kg/ha	3915	1.23
Technology option 3 (Seedling raised in poly bag and transplanted at 20 days)	TNAU, Coimbatore	1054	Kg/ha	13717	1.92

**Details of each On Farm Trial for assessment to be furnished in the following format separately as per the following details**

1.	Title of Technology refined	:	Assessment of planting method in Redgram
2.	Problem Definition	:	Assessment of planting method in Redgram
3.	Details of technologies selected for Assessment	:	Ensuring good crop stand through transplanting healthy seedling instead of going for present day dibbling method. The technologies assessed were 1)Seed Dibbling ; Farmers practice, 2)Raising seedling through nursery bed ; technology option 2 and 3)Seedling raised in poly bag and transplanted; Technology option 3
4.	Source of technology	:	TNAU, Coimbatore
5.	Production system and thematic area	:	Garden Land, Improving the productivity of Pulses (Redgram)
6.	Performance of the Technology with performance indicators	:	Three different planting methods were assessed for identifying the best planting method in redgram to ensure optimum crop stand. Among the three planting method, transplanting 20 days old seedling raised in poly bag performed well with a highest yield of 1054 kg/ha followed by seed dibbling method with a recorded yield of 924 kg/ha. Raising seedling in nursery bed and

			transplanting in main field does not ensure proper crop stand thus resulted in lowest yield of 704 kg/ha
7.	Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques	:	
8.	Final recommendation for micro level situation	:	In order to improve the productivity of redgram, ensuring optimum crop stand with healthy plants are very much essential. This can be achieved by transplanting 20 days old red gram seedling raised in poly bag. This method will ensure on an average yield of 1000 kg/ha
9.	Constraints identified and feedback for research	:	NIL
10.	Process of farmers participation and their reaction	:	Farmers are very cooperative through out the OFT period and they are very much satisfied with transplanting 20 days old seedling than raising seedling in nursery bed and direct dibbling in main field method

**OFT 3 Performance assessment of 'Micronutrient mixtures' on Banana**

Crop/enterprise	Farming situation	Problem definition	Title of OFT	No. of trials	Technology Assessed	Parameters of assessment	Data on the parameter		Results of assessment	Feedback from the farmer	Any refinement needed	Justification for refinement
1	2	3	4	5	6	7	8		9	10	11	12
							Banana sakthi	Banana special				
Banana	Wet land	Inadequate and imbalanced nutrition leads to lower yield	Performance assessment of micronutrient mixtures on banana	3	Foliar spraying of Banana sakthi @ 2 % at 4,5 and 6 MAP and Banana special @ 0.5 % at 5,6,7 MAP and one month after bunch emergence against spraying ZnSO <sub>4</sub> (0.5 %), FeSO <sub>4</sub> (0.2 %), CuSO <sub>4</sub> (0.2 %) and H <sub>3</sub> BO <sub>3</sub> (0.1 %) at 3,5 and 7 MAP.	Bunch weight (kg)	17.4	18.3	Spraying of Banana special recorded the highest fruit yield. Spraying of banana sakthi recorded the similar yield with the spraying of MNs separately.	Farmers realized the importance of MN fertilization and its application on the improvement of yield	Not necessary	Does not arise
					Fruit weight (g)	125.7	128.7					
					Yield (t ha <sup>-1</sup> )	39.79	41.85					

Contd..

Technology Assessed	Source of Technology	Production	Please give the unit (kg/ha, t/ha, lit/animal, nuts/palm, nuts/palm/year)	Net Return (Profit) in Rs. / unit	BC Ratio
13	14	15	16	17	18
Technology option 1 (No micronutrient application)		37.35	t ha <sup>-1</sup>	128375	1.91
Technology option 2 Spraying micronutrients viz., ZnSO <sub>4</sub> (0.5 %), FeSO <sub>4</sub> (0.2 %), CuSO <sub>4</sub> (0.2 %) and H <sub>3</sub> BO <sub>3</sub> (0.1 %) at 3,5 and 7 MAP	TNAU, Coimbatore	40.56	t ha <sup>-1</sup>	136500	2.32
Technology option 3 Foliar spraying of Banana sakthi @ 2 % at 4,5 and 6 MAP	NRCB, Trichy	39.79	t ha <sup>-1</sup>	135400	2.16
Technology option 4 Foliar spraying of Banana special @ 0.5 % at 5,6,7 MAP and one month after bunch emergence	IIHR, Bangaluru	41.85	t ha <sup>-1</sup>	144625	2.38

**Details of each On Farm Trial for assessment to be furnished in the following format separately as per the following details**

1	Title of Technology Assessed	:	Performance assessment of micronutrient mixtures on banana
2	Problem Definition	:	Inadequate and imbalanced nutrition leads to lower yield
3	Details of technologies selected for assessment	:	Foliar spraying of Banana sakthi @ 2 % at 4,5 and 6 MAP and Banana special @ 0.5 % at 5,6,7 MAP and one month after bunch emergence against spraying ZnSO <sub>4</sub> (0.5 %), FeSO <sub>4</sub> (0.2 %), CuSO <sub>4</sub> (0.2 %) and H <sub>3</sub> BO <sub>3</sub> (0.1 %) at 3,5 and 7 MAP.
4	Source of technology	:	Banana sakyhi – NRCB, Trichy; Banana special – IIHR, Bangaluru
5	Production system and thematic area	:	Wetland system, Nutrient management

6	Performance of the Technology with performance indicators	:	Foliar spraying of Banana special enhanced the fruit yield by 12 % over non application of MNS, 5.2 % over banana sakthi and 3.2 % over the TNAU recommendation. Application of banana special recorded the highest bunch weight and fruit weight over the application of banana sakthi and TNAU recommendation. This may be due to the composition difference of the MN mixtures.
7	Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques	:	Farmers accepted this technology because foliar spraying of MN mixtures enhanced the fruit weight, bunch weight and fruit yield.
8	Final recommendation for micro level situation	:	Foliar spraying of Banana special @ 0.5 % at 5,6,7 MAP and one month after bunch emergence has been recommended for enhancing the fruit yield of banana.
9	Constraints identified and feedback for research	:	Nil
10	Process of farmers participation and their reaction	:	Farmers were actively participated in the training programmes and group discussions made during the OFT. They were realized the importance of the application of MNS for the improvement of crop yield. They were actively participated in each and every operation during OFT.

OFT-4 Assessment of food baits for the management of African giant snail (*Achatina fulica*) in Jasmine

Crop/enterprise	Farming situation	Problem definition	Title of OFT	No. of trials	Technology Assessed	Parameters of assessment	Data on the parameter		Results of assessment	Feedback from the farmer	Any refinement needed	Justification for refinement
1	2	3	4	5	6	7	8		9	10	11	12
Jasmine	Irrigated garden land	African giant snail is one of the major pests in jasmine causing severe yield reduction	Management of African giant snail ( <i>Achatina fulica</i> ) in Jasmine	5	Dichlorvos bait @ 2.5 kg/ha with fresh cabbage leaves as attractant  Methomyl bait @ 2.5 kg/ha with fresh cabbage leaves as attractant	Population reduction (%)  Yield	Dichlorvos bait  95%  8.2t/ha	Methomyl bait  96%  8.25t/ha	Poison bait reduced the population of African giant snail.	Farmers realized the importance of poison baits for the control of African giant snail ( <i>Achatina fulica</i> ).	Not necessary	Does not arise

Contd..

Technology Assessed	Source of Technology	Production	Please give the unit (kg/ha, t/ha, lit/animal, nuts/palm, nuts/palm/year)	Net Return (Profit) in Rs. / unit	BC Ratio
13	14	15	16	17	18
Technology option 1 (Farmer's practice) Sprinkling of salt		6.2	t/ha/yr		
Technology option 2 Dichlorvos bait @ 2.5 kg/ha with fresh cabbage leaves as attractant (Bait: Wheat flour 1kg+Jaggery 0.2kg+Dichlorvos 250ml)	Bareilly College, Bareilly, UP	8.2	t/ha/yr		
Technology option 3 Methomyl bait @ 2.5 kg/ha with fresh cabbage leaves as attractant (Bait: Rice bran 1kg+Jaggery 0.2kg+Methomyl 100g)	Bareilly College, Bareilly, UP	8.25	t/ha/yr		

**Details of each On Farm Trial for assessment to be furnished in the following format separately as per the following details**

1	Title of Technology Assessed	Assessment of food baits for the management of African giant snail ( <i>Achatina fulica</i> ) in Jasmine
2	Problem Definition	African giant snail is one of the major pests in jasmine causing severe yield reduction
3	Details of technologies selected for assessment	Dichlorvos bait @ 2.5 kg/ha with fresh cabbage leaves as attractant (Bait: Wheat flour 1kg+Jaggery 0.2kg+Dichlorvos 250ml) Methomyl bait @ 2.5 kg/ha with fresh cabbage leaves as attractant (Bait: Rice bran 1kg+Jaggery 0.2kg+Methomyl 100g)

4	Source of technology	Bareilly College, Bareilly, UP
5	Production system and thematic area	Irrigated garden land and Integrated Pest Management
6	Performance of the Technology with performance indicators	Poison baits reduced the population of African giant snails by 90 % over farmer's practice of sprinkling of salt. Reduced shoot damage was recorded in poison bait applied plots compared to farmers practice.
7.	Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques	Farmers accepted this technology since it is easy to prepare and keep in field compared to the application of common salt in the field. Poison baits reduced the population of snails and increased the flower yield in jasmine.
8	Final recommendation for micro level situation	Dichlorvos bait @ 2.5 kg/ha or Methomyl bait @ 2.5 kg/ha with fresh cabbage leaves as attractant has been recommended for controlling African giant snail ( <i>Achatina fulica</i> ).
9	Constraints identified and feedback for research	Does not arise
10	Process of farmers participation and their reaction	Farmers were actively participated in the training programme and group discussions made during the OFT. They actively participated in the OFT and realized the importance of the poison baits in controlling African giant snails.



## OFT-5 Management of foot rot in betelvine

Crop/enterprise	Farming situation	Problem definition	Title of OFT	No. of trials	Technology Assessed	Parameters of assessment	Data on the parameter		Results of assessment	Feedback from the farmer	Any refinement needed	Justification for refinement
1	2	3	4	5	6	7	8		9	10	11	12
Betel vine	Wetland	Foot rot disease is most serious in Cauvery delta region causing severe yield reduction	Management of foot rot in betel vine	5	Premonsoon Soil drenching 0.25 % of Bordeaux mixture @ 1lit + 0.5 g Streptocyclin – Soil application of <i>Trichoderma viride</i> 1 kg+ 100 kg FYM +10 kg neem cake (once in three months) Premonsoon Soil drenching 0.25 % of Bordeaux mixture @ 1lit + 0.5 g Streptocyclin – Soil application of <i>Pseudomonas fluorescens</i> 1 kg + 100 kg FYM +10 kg neem cake (once in three months)	Disease incidence (%)  Yield	<i>Trichoderma viride</i>	<i>Pseudomonas fluorescens</i>	Premonsoon Soil drenching 0.25 % of Bordeaux mixture @ 1lit + 0.5 g Streptocyclin followed by soil application of <i>Trichoderma viride</i> 1 kg+ 100 kg FYM +10 kg neem cake (once in three months) or soil application of <i>Pseudomonas fluorescens</i> 1kg+ 100 kg FYM +10 kg neem cake (once in three months) reduced the disease incidence of foot rot in betelvine	Farmers realized the importance of Premonsoon Soil drenching 0.25 % of Bordeaux mixture and application of <i>Trichoderma viride</i> and <i>Pseudomonas fluorescens</i> in the management of foot rot	Not necessary	Does not arise
							8.58	7.98				
							13.12 lakh leaves/ha	13.42 lakh leaves/ha				

Contd..

Technology Assessed	Source of Technology	Production	Please give the unit (kg/ha, t/ha, lit/animal, nuts/palm, nuts/palm/year)	Net Return (Profit) in Rs. / unit*	BC Ratio*
13	14	15	16	17	18
Technology option 1 (Farmer's practice) Spraying mancozeb 2g/lit		10.12	Lakh leaves/ha	-	-
Technology option 2 Premonsoon Soil drenching 0.25 % of Bordeaux mixture @ 1lit + 0.5 g Streptocyclin – Soil application of <i>Trichoderma viride</i> 1 kg+ 100 kg FYM +10 kg neem cake (once in three months)	TNAU	13.12	Lakh leaves/ha	-	-
Technology option 3 Premonsoon Soil drenching 0.25 % of Bordeaux mixture @ 1lit + 0.5 g Streptocyclin – Soil application of <i>Pseudomonas fluroscens</i> 1 kg + 100 kg FYM +10 kg neem cake (once in three months)	TNAU	13.42	Lakh leaves/ha	-	-

\* Since betel vine is grown for two years the net return and BC ratio cannot be worked out

**Details of each On Farm Trial for assessment to be furnished in the following format separately as per the following details**

1	Title of Technology Assessed	:	Management of foot rot in betel vine
2	Problem Definition	:	Foot rot disease is most serious in Cauvery delta region causing severe yield reduction
3	Details of technologies selected for assessment	:	Premonsoon Soil drenching 0.25 % of Bordeaux mixture @ 1lit + 0.5 g Streptocyclin – Soil application of <i>Trichoderma viride</i> 1 kg+ 100 kg FYM +10 kg neem cake (once in three months) Premonsoon Soil drenching 0.25 % of Bordeaux mixture @ 1lit + 0.5 g Streptocyclin – Soil application of <i>Pseudomonas fluroscens</i> 1 kg + 100 kg FYM +10 kg neem cake (once in three months)
4	Source of technology	:	TNAU
5	Production system and thematic area	:	Wetland and Integrated Disease Management
6	Performance of the Technology with performance indicators	:	Premonsoon Soil drenching 0.25 % of Bordeaux mixture @ 1lit + 0.5 g Streptocyclin followed by soil application of <i>Trichoderma viride</i> 1 kg+ 100 kg FYM +10 kg neem cake (once in three months) or soil application of <i>Pseudomonas fluroscens</i> 1kg+ 100 kg FYM + 10kg neem cake (once in three months) reduced the disease incidence of foot rot in betel vine
7.	Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques	:	Farmers accepted this technology since it is easy to prepare apply the Bordeaux mixture in field. Soil application of bioinoculants viz., <i>Pseudomonas fluroscens</i> and <i>Trichoderma viride</i> once in three months reduced the foot rot disease incidence in betel vine and increased the crop stand.
8	Final recommendation for micro level situation	:	Premonsoon Soil drenching 0.25 % of Bordeaux mixture @ 1lit + 0.5 g Streptocyclin followed by soil application of <i>Trichoderma viride</i> 1 kg+ 100 kg FYM +10 kg neem cake (once in three months) or soil application of <i>Pseudomonas fluroscens</i> 1kg+ 100 kg FYM + 10kg neem cake (once in three months) reduced the disease incidence of foot rot in betel vine
9	Constraints identified and feedback for research	:	Does not arise
10	Process of farmers participation and their reaction	:	Farmers were actively participated in the training programme and group discussions made during the OFT. They realized the importance of the premonsoon drenching of Bordeaux mixture and soil application of bioinoculants.

**OFT-6 Assessment of micronutrients and growth promoters requirement on the productivity of betel vine**

Crop/ enterprise	Farming situation	Problem definition	Title of OFT	No. of trials	Technology Assessed	Parameters of assessment	Data on the parameter	Results of assessment	Feedback from the farmer	Any refinement needed	Justification for refinement
1	2	3	4	5	6	7	8	9	10	11	12
Betel vine	Wet land	Lesser leaf area and poor growth of vines leads to lower productivity in Betel vine.	Assessment of micronutrients and growth promoters requirement on the productivity of betel vine	2	Foliar spraying of amino acids @ 500 ppm at 5 <sup>th</sup> month and second spraying at 30 days interval. Rexolin @ 0.5 % spray at 7 <sup>th</sup> month	No. of leaves / plant/picking  Yield/ ha/picking	17.5  14 lakh leaves	Foliar application of amino acids @ 500 ppm and Rexolin @ 0.5 % recorded the highest no. of leaves per plant and yield.	Farmers accepted this technology since it increased the leaf yield and no. of leaves per plant.	Not necessary	Does not arise

Contd..

Technology Assessed	Source of Technology	Production	Please give the unit (kg/ha, t/ha, lit/animal, nuts/palm, nuts/palm/year)	Net Return (Profit)* in Rs. / unit	BC Ratio*
13	14	15	16	17	18
Technology option 1 (No micronutrient and growth promoter application)		12.02	Lakh leaves /ha/picking	-	-
Technology option 2 Foliar spraying of Triacontanol @ 500 ppm at 30 days interval from 5 <sup>th</sup> month (3 times) and ZnSO <sub>4</sub> @ 0.5 % at 7 <sup>th</sup> month.	TNAU, Coimbatore	13.42	Lakh leaves /ha/picking	-	-
Technology option 3 Foliar spraying of amino acids @ 500 ppm at 5 <sup>th</sup> month and second spraying at 30 days interval. Rexolin @ 0.5 % spray at 7 <sup>th</sup> month	TNAU, Coimbatore	14.00	Lakh leaves /ha/picking	-	-

\*Note: Since betel vine is grown for two years the net return and BC ratio were not able to work out.

**Details of each On Farm Trial for assessment to be furnished in the following format separately as per the following details**

1	Title of Technology Assessed	:	Assessment of micronutrients and growth promoters requirement on the productivity of betel vine
2	Problem Definition	:	Lesser leaf area and poor growth of vines leads to lower productivity in Betel vine
3	Details of technologies selected for assessment	:	Foliar spraying of amino acids @ 500 ppm at 5 <sup>th</sup> month and second spraying at 30 days interval. Rexolin @ 0.5 % spray at 7 <sup>th</sup> month
4	Source of technology	:	TNAU, Coimbatore
5	Production system and thematic area	:	Wetland system, Nutrient management
6	Performance of the Technology with performance indicators	:	Foliar spraying of amino acids @ 500 ppm at 5 <sup>th</sup> month and second spraying at 30 days interval. Rexolin @ 0.5 % spray at 7 <sup>th</sup> month recorded the highest leaf yield to the tune of 16.5 % over non application of MNS and growth promoters and 4 % over the application of Triaccontanol and ZnSO <sub>4</sub> .
7	Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques	:	Farmers accepted this technology because foliar spraying of MNS and growth promoters enhanced the no. of leaves per vine and leaf yield.
8	Final recommendation for micro level situation	:	Foliar spraying of amino acids @ 500 ppm at 5 <sup>th</sup> month and second spraying at 30 days interval. Rexolin @ 0.5 % spray at 7 <sup>th</sup> month has been recommended for enhancing the fruit yield of banana.
9	Constraints identified and feedback for research	:	Nil
10	Process of farmers participation and their reaction	:	Farmers were actively participated in the training programmes, group discussions and every operation made during OFT.

## OFT-7 Performance assessment of elm and oyster mushroom in Tiruchirappali district

Crop	Farming situation	Problem definition	Title of OFT	No. of trials	Technology Assessed	Parameters of assessment	Data on the parameter	Results of assessment	Feedback from the farmer	Any refinement done	Justification for refinement
1	2	3	4	5	6	7	8	9	10	11	12
Mushroom	-	Low productivity in tropical climate	Performance assessment of elm and oyster mushroom in Tiruchirappali district	4	Production of elm oyster mushroom	Yield Shelf life Consumer acceptability	657g / bed 3 days Good	The cultivation practices of this variety are exactly similar to the other oyster mushroom. Bag or cylinder system is adopted for its cultivation. It can grow successfully on paddy straw. The optimum temperature for this variety is 23°C to 26°C. The mushroom emerges on 20 <sup>th</sup> to 25 <sup>th</sup> day. It is larger with thick texture, fleshy and also tastes better than the regular commercial variety like white oyster mushroom. This variety has a prolonged shelf life of 3 days at room temperature compared with 1 day of other oyster mushroom.	Elm oyster mushroom is an excellent edible mushroom which can be easily grown either for commercial purpose or for home consumption. Since the cultivation method is similar to other oyster type it is very easy to follow. The mushroom shed should be maintained as cool by regular spraying of water. By proper maintenance can get good yield of this mushroom ranges from 0.5 kg to 1.5 kg per bed.	Nil	Does not arise

Contd..

Technology Assessed		Production	Please give the unit	Net Return (Profit) in Rs. / unit	BC Ratio
13		14	15	16	17
Technology option 1 (Farmer's practice)	White oyster mushroom	645	g/bed	50	1:1.5
Technology option 2	Elm oyster mushroom	657	g/bed	80	1:1.85

**Details of each On Farm Trial for assessment to be furnished in the following format separately as per the following details**

1.	Title of Technology Assessed	:	Performance assessment of elm and oyster mushroom in Tiruchirappali district
2.	Problem Definition	:	Low productivity in tropical climate
3.	Details of technologies selected for assessment	:	Production of elm oyster and other oyster mushroom in tropical climate
4.	Source of technology	:	IIHR, Bangalore
5.	Production system and thematic area	:	-
6.	Performance of the Technology with performance indicators	:	Better yield and good keeping quality up to 3 days under room temperature. The marketing of other oyster mushroom is very difficult in hot climate due to their low shelf life. But this elm variety has got good keeping quality (3 days) than existing variety. Also the mushrooms are very fleshy and larger in size than other oyster mushrooms ultimately increased in yield/bed as 500 gm to 1500 gm.
7.	Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques	:	Yield (g/bed) – 657g/bed Shelf life – 3 days under room temperature Keeping quality of elm oyster mushroom is better than the other oyster mushroom even in tropical climate. Elm oyster mushroom production steps are similar like other oyster mushroom. By regular spraying of water and proper maintenance of shed can get good yield of this mushroom.
8.	Final recommendation for micro level situation	:	Because of high yield and better keeping quality of this mushroom, it can be grown by the mushroom growers who are struggling with the marketing problem of other oyster mushroom in tropical climate. By regular spraying of water in the shed we can get better performance of this mushroom.
9.	Constraints identified and feedback for research	:	-
10.	Process of farmers participation and their reaction	:	Good. Mushroom growers are very happy to cultivate elm oyster mushroom in their field because of the high yield and better keeping quality.



## OFT-8 Assessment of sugarcane varieties for quality juice

Crop	Farming situation	Problem definition	Title of OFT	No. of trials	Technology Assessed	Parameters of assessment	Data on the parameter	Results of assessment	Feedback from the farmer	Any refinement done	Justification for refinement
1	2	3	4	5	6	7	8	9	10	11	12
Sugarcane	-	Non availability of quality sugarcane juice and low storage stability of juice	Assessment of sugarcane varieties for quality juice	3	Selection of suitable variety for quality juice  Assessment of shelf life of that juice  Consumer preference	Suitable variety  Shelf life of juice  Consumer acceptability  Microbial load	Co86032  90 days  Acceptable score (7.5)  Negligible	The data reveals that the bottled sugarcane juices made from three varieties such as CoC 671, Co86032 and TNAU sugarcane (SI) 7 were accepted by the panelist. But, among the three varieties, Co 86032 has highest score than other two varieties in respect of sensory attributes. The bottled sugarcane juice under room temperature has better storage stability up to 90 days without much deterioration. If kept the juice under refrigeration condition it could be extended for few more days.	The taste of the sugarcane juices made from three varieties was good but the juice from Co 86032 is highly acceptable because of medium sweet taste than other varieties which have strong sweet taste. The keeping quality of the sugarcane juice from all the 3 varieties is up to 3 months under room temperature.	Nil	Does not arise

Cond.,

Technology Assessed		Production/ juice content	Please give the unit	Net Return (Profit) in Rs. / litre	BC Ratio
13		14	15	16	17
Technology option 1 (Farmer's practice)	CoC 671	424 - 467	ml/cane	20	1:1.5
Technology option 2	Co86032	435 - 475	ml/cane	30	1:1.75
Technology option 3	TNAU sugarcane (SI) 7	430 - 467	ml/cane	25	1:1.63

**Details of each On Farm Trial for assessment to be furnished in the following format separately as per the following details**

1.	Title of Technology Assessed	:	Assessment of sugarcane varieties for quality juice
2.	Problem Definition	:	Non availability of quality sugarcane juice and low storage stability of juice
3.	Details of technologies selected for assessment	:	Variety identification and storage stability of the sugarcane juice
4.	Source of technology	:	TNAU, Coimbatore
5.	Production system and thematic area	:	-
6.	Performance of the Technology with performance indicators	:	The consumer acceptability of the sugarcane juice from Co86032 was good than other two varieties. Juices made from 3 varieties have better keeping quality up to 3 months under room temperature.
7.	Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques	:	The entrepreneurs were actively participated in this OFT. From the feedback of the participants, it reveals that the taste of the sugarcane juice made from three varieties was good, but the juice from Co 86032 is highly acceptable because of medium sweet taste than other varieties which have strong sweet taste. The keeping quality of the sugarcane juice from all the 3 varieties is up to 3 months under room temperature.

8.	Final recommendation for micro level situation	:	Though the sugarcane juice is a popular refreshing drink in many parts of the country, the juice may be disqualified due to tastelessness, spoilage and because of this poses many health hazards. So the necessary steps should be taken to overcome this problem by assessing the varieties for quality juice making. Selection of suitable sugarcane variety and preparation under fully hygienic condition can give good quality of juice. Hence, this technology is suitable for small scale industry and for income generating activity.
9.	Constraints identified and feedback for research	:	-
10.	Process of farmers participation and their reaction	:	Good

#### OFT-9 Effect of polythene mulch in watermelon production and quality under precision farming

Crop/ enterprise	Farming situation	Problem definition	Title of OFT	No. of trials	Technology Assessed	Parameters of assessment	Data on the parameter		Results of assessment	Feedback from the farmer	Any refinement needed	Justification for refinement
							FP	TO1				
1	2	3	4	5	6	7	8	9	10	11	12	
Water melon	Garden land	Low productivity & quality	Effect of polythene mulch in watermelon production and quality under precision farming	2	Polythene Mulch	Fruit weight (kg) No of fruits/plant Yield/ha	1.74 2.6 40.72	1.98 2.9 57.42	Improved quality with high yield	Polythene mulch increased the fruit size and quality and reduced the weed population and conserve the moisture & Nutrients	Not required	Nil

Contd..

Technology Assessed	Source of Technology	Production	Please give the unit (kg/ha, t/ha, lit/animal, nuts/palm, nuts/palm/year)	Net Return (Profit) in Rs. / unit	BC Ratio
13	14	15	16	17	18
Technology option 1 (Farmer's practice)	Farmers	40.71	t/ha	62506	1.78
Technology option 2	TNAU, Coimbatore	57.42	t/ha	129680	2.08
Technology option 3					

**Details of each On Farm Trial for assessment to be furnished in the following format separately as per the following details**

1.	Title of Technology refined	:	Effect of polythene mulch in watermelon production and quality under precision farming
2.	Problem Definition	:	Low productivity & quality
3.	Details of technologies selected for Assessment	:	Laying polythene mulch
4.	Source of technology	:	TNAU, Coimbatore
5.	Production system and thematic area	:	Garden land system & Crop Management
6.	Performance of the Technology with performance indicators	:	Good quality fruits with increased size and more yield fetches more market price & increased the Net profit
7.	Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques	:	Plastic mulch conserves moisture & nutrients and reduced the field mortality & increased the fruit size
8.	Final recommendation for micro level situation	:	Laying plastic mulch under precision farming system increased the yield and quality leads to High return
9.	Constraints identified and feedback for research	:	Cost of the material & non availability
10.	Process of farmers participation and their reaction	:	Farmers actively participated during the field day

## OFT 10 Control of ranikhet disease in desi chicken

Crop/enterprise	Farming situation	Problem definition	Title of OFT	No. of trials	Technology Assessed	Parameters of assessment	Data on the parameter	Results of assessment	Feedback from the farmer	Any refinement needed	Justification for refinement
1	2	3	4	5	6	7	8	9	10	11	12
Desi chicks	IFS	Ranikhet disease	Oral pellet vaccine for control of ranikhet disease in Desi chicks	2	Oral Pellet vaccine	Mortality rate	90 % mortality	Mortality rate reduced to 40 %	1.Oral pellet vaccine has controlled the ranikhet disease among the desi chicks 2.easily available 3.easy to handle 4. Farmer friendly technology	Contn in the current year	-

## Contd..

Technology Assessed	Source of Technology	Production	Please give the unit (kg/ha, t/ha, lit/animal, nuts/palm, nuts/palm/year)	Net Return (Profit) in Rs. / unit	BC Ratio
13	14	15	16	17	18
Technology option 1 (Farmer's practice)	Farmers practice	1 kg bird weight in 90 days	Kg/bird	Rs 140/kg	1.2
Technology option 2	Lasota vaccine eye drops-7 <sup>th</sup> and 14 <sup>th</sup> day RDKA subcutaneous 8 <sup>th</sup> and 16 <sup>th</sup> week TANUVAS	1.25 kg /bird	. Kg/bird	Rs 140/kg	1.3
Technology option 3	Oral pellet vaccine at 7 <sup>th</sup> and 14 <sup>th</sup> day TANUVAS	1.5 kg/ bird	Kg/bird	Rs 140/kg	1.5

**Details of each On Farm Trial for assessment to be furnished in the following format separately as per the following details**

1.	Title of Technology Assessed	:	Oral pellet vaccine for control of ranikhet disease in desi chicks
2.	Problem Definition:	:	Nearly 90% mortality due to ranikhet disease in desi chicks
3.	Details of technologies selected for assessment	:	Lasota vaccine eye drops-7 <sup>th</sup> and 14 <sup>th</sup> day RDKA subcutaneous 8 <sup>th</sup> and 16 <sup>th</sup> week TANUVAS Oral pellet vaccine at 7 <sup>th</sup> and 14 <sup>th</sup> day TANUVAS
4.	Source of technology	:	TANUVAS
5.	Production system and thematic area	:	Desi chicks are found almost in all the household of countryside. The loss and mortality due to ranikhet disease is very high
6.	Performance of the Technology with performance indicators	:	No of infected bird & survival percentage
7.	Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques	:	easy to use, farmer friendly technology, cost effective
8.	Final recommendation for micro level situation	:	Oral pellet vaccine reduce the mortality rate upto 40% level
9.	Constraints identified and feedback for research	:	Non availability of the vaccine at timely interval as there are no private out let
10.	Process of farmers participation and their reaction	:	Farmers and farm women actively participated in the technology assessment and reported that the oral pellet vaccine works well in controlling the ranikhet disease among desi chicks

## OFT 11. Standardization of High density planting methods for wet land Banana var. Nendran

Crop/ enterprise	Farming situation	Problem definition	Title of OFT	No. of trials	Technology refined	Parameters of refined	Data on the parameter			Results of refinement	Feedback from the farmer	Details of refinement done
							TO 1	TO2	TO3			
1	2	3	4	5	6	7	8	9	10	11		
Banana	Wetland	Low productivity	Standardizati on of High density planting methods for wet land Banana var. Nendran	4	2 m x 2.5 m two suckers (4000 plants/ha)	Fruit weight (g) No. of Fingers/plant No. of Hands/plant Bunch weight (kg) Yield (t/ha)	257 49.4 5.1 12.7 30.5	226 46.8 4.8 10.6 47.6	249 47.3 4.9 11.8 44.7	High yield with increased fruit size fetches more market price & increased the Net profit	Mortality is less in refined technology	2x3 m three suckers is refined to 2 m x 2.5 m two suckers (4000 plants/ha)

Contd..

Technology Refined	Source of Technology for Technology Option1 / Justification for modification of assessed Technology Option 1	Production	Please give the unit (kg/ha, t/ha, lit/animal, nuts/palm, nuts/palm/year)	Net Return (Profit) in Rs. / unit	BC Ratio
12	13	14	15	16	17
Technology Option 1 Farmers Practice-2x2m (2500 plants per ha)	Farmers Field	30.48	t/ha	72416	2.18
Technology Option 2 Alternate Technology-2 m x 3 m three suckers (5000 plants/ha)	TNAU, Coimbatore	47.63	t/ha	100535	2.12
Technology Option 3 Refined Technology-2 m x 2.5 m two suckers (4000 plants/ha)	NRCB, Tiruchirapalli	44.74	t/ha	118589	2.37

**Details of each On Farm Trial for refinement to be furnished in the following format separately as per the proforma below**

1.	Title of Technology refined	:	Standardization of High density planting methods for wet land Banana var. Nendran
2.	Problem Definition	:	Low productivity
3.	Details of technologies selected for refinement	:	2x3 m three suckers is refined to 2 m x 2.5 m two suckers (4000 plants/ha)
4.	Source of technology	:	NRCB, Tiruchirappalli
5.	Production system and thematic area	:	Wetland System & Crop Management
6.	Performance of the Technology with performance indicators	:	High yield with increased fruit size fetches more market price & increased the Net profit
7.	Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques	:	Instead of maintaining three suckers per pit, maintaining two suckers per pit is easy & field withstand rate is more
8.	Final recommendation for micro level situation	:	2x3 m three suckers is refined to 2 m x 2.5 m two suckers (4000 plants/ha) increased the yield and quality leads to High return
9.	Constraints identified and feedback for research	:	Farmers are reluctant to take up High Density Planting method since, it is required skill & more attention
10.	Process of farmers participation and their reaction	:	Farmers actively participated during planting time as well as in the field day



## PART V - FRONTLINE DEMONSTRATIONS

### 5.A. Summary of FLDs implemented during 2010-11

Sl. No.	Category	Farming Situation	Season and Year	Crop	Variety/breed	Hybrid	Thematic area	Technology Demonstrated	Area (ha)		No. of farmers/ demonstration			Reasons for shortfall in achievement
									Proposed	Actual	SC/ST	Others	Total	
	Oilseeds													
1	Sesame	Garden land	Rabi/summer/2011	Sesame	TVM 7	-	INM	Popularization of INM in sesame	5	5	0	6	6	
	Pulses													
	Cereals													
2		Irrigated low land	Kharif 2010	Rice		Co(R)H3	ICMP	Popularization of Co(R)H3 under SRI	5	5	8	4	12	
3		Irrigated wet land	Rabi 2010	Rice			Mechanization	Use of transplanter, power weeder, combined harvester	2	2	1	5	6	
4		Irrigated wet land	Rabi 2010	Rice	TRY 1		Problem soil management	Reclamation of sodic soil for rice cultivation	5	5	2	10	12	
	Millets													

Sl. No.	Category	Farming Situation	Season and Year	Crop	Variety/breed	Hybrid	Thematic area	Technology Demonstrated	Area (ha)		No. of farmers/ demonstration			Reasons for shortfall in achievement
									Proposed	Actual	SC/ST	Others	Total	
5		Irrigated gardenland	Rabi 2010	Maize		CoH(M) 5	ICMP	Popularizing integrated crop management practices in maize	5	5	0	12	12	
	Vegetables													
6		Garden Land	Kharif 2010	Chilli		NS1701	ICMP	Popularizing integrated crop management practices in chilli	5	5	3	9	12	Nil
7		Dry land	Rabi 2010	onion	Arka kalyan		Production technology	Popularization of onion variety - Arka kalyan	5	5	-	12	12	-
	Flowers													
	Ornamental													
	Fruits													
8		Wetland	Kharif & Rabi	Banana	Nendran		ICMP	Popularization of ICMP in Banana	.4	.4	2	8	10	Nil
								Popularization of ICMP in Acid lime	5	5	1	11	12	
	Spices and condiments													
	Commercial													

Sl. No.	Category	Farming Situation	Season and Year	Crop	Variety/breed	Hybrid	Thematic area	Technology Demonstrated	Area (ha)		No. of farmers/ demonstration			Reasons for shortfall in achievement
									Proposed	Actual	SC/ST	Others	Total	
9			Kharif & Rabi	sugarcane	-	-	Mechanization	Popularization of machineries in sugarcane	5	5	3	9	12	
	Medicinal and aromatic													
	Fodder													
	Plantation													
	Fibre													
	Dairy													
	Poultry													
	Rabbitry													
	Piggery													
	Sheep and goat													
	Duckery													
	Common carps													
10		Delta zone	Sept. 2010 to Feb. 2011	Common carps	Cutla, Rouge and Mirgal	-	Production technology	Popularization of Inland Aquaculture	10	10	-	10	10	-

Sl. No.	Category	Farming Situation	Season and Year	Crop	Variety/breed	Hybrid	Thematic area	Technology Demonstrated	Area (ha)		No. of farmers/ demonstration			Reasons for shortfall in achievement
									Proposed	Actual	SC/ST	Others	Total	
	Mussels													
	Ornamental fishes													
	Oyster mushroom													
	Button mushroom													
	Vermicompost													
	Sericulture													
	Apiculture													
	Implements													
	Others (specify)													
11	Azolla			Azolla			INM	Popularization of bio inoculants - Azolla	5	5	2	10	12	

## 5.A. 1. Soil fertility status of FLDs plots during 2010-11

Sl. No	Category	Farming Situation	Season and Year	Crop	Variety/breed	Hybrid	Thematic area	Technology Demonstrated	Season and year	Status of soil			Previous crop grown
										N	P	K	
	Oilseeds												
		Garden land	Rabi/summer/2011	Sesame	TMV 7	-	INM	Popularization of INM in sesame	Rabi 2011	173	26	263	Paddy
	Pulses												
	Cereals												
		Irrigated low land	Kharif 2010	Rice		Co(R)H3	ICMP	Popularization of Co(R)H3 under SRI	Kharif 2010	208	22	378	pulses
		Irrigated wet land	Rabi 2010	Rice				Use of transplanter, power weeder, combined harvester	Rabi 2010	179	19	256	pulses
		Irrigated low land	Rabi 2010	Rice	TRY 1		Problem soil management	Reclamation of sodic soil for rice cultivation	Rabi 2010	156	4.2	284	Rice
	Millets												
		Irrigated gardenland	Rabi 2010	Maize		CoH(M)5	ICMP	Popularizing integrated crop management practices in maize	Rabi 2010	168	96	376	
	Vegetables												
		Garden Land	Kharif 2010	Chilli		NS1701	ICMP	Popularizing integrated crop management practices in chilli	Khariff, 2010	178	85	254	Tapioca, Brinjal, Onion
		Dry land	Rabi	onion	Arka		Production	Popularization of onion		142	14.6	208	

Sl. No	Category	Farming Situation	Season and Year	Crop	Variety/breed	Hybrid	Thematic area	Technology Demonstrated	Season and year	Status of soil			Previous crop grown
										N	P	K	
			2010		kalyan		technology	variety - Arka kalyan					
	Flowers												
	Ornamental												
	Fruits												
		Wetland	Kharif & Rabi 2010	Banana	Nendran		ICMP	Popularization of ICMP in Banana	Kharif & Rabi 2010	145	64	286	Rice
			Kharif 2010	Acid lime	Local		INM	Popularization of ICMP in Acid lime	Kharif 2010	226	18	375	Acid lime
	Spices and condiments												
	Commercial												
			Rabi 2010	sugarcane				Popularization of machineries in sugarcane	Rabi 2010	213	9.8	400	
	Medicinal and aromatic												
	Fodder												
	Plantation												
	Fibre												

## 5.B. Results of Frontline Demonstrations

### 5.B.1. Crops

#### FLD 1 - Popularization of INM in sesame

Crop	Name of the technology demonstrated	Variety	Hybrid	Farming situation	No. of Demo.	Area (ha)	Yield (q/ha)				% Increase	Economics of demonstration (Rs./ha)				Economics of check (Rs./ha)			
							Demo			Check		Gross Cost	Gross Return	Net return	BCR	Gross Cost	Gross Return	Net return	BCR
							H	L	A										
sesame	Popularization of INM in sesame	TMV 7	-	Irrigated Garden land	6	5	7.8	6.8	7.3	6.1	20	10650	32850	22200	1:3.08	10450	27450	17000	1:2.63

#### Data on additional parameters other than yield (viz., reduction of percentage in weed/pest/ diseases etc.)

Data on other parameters in relation to technology demonstrated		
Parameter with unit	Demo	Check
Yield (q/ha)	7.3	6.1
Number of capsule per plant	75	62
Number of seeds per capsule	59.5	47
Test weight (1000 grain weight)	3.1 g	2.9 g

**FLD 2 - Popularization of rice hybrid under System of Rice Intensification (SRI)**

Crop	Name of the technology demonstrated	Variety	Hybrid	Farming situation	No. of Demo.	Area (ha)	Yield (q/ha)				% Increase	Economics of demonstration (Rs./ha)				Economics of check (Rs./ha)			
							Demo			Check		Gross Cost	Gross Return	Net return	BCR	Gross Cost	Gross Return	Net return	BCR
							H	L	A										
Rice	Popularization of rice hybrid under System of Rice Intensification (SRI)		CO(R) H 3	Irrigated low land	12	5	80.2	65.3	74.1	57.5	39.4	26098	59280	33182	2.3	24400	45967	21566	1.9

**FLD 3 - Reclamation of sodic soil**

Crop	Name of the technology demonstrated	Variety	Hybrid	Farming situation	No. of Demo.	Area (ha)	Yield (q/ha)				% Increase	Economics of demonstration (Rs./ha)				Economics of check (Rs./ha)			
							Demo			Check		Gross Cost	Gross Return	Net Return	BCR	Gross Cost	Gross Return	Net Return	BCR
							H	L	A										
Rice	Reclamation of sodic soil for rice cultivation	TRY 1	-	Irrigated low land	12	5	47.71	36.84	40.55	22.74	78	22800	60825	38025	2.67	18800	34110	15310	1.81



Data on additional parameters other than yield (viz., reduction of percentage in weed/pest/ diseases etc.)

Data on other parameters in relation to technology demonstrated		
Parameter with unit	Demo	Check
Total tillers/m <sup>2</sup>	227	128
Productive tillers/m <sup>2</sup>	164	92
No. of grains/panicle	115	65
Test weight (g)	24.5	24.3

#### FLD 4 - Popularizing Integrated Crop Management Practices in Maize

Crop	Name of the technology demonstrated	Variety	Hybrid	Farming situation	No. of Demo.	Area (ha)	Yield (q/ha)			% Increase	Economics of demonstration (Rs./ha)				Economics of check (Rs./ha)				
							Demo				Check	Gross Cost	Gross Return	Net Return	BCR	Gross Cost	Gross Return	Net return	BCR
							H	L	A										
Maize	Popularizing Integrated Crop Management Practices in Maize		CoH(M)5	Irrigated garden land	12	5	58.71	50.88	54.96	38.82	41.58	22500	42873	20373	1.91	19800	30277	10477	1.53

**Data on additional parameters other than yield (viz., reduction of percentage in weed/pest/ diseases etc.)**

Data on other parameters in relation to technology demonstrated		
Parameter with unit	Demo	Check
Cob length (cm)	17.6	14.2
Number of grains per cob	342	248
100 grain weight (g)	42.6	41.2
Stem borer incidence (%)	2.58	15.6

**FLD 5 - Popularizing Integrated Crop Management Practices in Chilli**

Crop	Name of the technology demonstrated	Variety	Hybrid	Farming situation	No. of Demo.	Area (ha)	Yield (q/ha)			% Increase	Economics of demonstration (Rs./ha)				Economics of check (Rs./ha)				
							Demo				Check	Gross Cost	Gross Return	Net Return	BCR	Gross Cost	Gross Return	Net return	BCR
							H	L	A										
Chilli	Triaccontanol @50 ml/ha NAA@50ml/ha Borax-2kg/ha MN mixture 7.5 kg/ha Sticky traps-25/ha Fipronil 5 SC @1500ml/ha		NS1701	Gardenland	12	5	36.06	20.16	28.112	17.58	59.91	40500	84336	43836	2.08	30000	52740	22740	1.76

## FLD 6 - Popularization of Onion variety – Arka Kalyan

Crop	Name of the technology demonstrated	Variety	Hybrid	Farming situation	No. of Demo.	Area (ha)	Yield (q/ha)				% Increase	Economics of demonstration (Rs./ha)				Economics of check (Rs./ha)			
							Demo			Check		Gross Cost	Gross Return	Net Return	BCR	Gross Cost	Gross Return	Net return	BCR
							H	L	A										
Onion	Popularization of Onion variety – Arka Kalyan	Arka Kalyan	-	Irrigated garden land	12	5	160	110	135	100	20	40000	27000	13000	1.45	30000	20000	10000	1.25

## FLD 7 - Popularizing ICMP in Banana

Crop	Name of the technology demonstrated	Variety	Hybrid	Farming situation	No. of Demo.	Area (ha)	Yield (q/ha)				% Increase	Economics of demonstration (Rs./ha)				Economics of check (Rs./ha)			
							Demo			Check		Gross Cost	Gross Return	Net Return	BCR	Gross Cost	Gross Return	Net return	BCR
							H	L	A										
Banana	Pseudomonas-2kg/ha Trichoderma viridi -2 kg/ha Banana Sakthi-5kg/ha Bunch overRs.5/cover	Nendran		wetland	10	4	53.6	38.6	46.1	34.57	33.45	80000	184540	104540	2.31	52000	103710	51710	1.99

## FLD 8 - Popularizing ICMP in Acid lime

Crop	Name of the technology demonstrated	Variety	Hybrid	Farming situation	No. of Demo.	Area (ha)	Yield (q/ha)				% Increase	Economics of demonstration (Rs./ha)				Economics of check (Rs./ha)			
							Demo			Check		Gross Cost	Gross Return	Net Return	BCR	Gross Cost	Gross Return	Net return	BCR
							H	L	A										
Acid lime	Popularizing ICMP in Acid lime	Local	-	Irrigated garden land	12	5	36.0	28.5	33.0	25.8	28	70000	146300	76300	2.09	67500	108500	41000	1.61

## Data on additional parameters other than yield (viz., reduction of percentage in weed/pest/ diseases etc.)

Data on other parameters in relation to technology demonstrated		
Parameter with unit	Demo	Check
No. of fruits per tree	418	310
Fruit weight (g)	75	55

## FLD 9 - Popularization of bio-inoculants - Azolla

Crop	Name of the technology demonstrated	Variety	Hybrid	Farming situation	No. of Demo.	Area (ha)	Yield (q/ha)				% Increase	Economics of demonstration (Rs./ha)				Economics of check (Rs./ha)			
							Demo			Check		Gross Cost	Gross Return	Net Return	BCR	Gross Cost	Gross Return	Net return	BCR
							H	L	A										
Azolla	Supplemental use of bio inoculants- Azolla		TNAU -1	Wet land	12	5	62.78	52.98	55.72	35.69	56.12	29500	64079	34579	2.17	24500	41044	16544	1.68

Data on additional parameters other than yield (viz., reduction of percentage in weed/pest/ diseases etc.)

Data on other parameters in relation to technology demonstrated		
Parameter with unit	Demo	Check
Number of productive tillers/m <sup>2</sup>	182	142
Number of grains per panicle	138	118

### 5.B.2. Livestock and related enterprises NIL

Type of livestock	Name of the technology demonstrated	Breed	No. of Demo	No. of Units	Yield (q/ha)			% Increase	*Economics of demonstration (Rs./unit)				*Economics of check (Rs./unit)					
					Demo				Check if any	Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR	
					H	L	A											
Dairy																		
Poultry																		
Rabbitry																		
Pigerry																		
Sheep and goat																		
Duckery																		
Others (pl.specify)																		

\* Economics to be worked out based total cost of production per unit area and not on critical inputs alone.

\*\* BCR= GROSS RETURN/GROSS COST

**Data on additional parameters other than yield (viz., reduction of percentage diseases, increase in conceiving rate, inter-calving period etc.)**

Data on other parameters in relation to technology demonstrated		
Parameter with unit	Demo	Check if any

## 5.B.3. Fisheries

## FLD 10 - Popularization of Inland Aquaculture

Type of Breed	Name of the technology demonstrated	Breed	No. of Demo	Units/ Area (m <sup>2</sup> )	Yield (q/ha)			% Increase	Economics of demonstration Rs./unit) or (Rs./m <sup>2</sup> )				Economics of check Rs./unit) or (Rs./m <sup>2</sup> )				
					Demo				Gross Cost	Gross Return	Net Return	BCR	Gross Cost	Gross Return	Net Return	BCR	
					H	L	A										
Common carps	Popularization of Inland Aquaculture	Cutla, Rogue, Mirgal	10	10	140	120	130	100	20	63000	140000	76000	1.45	50000	95000	45000	1.2

## 5.B.4. Other enterprises : NIL

Enterprise	Name of the technology demonstrated	Variety/ species	No. of Demo	Units/ Area {m <sup>2</sup> }	Yield (q/ha)			% Increase	*Economics of demonstration (Rs./unit) or (Rs./m <sup>2</sup> )				*Economics of check (Rs./unit) or (Rs./m <sup>2</sup> )				
					Demo				Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR	
					H	L	A										
Oyster mushroom																	
Button mushroom																	

Enterprise	Name of the technology demonstrated	Variety/ species	No. of Demo	Units/ Area {m <sup>2</sup> }	Yield (q/ha)			% Increase	*Economics of demonstration (Rs./unit) or (Rs./m2)				*Economics of check (Rs./unit) or (Rs./m2)				
					Demo	Check if any			Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR	
Vermicompost																	
Sericulture																	
Apiculture																	
Others (pl.specify)																	

\* Economics to be worked out based total cost of production per unit area and not on critical inputs alone.

\*\* BCR= GROSS RETURN/GROSS COST

H-High L-Low, A-Average

**Data on additional parameters other than yield (viz., additional income realized, employment generation, quantum of farm resources recycled etc.)**

Data on other parameters in relation to technology demonstrated		
Parameter with unit	Demo	Local



## 5.B.5. Farm implements and machinery

## FLD 11 – Use of Transplanter Power weeder and Combined harvester in Rice

Name of the implement	Cost of the implement in Rs.	Name of the technology demonstrated	No. of Demo	Area covered under demo in ha	Labour requirement in Mandays		% save	Savings in labour (Rs./ha)	Economics of demonstration (Rs./ha)				Economics of check (Rs./ha)			
					Demo	Check			Gross cost	Gross Return	Net Return	BCR	Gross cost	Gross Return	Net Return	BCR
Rice TRansplanter	12,000	Adoption of rice transplanter instead of convention manual transplanting	6	2	4	45	91	4100	12500	25435	12935	2.03	11260	23145	11885	2.1
Power weeder (Rice)	4,800	Adoption of rice power weeder instead of convention manual weeding	6	2	1	25	96	2400	12100	24700	12600	2.04	12850	25455	12605	2.0
Combined Harvester (Rice)	12,000	Adoption of paddy combined harvester instead of convention manual harvesting	6	2	5	40	87.5	3500	13256	26540	13284	2.00	10250	22145	11895	2.2

### FLD 12 – Popularization of machineries in sugarcane

Name of the implement	Cost of the implement in Rs.	Name of the technology demonstrated	No. of Demo	Area covered under demo in ha	Labour requirement in Mandays		% save	Savings in labour (Rs./ha)	Economics of demonstration (Rs./ha)				Economics of check (Rs./ha)			
					Demo	Check			Gross cost	Gross Return	Net Return	BCR	Gross cost	Gross Return	Net Return	BCR
Power Weeder in Sugarcane	12,000	Use of power weeder instead of manual weeding	12	4.8	1	30	96.7	2900	43850	124850	81000	2.85	41450	121350	79900	2.9
Sugarcane trash shredder	12,000	Use of sugarcane trash shredder instead of burning the sugarcane trash	6	2.4	1	20	95	1900	42345	114580	72235	2.71	40150	108456	68306	2.7

### 5.B.6. Cotton – NIL

#### 5.B.6.1. Summary of demonstrations conducted under FLD cotton

Sl. No.	Category	Technology Demonstrated	Variety	Hybrid	Season and year	Area (ha)		No. of farmers/ demonstration			Reasons for shortfall in achievement
						Proposed	Actual	SC/ST	Others	Total	
	Production Technology										
	IPM										
	Farm Implements										

### 5.B.6.2 Production technology demonstrations

#### Performance of demonstrations

Farming situation	Technology Demonstrated	Area (ha)	No.of demo.	Variety	Hybrid	Yield (q/ha)		% Increase	Economics of demonstration (Rs./ha)				Economics of local check (Rs./ha)					
						Demo	Local		Gross Cost	Gross Return	Net Return	BCR	Gross Cost	Gross Return	Net Return	BCR		

#### Performance of Bt hybrids, Desi hybrids, non-Bt hybrids and Varieties in Front Line Demonstrations in cotton during 2010-11

Category	Farming situation	Technology Demonstrated	Area (ha)	No.of demo.	Variety	Hybrid	Yield (q/ha)		% Increase	Economics of demonstration (Rs./ha)				Economics of local check (Rs./ha)				
							Demo	Local		Gross Cost	Gross Return	Net Return	BCR	Gross Cost	Gross Return	Net Return	BCR	
Bt hybrids																		
Desi hybrids (AXA)																		
HXB Hybrids																		
HXH Hybrids																		
Herbacious Varieties																		
Hirsutum Varieties																		
Arboreum Varieties																		



## 5.B.6.5 Extension Programmes organized in Cotton Demonstration Plots

Extension activity	No. of Programmes	Participants			SC/ST		
		Male	Female	Total	Male	Female	Total
Consultancy							
Conventions							
Demonstrations							
Diagnostic surveys							
Exhibition							
Farmer study tours							
Farmers Field school							
Field Days							
Field visits							
Gram sabha							
Group discussions							
Kisan Gosthi							
Kisan Mela							
Training for Extension Functionaries							
Training for farmers							
Viedo show							
Newspaper coverage							
Popular articles							
Publication							
Radio talks							
T.V. Programme							
Others (Pl.specify)							
<b>TOTAL</b>							

### 5.B.6.6 Technical Feedback on the demonstrated technologies on all crops / enterprise

S. No	Crop / Enterprise	Name of the technology demonstrated	Feed Back
1	Sesame	Popularization of INM in sesame	Application of biofertilizer and MN mixture increased the yield
2	Rice	Popularization of CO(R) H 3 under SRI	Introduction of hybrid increases the yield under SRI
3	Rice	Reclamation of sodic soil for rice cultivation	Application of gypsum and green manure improved the soil health of the sodic soil resulting in enhanced grain yield in TRY 1 Rice variety
4	Maize	Popularizing Integrated Crop Management Practices in Maize	Designer seed technology reduced the stem borer incidence and downy mildew incidence. Application of maize maxim increased the yield
5	Chillies	Popularizing Integrated Crop Management Practices in Chillies	Introduction of hybrid and application of growth regulators and micronutrient increased the yield
6	Onion	Popularization of Onion variety Arka kalyan	The variety suits well for the climatic condition and soil type of the vegetable growing districts of Trichy It is resistant to the major pests and diseases of the area Yield is comparatively higher than the local leading varieties of the area
7	Banana	Popularizing ICMP in banana	Application of banana sakthi increased the yield and quality improvement was noticed by using bunch cover
8	Acidlime	Popularizing Integrated Crop Management Practices in Acid lime	Spraying of Streptomycin sulphate effectively controlled the citrus canker. Application of MN mixture and Pseudomonas enhanced the fruit yield. rust mite was effectively controlled by the application of wettable sulphur 50WP
9	Azolla	Popularization of Bio-inoculants – Azolla	Application of azolla reduced Nitrogen application and increased no. of productive tillers, no. of grains per panicle and increased the yield in rice
10	Fisheries	Popularization of Inland Aquaculture	Additional income is assured along with the conventional paddy cultivation Marketing is high for inland aquaculture for table purpose

S. No	Crop / Enterprise	Name of the technology demonstrated	Feed Back
			Highly remunerative to the farmers Rural youth are highly interested in this avenue
11	Rice	Use of transplanter , Power weeder, Combined harvester	Use machineries reduced the labour durdgerly
12	Sugarcane	Popularization of machineries in Sugarcane	Use machineries reduced the labour durdgerly

#### 5.B.6.7 Farmers' reactions on specific technologies

S. No	Crop / Enterprise	Name of the technology demonstrated	Feed Back
1	Sesame	Popularization of INM in sesame	The availability of high yielding sesame varieties at appropriate sowing season needs to be ensured locally
2	Rice	Popularization of CO(R) H 3 under SRI	Increased in yield by use of hybrids under SRI
3	Rice	Reclamation of sodic soil for rice cultivation	Application of gypsum based on the GR of the soil followed by green manuring and raising sodicity resistant rice variety created awareness among the farmers on the effective method of reclamation of sodic soil
4	Maize	Popularizing Integrated Crop Management Practices in Maize	Good income in shorter time and the stalks are used as cattle feed
5	Chillies	Popularizing Integrated Crop Management Practices in Chillies	Reduction in flower drop and production of more no. of flowers by application of growth regulators
6	Onion	Popularization of Onion variety Arka kalyan	New variety of Arka kalyan is highly suitable for the area and fetches good price comparatively to the local varieties Technical trainings and skill demonstration on production and plant protection technologies in Arka Kalyan Onion is highly required

S. No	Crop / Enterprise	Name of the technology demonstrated	Feed Back
7	Banana	Popularizing ICMP in banana	Good quality bunches were obtained by covering bunch with banana bunch cover
8	Acidlime	Popularizing Integrated Crop Management Practices in Acid lime	Created awareness among the farmers on the symptoms of citrus canker and rust mite. They were satisfied with the application of MN mixture on the enhancement of fruit yield
9	Azolla	Popularization of Bio-inoculants – Azolla	Use of azolla reduced the Urea application and increased the yield. Azolla can also be used as animal feed
10	fisheries	Popularization of Inland Aquaculture	This is a remunerative avenue in paddy production system It provides employment opportunities to rural youth Training and demonstration on inland aquaculture and ornamental fish production is required Training on Feed management and disease management technologies is highly required by the farmers
11	Rice	Use of transplanter , Power weeder, Combined harvester	Use machineries reduced the labour durdgerly
12	Sugarcane	Popularization of machineries in Sugarcane	Use machineries reduced the labour durdgerly

#### 5.B.6.8 Extension and Training activities under FLD

Sl.No.	Activity	No. of activities organised	Number of participants	Remarks
1	Field days	12	713	
2	Farmers Training	15	412	
3	Media coverage	23	mass	
4	Training for extension functionaries	2	80	



## PART VI – DEMONSTRATIONS ON CROP HYBRIDS

## Demonstration details on crop hybrids

Type of Breed	Name of the technology demonstrated	Name of the hybrid	No. of Demo	Area (ha)	Yield (q/ha)			% Increase	*Economics of demonstration (Rs./ha)				*Economics of check (Rs./ha)					
					Demo				Check	Gross Cost	Gross Return	Net Return	BCR	Gross Cost	Gross Return	Net Return	BCR	
					H	L	A											
<b>Cereals</b>																		
Bajra																		
Maize																		
Paddy																		
Sorghum																		
Wheat																		
Others (pl.specify)																		
<b>Total</b>																		
<b>Oilseeds</b>																		
Castor																		
Mustard																		
Safflower																		
Sesame																		
Sunflower																		
Groundnut																		
Soybean																		
Others (pl.specify)																		
<b>Total</b>																		
<b>Pulses</b>																		
Greengram																		
Blackgram																		
Bengalgram																		
Redgram																		
Others (pl.specify)																		

Type of Breed	Name of the technology demonstrated	Name of the hybrid	No. of Demo	Area (ha)	Yield (q/ha)		% Increase	*Economics of demonstration (Rs./ha)				*Economics of check (Rs./ha)					
					Demo	Check		Gross Cost	Gross Return	Net Return	BCR	Gross Cost	Gross Return	Net Return	BCR		
<b>Total</b>																	
<b>Vegetable crops</b>																	
Bottle gourd																	
Capsicum																	
Others (pl.specify)																	
<b>Total</b>																	
Cucumber																	
Tomato																	
Brinjal																	
Okra																	
Onion																	
Potato																	
Field bean																	
Others (pl.specify)																	
<b>Total</b>																	
<b>Commercial crops</b>																	
Sugarcane																	
Coconut																	
Others																	
<b>Total</b>																	
<b>Fodder crops</b>																	
Maize (Fodder)																	
Sorghum (Fodder)																	
Others (pl.specify)																	
<b>Total</b>																	

H-High L-Low, A-Average

\*Please ensure that the name of the hybrid is correct pertaining to the crop specified

## PART VII. TRAINING

### 7.A.. Farmers' Training including sponsored training programmes (On campus)

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
<b>Crop Production</b>										
Weed Management										
Resource Conservation Technologies	3	46	11	57	24	2	26	70	13	83
Cropping Systems	1	18	0	18	2	0	2	20	0	20
Crop Diversification										
Integrated Farming										
Micro Irrigation/Irrigation										
Seed production										
Nursery management										
Integrated Crop Management	2	36	33	69	0	0	0	36	33	69
Soil and Water Conservation										
Integrated Nutrient Management										
Production of organic inputs										
Others (pl.specify)										
<b>Horticulture</b>										
<b>a) Vegetable Crops</b>										
Production of low value and high volume crop	1	19	1	20	4	1	5	23	2	25
Off-season vegetables										
Nursery raising										
Exotic vegetables										
Export potential vegetables										
Grading and standardization										
Protective cultivation										
Others (pl.specify) Precision farming	18	623	44	667	56	4	60	679	48	727
<b>b) Fruits</b>										
Training and Pruning										

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Layout and Management of Orchards										
Cultivation of Fruit	1	50	11	61	4	4	8	54	15	69
Management of young plants/orchards										
Rejuvenation of old orchards										
Export potential fruits										
Micro irrigation systems of orchards										
Plant propagation techniques										
Others (pl.specify)										
<b>c) Ornamental Plants</b>										
Nursery Management										
Management of potted plants										
Export potential of ornamental plants	1	22	3	25	1	0	1	23	3	26
Propagation techniques of Ornamental Plants										
Others (pl.specify)										
<b>d) Plantation crops</b>										
Production and Management technology										
Processing and value addition										
Others (pl.specify)										
<b>e) Tuber crops</b>										
Production and Management technology										
Processing and value addition										
Others (pl.specify)										
<b>f) Spices</b>										
Production and Management technology										
Processing and value addition										
Others (pl.specify)										

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
<b>g) Medicinal and Aromatic Plants</b>										
Nursery management										
Production and management technology										
Post harvest technology and value addition										
Others (pl.specify)										
<b>Soil Health and Fertility Management</b>										
Soil fertility management										
Integrated water management										
Integrated nutrient management	1	29	2	31	3	1	4	32	3	35
Production and use of organic inputs										
Management of Problematic soils										
Micro nutrient deficiency in crops										
Nutrient use efficiency										
Balanced use of fertilizers										
Soil and water testing										
Others (pl.specify)										
<b>Livestock Production and Management</b>										
Dairy Management										
Poultry Management	2	59	30	89	6	2	8	65	32	97
Piggery Management										
Rabbit Management										
Animal Nutrition Management										
Animal Disease Management										
Feed and Fodder technology										
Production of quality animal products										
Others (pl.specify)										

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
<b>Home Science/Women empowerment</b>										
Household food security by kitchen gardening and nutrition gardening										
Design and development of low/minimum cost diet										
Designing and development for high nutrient efficiency diet										
Minimization of nutrient loss in processing										
Processing and cooking										
Gender mainstreaming through SHGs										
Storage loss minimization techniques										
Value addition	2	44	31	75	5	1	6	49	32	81
Women empowerment										
Location specific drudgery production										
Rural Crafts										
Women and child care										
Others (pl.specify)										
<b>Agril. Engineering</b>										
Farm machinery and its maintenance										
Installation and maintenance of micro irrigation systems										
Use of Plastics in farming practices										
Production of small tools and implements										
Repair and maintenance of farm machinery and implements										
Small scale processing and value addition										
Post Harvest Technology										
Others (pl.specify)										

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
<b>Plant Protection</b>										
Integrated Pest Management										
Integrated Disease Management										
Bio-control of pests and diseases	1	31	0	31	1	0	1	32	0	32
Production of bio control agents and bio pesticides										
Others (pl.specify)										
<b>Fisheries</b>										
Integrated fish farming										
Carp breeding and hatchery management										
Carp fry and fingerling rearing										
Composite fish culture	1	24	1	25	5	0	5	29	1	30
Hatchery management and culture of freshwater prawn										
Breeding and culture of ornamental fishes										
Portable plastic carp hatchery										
Pen culture of fish and prawn										
Shrimp farming										
Edible oyster farming										
Pearl culture										
Fish processing and value addition										
Others (pl.specify)										
<b>Production of Inputs at site</b>										
Seed Production										
Planting material production										
Bio-agents production										
Bio-pesticides production										
Bio-fertilizer production										

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Vermi-compost production	2	40	6	46	17	0	17	57	6	63
Organic manures production										
Production of fry and fingerlings										
Production of Bee-colonies and wax sheets										
Small tools and implements										
Production of livestock feed and fodder	1	32	1	33	0	0	0	32	1	33
Production of Fish feed										
Mushroom production	2	24	18	42	5	0	5	29	18	47
Apiculture	1	16	2	18	0	0	0	16	2	18
Others (pl.specify)										
<b>Capacity Building and Group Dynamics</b>										
Leadership development										
Group dynamics										
Formation and Management of SHGs										
Mobilization of social capital										
Entrepreneurial development of farmers/youths	1	26	9	35	5	0	5	31	9	40
Others (pl.specify)										
<b>Agro-forestry</b>										
Production technologies										
Nursery management										
Integrated Farming Systems										
Others (Pl. specify)										
<b>Total</b>	<b>41</b>	<b>1139</b>	<b>203</b>	<b>1342</b>	<b>138</b>	<b>15</b>	<b>153</b>	<b>1277</b>	<b>218</b>	<b>1495</b>



### 7.B. Farmers' Training including sponsored training programmes (Off campus)

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
<b>Crop Production</b>										
Weed Management										
Resource Conservation Technologies										
Cropping Systems										
Crop Diversification										
Integrated Farming										
Micro Irrigation/Irrigation										
Seed production										
Nursery management										
Integrated Crop Management	1	32	0	32	0	0	0	32	0	32
Soil and Water Conservation										
Integrated Nutrient Management										
Production of organic inputs										
Others (pl.specify)										
<b>Horticulture</b>										
<b>a) Vegetable Crops</b>										
Production of low value and high volume crop	1	25	5	30	0	0	0	25	5	30
Off-season vegetables										
Nursery raising										
Exotic vegetables										
Export potential vegetables										
Grading and standardization										
Protective cultivation										
Others (pl.specify) precision farming	6	263	34	297	35	2	37	298	36	334
<b>b) Fruits</b>										
Training and Pruning										
Layout and Management of Orchards										
Cultivation of Fruit	1	17	0	17	0	0	0	17	0	17
Management of young plants/orchards										

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Rejuvenation of old orchards										
Export potential fruits										
Micro irrigation systems of orchards										
Plant propagation techniques										
Others (pl.specify)										
<b>c) Ornamental Plants</b>										
Nursery Management										
Management of potted plants										
Export potential of ornamental plants	1	28	5	33	4	0	4	32	5	37
Propagation techniques of Ornamental Plants										
Others (pl.specify)										
<b>d) Plantation crops</b>										
Production and Management technology										
Processing and value addition										
Others (pl.specify)										
<b>e) Tuber crops</b>										
Production and Management technology										
Processing and value addition										
Others (pl.specify)										
<b>f) Spices</b>										
Production and Management technology										
Processing and value addition										
Others (pl.specify)										
<b>g) Medicinal and Aromatic Plants</b>										
Nursery management										
Production and management technology										
Post harvest technology and value addition										

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Others (pl.specify)										
<b>Soil Health and Fertility Management</b>										
Soil fertility management	1	10	9	19	1	0	0	11	9	20
Integrated water management										
Integrated nutrient management										
Production and use of organic inputs										
Management of Problematic soils										
Micro nutrient deficiency in crops										
Nutrient use efficiency										
Balanced use of fertilizers										
Soil and water testing										
Others (pl.specify)										
<b>Livestock Production and Management</b>										
Dairy Management										
Poultry Management	1	0	40	40	0	0	0	0	40	40
Piggery Management										
Rabbit Management										
Animal Nutrition Management										
Animal Disease Management										
Feed and Fodder technology										
Production of quality animal products										
Others (pl.specify)										
<b>Home Science/Women empowerment</b>										
Household food security by kitchen gardening and nutrition gardening										
Design and development of low/minimum cost diet										
Designing and development for high nutrient efficiency diet										

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Minimization of nutrient loss in processing										
Processing and cooking										
Gender mainstreaming through SHGs										
Storage loss minimization techniques										
Value addition										
Women empowerment										
Location specific drudgery production										
Rural Crafts										
Women and child care										
Others (pl.specify)										
<b>Agril. Engineering</b>										
Farm machinery and its maintenance	1	20	10	30	5	1	6	25	11	36
Installation and maintenance of micro irrigation systems										
Use of Plastics in farming practices										
Production of small tools and implements										
Repair and maintenance of farm machinery and implements										
Small scale processing and value addition										
Post Harvest Technology										
Others (pl.specify)										
<b>Plant Protection</b>										
Integrated Pest Management	1	17	1	18	2	1	3	19	2	21
Integrated Disease Management	1	28	4	32	1	0	1	29	4	33
Bio-control of pests and diseases										
Production of bio control agents and bio pesticides										
Others (pl.specify)										
<b>Fisheries</b>										

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Integrated fish farming										
Carp breeding and hatchery management										
Carp fry and fingerling rearing										
Composite fish culture	1	10	0	10	3	0	3	13	0	13
Hatchery management and culture of freshwater prawn										
Breeding and culture of ornamental fishes										
Portable plastic carp hatchery										
Pen culture of fish and prawn										
Shrimp farming										
Edible oyster farming										
Pearl culture										
Fish processing and value addition										
Others (pl.specify)										
<b>Production of Inputs at site</b>										
Seed Production										
Planting material production										
Bio-agents production										
Bio-pesticides production										
Bio-fertilizer production										
Vermi-compost production										
Organic manures production										
Production of fry and fingerlings										
Production of Bee-colonies and wax sheets										
Small tools and implements										
Production of livestock feed and fodder										
Production of Fish feed										
Mushroom production										
Apiculture										
Others (pl.specify)										
<b>Capacity Building and</b>										

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
<b>Group Dynamics</b>										
Leadership development										
Group dynamics										
Formation and Management of SHGs										
Mobilization of social capital										
Entrepreneurial development of farmers/youths										
Others (pl.specify)										
<b>Agro-forestry</b>										
Production technologies										
Nursery management										
Integrated Farming Systems										
Others (Pl. specify)										
<b>Total</b>	<b>16</b>	<b>450</b>	<b>108</b>	<b>558</b>	<b>51</b>	<b>4</b>	<b>55</b>	<b>501</b>	<b>112</b>	<b>613</b>

### 7.C. Training for Rural Youths including sponsored training programmes (on campus)

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Nursery Management of Horticulture crops										
Training and pruning of orchards										
Protected cultivation of vegetable crops										
Commercial fruit production										
Integrated farming										
Seed production										
Production of organic inputs										
Planting material production										
Vermi-culture										
Mushroom Production										
Bee-keeping	1	16	2	18	0	0	0	16	2	18
Sericulture										
Repair and maintenance of farm machinery and										

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
implements										
Value addition	3	23	25	48	5	2	7	28	27	55
Small scale processing	1	6	9	15	0	0	0	6	9	15
Post Harvest Technology										
Tailoring and Stitching										
Rural Crafts										
Production of quality animal products										
Dairying										
Sheep and goat rearing										
Quail farming										
Piggery										
Rabbit farming										
Poultry production										
Ornamental fisheries	1	31	4	35	1	1	2	32	5	37
Composite fish culture										
Freshwater prawn culture										
Shrimp farming										
Pearl culture										
Cold water fisheries										
Fish harvest and processing technology										
Fry and fingerling rearing										
Any other (pl.specify) mushroom	1	24	8	32	0	0	0	24	8	32
<b>TOTAL</b>	<b>7</b>	<b>100</b>	<b>48</b>	<b>148</b>	<b>6</b>	<b>3</b>	<b>9</b>	<b>106</b>	<b>51</b>	<b>157</b>

#### 7.D. Training for Rural Youths including sponsored training programmes (off campus)

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Nursery Management of Horticulture crops										
Training and pruning of orchards										
Protected cultivation of vegetable crops										

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Commercial fruit production										
Integrated farming										
Seed production										
Production of organic inputs										
Planting material production										
Vermi-culture										
Mushroom Production										
Bee-keeping										
Sericulture										
Repair and maintenance of farm machinery and implements										
Value addition										
Small scale processing										
Post Harvest Technology										
Tailoring and Stitching										
Rural Crafts										
Production of quality animal products										
Dairying										
Sheep and goat rearing										
Quail farming										
Piggery										
Rabbit farming										
Poultry production										
Ornamental fisheries										
Composite fish culture										
Freshwater prawn culture										
Shrimp farming										
Pearl culture										
Cold water fisheries										
Fish harvest and processing technology										
Fry and fingerling rearing										
Any other (pl.specify)										
<b>TOTAL</b>										



**7.E. Training programmes for Extension Personnel including sponsored training programmes (on campus)**

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Productivity enhancement in field crops	2	26	1	27	0	0	0	26	1	27
Integrated Pest Management	1	13	2	15	0	0	0	13	2	15
Integrated Nutrient management	1	13	2	15	0	0	0	13	2	15
Rejuvenation of old orchards										
Protected cultivation technology										
Production and use of organic inputs										
Care and maintenance of farm machinery and implements										
Gender mainstreaming through SHGs	2	28	14	42	0	0	0	28	14	42
Formation and Management of SHGs										
Women and Child care	1	0	22	22	0	8	8	0	30	30
Low cost and nutrient efficient diet designing										
Group Dynamics and farmers organization										
Information networking among farmers										
Capacity building for ICT application	4	58	9	67	0	0	0	58	9	67
Management in farm animals										
Livestock feed and fodder production										
Household food security										
Any other (pl.specify)										
<b>Total</b>	<b>11</b>	<b>138</b>	<b>50</b>	<b>188</b>	<b>0</b>	<b>8</b>	<b>8</b>	<b>138</b>	<b>58</b>	<b>196</b>

**7.F. Training programmes for Extension Personnel including sponsored training programmes (off campus)**

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Productivity enhancement in field crops										
Integrated Pest Management										
Integrated Nutrient management										
Rejuvenation of old orchards										
Protected cultivation technology										
Production and use of organic inputs										
Care and maintenance of farm machinery and implements										
Gender mainstreaming through SHGs										
Formation and Management of SHGs										
Women and Child care										
Low cost and nutrient efficient diet designing										
Group Dynamics and farmers organization										
Information networking among farmers										
Capacity building for ICT application										
Management in farm animals										
Livestock feed and fodder production										
Household food security										
Any other (pl.specify)										
<b>Total</b>										

## 7.G. Sponsored training programmes

S.No	Area of training	No. of Courses	No. of Participants								
			General			SC/ST			Grand Total		
			Male	Female	Total	Male	Female	Total	Male	Female	Total
<b>1</b>	<b>Crop production and management</b>										
1.a.	Increasing production and productivity of crops	4	107	19	126	14	4	18	212	23	144
1.b.	Commercial production of vegetables	20	761	71	832	81	6	87	842	77	919
<b>2</b>	<b>Production and value addition</b>										
2.a.	Fruit Plants										
2.b.	Ornamental plants										
2.c.	Spices crops										
<b>3.</b>	<b>Soil health and fertility management</b>										
<b>4</b>	<b>Production of Inputs at site</b>										
<b>5</b>	<b>Methods of protective cultivation</b>										
<b>6</b>	<b>Others (pl.specify)</b>										
<b>7</b>	<b>Post harvest technology and value addition</b>										
7.a.	Processing and value addition	1	11	9	20	1	0	1	12	9	21
7.b.	Others (pl.specify)										
<b>8</b>	<b>Farm machinery</b>										
8.a.	Farm machinery, tools and implements										
8.b.	Others (pl.specify)										
<b>9.</b>	<b>Livestock and fisheries</b>										
<b>10</b>	<b>Livestock production and management</b>										
10.a.	Animal Nutrition Management										
10.b.	Animal Disease Management										
10.c.	Fisheries Nutrition										
10.d.	Fisheries Management										
10.e.	Others (pl.specify)										

S.No	Area of training	No. of Courses	No. of Participants									
			General			SC/ST			Grand Total			
			Male	Female	Total	Male	Female	Total	Male	Female	Total	
<b>11.</b>	<b>Home Science</b>											
11.a.	Household nutritional security											
11.b.	Economic empowerment of women	2	28	14	42	0	0	0	28	14	42	
11.c.	Drudgery reduction of women											
11.d.	Others (pl.specify)											
<b>12</b>	<b>Agricultural Extension</b>											
12.a.	Capacity Building and Group Dynamics	2	56	18	74	12	2	14	68	20	88	
12.b.	Others (pl.specify)											
	<b>Total</b>	<b>29</b>	<b>963</b>	<b>131</b>	<b>1094</b>	<b>108</b>	<b>12</b>	<b>120</b>	<b>1071</b>	<b>143</b>	<b>1214</b>	

#### Details of sponsoring agencies involved

1. Indian Overseas bank
2. NADP
3. TNAU
4. Dept. of Agriculture

#### 7.H. Details of vocational training programmes carried out by KVKs for rural youth

S.No	Area of training	No. of Courses	No. of Participants									
			General			SC/ST			Grand Total			
			Male	Female	Total	Male	Female	Total	Male	Female	Total	
<b>1</b>	<b>Crop production and management</b>											
1.a.	Commercial floriculture											
1.b.	Commercial fruit production											
1.c.	Commercial vegetable production											
1.d.	Integrated crop management											
1.e.	Organic farming											
1.f.	Others (pl.specify)											
<b>2</b>	<b>Post harvest technology and value addition</b>											
2.a.	Value addition	3	11	40	51	1	3	4	12	43	55	

S.No	Area of training	No. of Courses	No. of Participants								
			General			SC/ST			Grand Total		
			Male	Female	Total	Male	Female	Total	Male	Female	Total
2.b.	Others (pl.specify)										
<b>3.</b>	<b>Livestock and fisheries</b>										
3.a.	Dairy farming										
3.b.	Composite fish culture										
3.c.	Sheep and goat rearing										
3.d.	Piggery										
3.e.	Poultry farming										
3.f.	Others (pl.specify)										
<b>4.</b>	<b>Income generation activities</b>										
4.a.	Vermi-composting	1	17	6	23	4	1	5	21	7	28
4.b.	Production of bio-agents, bio-pesticides, bio-fertilizers etc.										
4.c.	Repair and maintenance of farm machinery and implements										
4.d.	Rural Crafts										
4.e.	Seed production	1	20	1	21	2	0	2	22	1	23
4.f.	Sericulture										
4.g.	Mushroom cultivation										
4.h.	Nursery, grafting etc.	1	10	0	10	0	0	0	10	0	10
4.i.	Tailoring, stitching, embroidery, dying etc.										
4.j.	Agril. para-workers, para-vet training										
4.k.	Others (pl.specify)										
<b>5</b>	<b>Agricultural Extension</b>										
5.a.	Capacity building and group dynamics										
5.b.	Others (pl.specify)										
	<b>Grand Total</b>	<b>6</b>	<b>58</b>	<b>47</b>	<b>105</b>	<b>7</b>	<b>4</b>	<b>11</b>	<b>65</b>	<b>51</b>	<b>116</b>

## PART VIII – EXTENSION ACTIVITIES

## Extension Programmes (including activities of FLD programmes)

Nature of Extension Programme	No. of Programmes	No. of Participants (General)			No. of Participants SC / ST			No. of extension personnel		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Field Day	12	543	109	652	22	18	40	15	6	21
Kisan Mela										
Kisan Ghosthi										
Exhibition	6	mass								
Film Show										
Method Demonstrations	21	647	58	705	29	16	45	7	1	8
Farmers Seminar										
Workshop										
Group meetings	1	48	17	65	22	0	22	1	1	2
Lectures delivered as resource persons	2	32	14	46	6	1	7	4	3	7
Newspaper coverage	34									
Radio talks	2									
TV talks	1									
Popular articles	4									
Extension Literature	16									
Advisory Services	107	251	34	285	34	19	53	3	2	5
Scientific visit to farmers field	63	473	124	597	48	20	68	4	1	5
Farmers visit to KVK	100	743	169	912	73	8	81	0	0	0
Diagnostic visits	17	66	7	73	4	2	6	5	0	5
Exposure visits	30	1294	131	1425	123	7	130	39	15	54
Ex-trainees Sammelan										
Soil health Camp										
Animal Health Camp										

Nature of Extension Programme	No. of Programmes	No. of Participants (General)			No. of Participants SC / ST			No. of extension personnel		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Agri mobile clinic										
Soil test campaigns										
Farm Science Club Conveners meet										
Self Help Group Conveners meetings										
Mahila Mandals Conveners meetings										
Celebration of important days (world food day)	1	20	10	30	5	1	6	3	4	7
Any Other (Specify)										
<b>Total</b>	<b>407</b>	<b>4124</b>	<b>676</b>	<b>4800</b>	<b>366</b>	<b>92</b>	<b>458</b>	<b>81</b>	<b>33</b>	<b>114</b>

## PART IX – PRODUCTION OF SEED, PLANT AND LIVESTOCK MATERIALS

### 9.A. Production of seeds by the KVKs

Crop category	Name of the crop	Variety	Hybrid	Quantity of seed (qtl)	Value (Rs)	Number of farmers to whom provided
Cereals (crop wise)	Paddy	BPT 5204	-	55	110000	250
Oilseeds						
Pulses	Black gram	ADT 3		Harvesting is in progress		
Commercial crops						
Vegetables						
Flower crops						
Spices						
Fodder crop seeds						
Fiber crops						
Forest Species						
Others (specify)						
<b>Total</b>				<b>55</b>	<b>110000</b>	<b>250</b>

### 9.B. Production of planting materials by the KVKs

Crop category	Name of the crop	Variety	Hybrid	Number	Value (Rs.)	Number of farmers to whom provided
Commercial						
Vegetable seedlings	Tomato		Lakshmi	6090	2436	13
	Brinjal		Ravia, Manapparai	10337	4135	32
	Chilli		Priyanka	4478	1800	21
Fruits						
Ornamental plants	Foliage ornaments			450	3500	105
Medicinal and Aromatic						
Plantation	Coconut	ECT		1656	41400	44
Spices	Curry leaf	Senkambu		200	1000	2
Tuber						
Fodder crop saplings	Fodder grass	Co4		255845	115130	55
Forest Species						
Others(specify)						
<b>Total</b>				<b>279056</b>	<b>169401</b>	<b>272</b>



**9.C. Production of Bio-Products**

Bio Products	Name of the bio-product	Quantity Kg	Value (Rs.)	Number of farmers to whom provided
Bio Fertilizers				
Bio-pesticide				
Bio-fungicide				
Bio Agents				
Others (specify)	VermiGold	2000	10000	64
<b>Total</b>				

**9.D. Production of livestock materials**

Particulars of Live stock	Name of the breed	Number	Value (Rs.)	Number of farmers to whom provided
<b>Dairy animals</b>				
Cows				
Buffaloes				
Calves				
Others (Pl. specify)				
<b>Poultry</b>				
Broilers				
Layers				
Duals (broiler and layer)				
Japanese Quail				
Turkey				
Emu				
Ducks				
Others (Pl. specify)				
<b>Piggery</b>				
Piglet				
Others (Pl. specify)				
<b>Fisheries</b>				
Fingerlings	Cultla, Rogue and Mirgal	150	75	10
Others (Pl. specify)				
<b>Total</b>		<b>150</b>	<b>75</b>	<b>10</b>

**PART X – PUBLICATION, SUCCESS STORY, SWTL, TECHNOLOGY WEEK  
AND DROUGHT MITIGATION**

**10. A. Literature Developed/Published (with full title, author & reference)**

(A) KVK News Letter ((Date of start, Periodicity, number of copies distributed etc.)

<b>News letter</b>	<b>Date of start</b>	<b>Periodicity</b>	<b>No. of issues</b>	<b>No. of copies distributed</b>
Pasumai	01.04.2006	Quarterly	4	2000

(B) Literature developed/published

<b>Item</b>	<b>Title</b>	<b>Authors name</b>	<b>Number</b>
Research papers	Remediation of Nickel Contaminated Soils Using Hyperaccumulators	Malarkodi, M., R. Krishnasamy and A.Sakunthalai	-
	Plant based technology to remediate heavy metal contaminated soils	Malarkodi, M., R. Krishnasamy and T. Chitdeshwari	-
	Agro biodiversity consequences of loss and conservation measures	Dr. C.Cinthia Fernandaz Dr. A. Sakunthalai	-
	Cyber extension model village- the new information way	Dr. C.Cinthia Fernandaz Dr. A. Sakunthalai	-
Technical reports	Annual action plan 2011-12	Scientists of KVK	1
News letters	Pasumai (4 Issues)	Scientists of KVK	1600
<b>Technical bulletins</b>			
Popular articles	Importance of Zinc in crop growth – Naam Uzhavar	Malarkodi, M and A. Sakunthalai	-
	Soil fertility for sustainable farming - IFFCO	Malarkodi, M and A. Sakunthalai	-
	Protray nursery techniques	Dr. S. Easwaran Dr. C.Cinthia Fernandaz Dr. A. Sakunthalai	2
	Inland aquaculture for sustainable farming	Dr. C.Cinthia Fernandaz Dr. A. Sakunthalai	-

Item	Title	Authors name	Number
Extension literature			
Booklets	Vermicompost production technologies	Malarkodi, M and A. Sakunthalai	500
	Banana value addition	L. Karpagapandi and A. Sakunthalai	500
	Masala powder preparation	L. Karpagapandi and A. Sakunthalai	500
	Amla value addition	L. Karpagapandi and A. Sakunthalai	500
	Rose cultivation	S.J.Viyalalalitha, S.Easwaran,P.Tamilse Ivi, P.Yamunadevi and A. Sakunthalai	300
	Jasmine cultivation	S.J.Viyalalalitha, S.Easwaran,P.Tamilse Ivi, P.Yamunadevi and A. Sakunthalai	300
	Tube rose cultivation	S.J.Viyalalalitha, S.Easwaran,P.Tamilse Ivi, P.Yamunadevi and A. Sakunthalai	300
	Cotton cultivation	KVK	200
Pamphlets	Mushroom value addition	L. Karpagapandi, P. Saravanan and S.P.Ramanathan	1000
	Banana value addition	L. Karpagapandi and A. Sakunthalai	1000
Folder	Coir pith compost technologies	Malarkodi, M and A. Sakunthalai	500
	Visual Diagnostic kit for micronutrient recommendation	Malarkodi, M and A. Sakunthalai	500
	Reclamation of sodic soil	Malarkodi, M	500
	Azolla cultivation	M.Ravi, A.Alagesan and A. Sakunthalai	600
	Betel vine cultivation	M.Ravi, S.Easwaran, A.Alagesan and	1000

Item	Title	Authors name	Number
		A. Sakunthalai	
	Newly released varieties & technologies	Dr. C.Cinthia Fernandaz Dr. A. Sakunthalai	300
	Inland Aquaculture	Dr. C.Cinthia Fernandaz Dr. A. Sakunthalai	300
	Desi chicks production	Dr. C.Cinthia Fernandaz Dr. A. Sakunthalai	300
Others			
<b>TOTAL</b>	<b>28</b>		<b>9100</b>

#### 10.B. Details of Electronic Media Produced

S. No.	Type of media (CD / VCD / DVD/ Audio-Cassette)	Title of the programme	Number
1	CD	Activities of the KVK	1

#### 10.C. Success Stories / Case studies, if any (two or three pages write-up on each case with suitable action photographs. The Success Stories / Case Studies need not be restricted to the reporting period).

##### 1. Mushroom Cultivation

J. Chandrasekar,  
Selva Vinayaga Mushroom Farm,  
Ponnagar,  
Vazhavandhan Kottai Road,  
Thuvakudi,  
Trichy – 15.

##### Background

Allied activities in agriculture are gaining much more importance in the recent days. Keeping one of the output materials of a main crop the allied activities fetch additional income as well as employment opportunities to the farming community. Among the allied activities one of the important allied activities from past years is the mushroom cultivation. Paddy straw is the main input for mushroom cultivation. KVK, Sirugamani has been training the farmers and farm women in mushroom cultivation. This case study is about one such farmer who has successfully

running a mushroom production unit as well as a value addition unit in mushroom. He is Mr. Chandrasekar of Thuvakudi. He is of middle age group with medium level of school education. He is a native of Trichy. He is well known to farming as his ancestral occupation.

### **Interventions**

He stepped into the business of mushroom cultivation 6 years back is in 2005. He came to know about mushroom, its importance, cultivation aspects and its medicinal values from a leading newspaper a foreigner was its author. After reading the article his eager increased towards mushroom cultivation. He sought help from many departments and finally traced out KVK, Sirugamani for the training need on knowledge and skill development in mushroom cultivation. He wanted to increase the socioeconomic status of his livelihood and hence he entered into mushroom cultivation. He also wanted to do some service to the human community. In this process the training given by KVK, Sirugamani was very mush useful to him. Along with the certificate this training provided a lot to confidence to Mr. Chandrasekar to start the milky mushroom unit at small level. The hurdles he faced in the beginning stage were many. The condition was not that much suitable for mushroom cultivation. Hence there was no expected outcome. In summer there would be sudden showers which would spoil the cultivation of mushroom. By getting technical support from KVK and ADAC&RI the problems in cultivation was solved. Next the problem in marketing began. Some days the unsold mushroom has to be thrown to dustbin. But now he has overcome all the hurdles and transferred the mushroom cultivation business into a successful one.

He has trained himself in value addition of mushroom by preparing mushroom soup, pickle, chilli idli powder etc. When there is problem in marketing the produce he uses these value addition techniques and sustains his business. The other important outlet for his market is the Anna Nagar Uzhavar Sandhai where he sells his mushroom soup daily. There is lot of demand for his produce.

### **Impact**

After venturing into the mushroom cultivation business his income has increased tremendously. The socio-economic status of his life style increased. Apart from mushroom cultivation, value addition and marketing, he was also entered into human resources development. He trains many farmers, farm women and rural youth in mushroom cultivation. Those who are needy and unable to pay, he helps them by giving free training. He also helps them is starting the mushroom cultivation business in low investment. He also advices his trainees to start the business with low investment and after withstanding well the investment could be increased and get good revenue.

**Economics****Expenditure**

60 x 11 x3 ft shed (Digging pit, Silpaulin)	:	60,000 (one time investment)
14 x 26 sized bed 300 no. of packets could be kept (for 1)	:	14,000
Other expenses	:	10,000
<b>Total</b>		<b>84,100</b>

**Returns****1500 kg in 2 months**

Annually (Rs.130/kg)	:	1,500kg
Gross income (1500 x 130 )	:	1, 95, 000
Expenditure	:	84,000
<b>Net profit</b>		<b>1,11,000</b>

**3. Desi Chicks Production**

Mrs. Chitra  
Kavalkarapalayam  
Sirugamani – 639 115.

This is the case study of Mrs. Chitra of Kavalkarapalayam, who is successful entrepreneur of Desi Chicks Production. Mrs. Chitra is 40 years old and she is educated up to secondary level. Her husband is retired from military and working for a private concern. During 2006 when her husband retired from the military services, Mrs. Chitra looked out for an alternate business for additional income. They chose Desi Chicks Production as their option. Mrs. Chitra has keen interest towards Desi Chicks Production from her childhood. This was also one of the reasons for her to select the venture.

Mrs. Chitra looks after the Desi Poultry Production all of her own. She also provides employment for two labours to look after the feeding and cleaning. Both Mr. and Mrs. Chitra have attended many trainings in veterinary university before entering into this avenue. Anyway the Desi Chicks Production training given by KVK, Sirugamani was very much useful for their to start and maintain this business. Nowadays too they are keen on knowing about the recent techniques in poultry production. The scientists of KVK, Sirugamani are the source of information for them.

Annually they rear 500 nos. of chicks in a batch totally 2 batches. As all other small entrepreneur Mrs. Chitra also faced hurdles to withstand the business. The first two batches she

brought were completely of loss. With the support of her husband she could regain her confidence and once again ventured into this business. Now they are self content and satisfied with the business.

They have lot of practical knowledge in Desi Chicks Production; the seeds are the chicks are very much important for success of any business. The chicks, feed and all other inputs needed for the business is brought from Namakkal. Now and then the veterinarians visit also ensures about the success of the enterprise.

The starting investment is high only because of the shed preparation and getting electricity connection. First four weeks the chicks need only small amount of feed and water. After four weeks they need high amount of feed the chicks also should be big. Along with the concentrate feed other feed (homemade) also helps in this venture which is cost effective. The cost of the chicks may also vary along with the market rate. Apart from their regular visit of the doctor and vaccination is also highly required for good maintenance and successful running of the business.

#### **Economics** (for 500 chicks)

##### **Expenditure**

Shed of electricity charges	:	60,000 (one time investment)
Utensils	:	3,000
500 chicks x 30	:	15,000
Feed, labour and maintenance	:	20,000
<b>Total</b>	<b>:</b>	<b>38,000</b>

##### **Returns**

3 months old chicks = 1 kg

500 = 10 % mortality = 450 x 1 = 450 kg

1 kg = Rs. 140

Therefore 450 kg	:	63,000
Expenditure	:	38,000
500 chicks x 30 (feed and labour maintenance)	:	10,000
<b>Net profit</b>	<b>:</b>	<b>25,000</b>

**10.D. Give details of innovative methodology or innovative technology of Transfer of Technology developed and used during the year**

**1) Farmer first approach:**

Technology dissemination would reach the farmers when the need of the farmers is kept first i.e., prioritizing the need of the farmer. Accordingly the needed technology is identified and disseminated first. Awareness would be high due to high interest of the farmer. Ultimately the rate of adoption also would be high.

**2) Participatory approach:**

Whenever a new technology is popularized among the group it should never be a one-way approach instead a two way of communication should exist. In participatory mode of technology dissemination, scientist farmers interface and interest among the farmers increases. When the farmers are involved their work ability and results is also enhanced. Hence participatory approach of technology dissemination is adopted among the farmers.

**10.E. Give details of indigenous technology practiced by the farmers in the KVK operational area which can be considered for technology development (in detail with suitable photographs)**

NIL

**10.F. Indicate the specific training need analysis tools/methodology followed for**

Identification of courses for farmers/farm women	Suggestion from SAC Discussion with NGOs District level monthly Zonal workshop Discussion with conveners of FSC, NABARD , FIG Training Need Assessment Scientists - Farmers Interaction
Rural Youth	Interaction with youth organizations and PRA analysis at village level
In-service personnel	Monthly Zonal workshop Discussion with JDA, DDH and Heads of line departments.

**10.G. Field activities**

- |      |                               |   |     |
|------|-------------------------------|---|-----|
| i.   | Number of villages adopted    | : | 5   |
| ii.  | No. of farm families selected | : | 200 |
| iii. | No. of survey/PRA conducted   | : | 10  |

**Village Adoption**

Our KVK has adopted five villages to develop them as model villages viz., Kodiyalam and Senthurai of Anthanallur block for wetland condition and Nagalaupram village of Thuraiyur taluk, Marungapuri of manapparai taluk for rainfed condition, Lalgudi for Cauvery delta zone, Kolakudi



for irrigated condition. The training needs of the village to improve their socio economic condition were under taken. The technology assessment was also carried out in the adopted villages. The impact of the interventions made by our KVK will be studied in order to replicate the same to other villages. The activities related to rice, sugarcane and banana were taken up in Kodyalam and the alternate crops such as sunflower, maize, vegetables and goat rearing were undertaken in Nagalapuram. In a phased manner, these villages will become model villages.

#### 10.H. Activities of Soil and Water Testing Laboratory

Status of establishment of Lab :

1. Year of establishment : 23.06.2005
2. List of equipments purchased with amount :

SI.No.	Name of the Equipment	Quantity	Cost (Rs.)
1	Electronic balance Model AA 2200	1	91,520.00
2	Electronic balance Model MX 7160A	1	28,080.00
3	Shaker 30"x24"	2	44,076.00
4	Hot Air oven 18"x18"x18"	1	8862.00
5	Nitrogen distillation unit, Macro kjeldahl apparatus	2	49178.00
6	Water distillation unit 3 lit. cap	1	26117.50
7	Hot plate	1	1875.60
8	Sample grinder	1	11582.00
9	Spectrophotometer	1	75072.00
10	Flame photometer	1	36720.00
11	pH meter	1	7344.00
12	EC meter	1	7344.00
13	Refrigerator with stabilizer	1	19,500.00
14	Electronic Automatic KEL PLUS Black digestion system	1	80,769.00
15	Electronic KEL PLUS-Nitrogen distillation system	1	1,14,286.00
16	Water bath	1	2600.00
17	Water still	1	3400.00
	<b>Sub Total</b>		<b>6,08,326.00</b>
18	Lab setup (Work table, water purification system, fire extinguisher etc.,)	--	3,01,836.00
19	Glass wares		1,55,428.45
20	Reagents		1,14,625.05
	<b>Grand Total</b>		<b>11,80,215.50</b>

**Details of samples analyzed so far since establishment of SWTL:**

Details	No. of Samples analyzed	No. of Farmers benefited	No. of Villages	Amount realized (Rs.)
Soil Samples	982	862	157	24550
Water Samples	512	384	113	5120
Plant samples				
Manure samples				
Others (specify)				
<b>Total</b>	<b>1494</b>	<b>1246</b>	<b>270</b>	<b>29670</b>

**Details of samples analyzed during the 2010-11 :**

Details	No. of Samples analyzed	No. of Farmers benefited	No. of Villages	Amount realized (Rs.)
Soil Samples	264	246	46	6600
Water Samples	170	144	29	1700
Plant samples				
Manure samples				
Others (specify)				
<b>Total</b>	<b>434</b>	<b>390</b>	<b>75</b>	<b>8300</b>

**10.I. Technology Week celebration**

NIL

**10. J. Interventions on drought mitigation (if the KVK included in this special programme)****A. Introduction of alternate crops/varieties**

State	Crops/cultivars	Area (ha)	Number of beneficiaries

**B. Major area coverage under alternate crops/varieties**

Crops	Area (ha)	Number of beneficiaries
Oilseeds		
Pulses		
Cereals		
Vegetable crops		
Tuber crops		
<b>Total</b>		

**C. Farmers-scientists interaction on livestock management**

State	Livestock components	Number of interactions	No.of participants

D. Animal health camps organized

NIL

E. Seed distribution in drought hit states

NIL

F. Large scale adoption of resource conservation technologies

State	Crops/cultivars and gist of resource conservation technologies introduced	Area (ha)	Number of farmers
<b>Total</b>			

G. Awareness campaign

State	Meetings		Gosthies		Field days		Farmers fair		Exhibition		Film show	
	No.	No.of farmers	No.	No.of farmers	No.	No.of farmers	No.	No.of farmers	No.	No.of farmers	No.	No.of farmers
<b>Total</b>												

## PART XI. IMPACT

### 11.A. Impact of KVK activities (Not to be restricted for reporting period).

Name of specific technology/skill transferred	No. of participants	% of adoption	Change in income (Rs.)	
			Before (Rs./Unit)	After (Rs./Unit)
In land aquaculture	73	55	Rs.4,500/ha	Rs.15,000/ha
Quality seed production	150	70	Rs.14000/ha	Rs.23000/ha
Integrated pest management for rice	300	80	Rs.5000/ha	Rs.10000/ha
Value addition in Banana	120	25	-	100/day
Reclamation of alkali soil	80	20	-	Rs.13000/ha
Precision Farming in vegetables	500	40	Rs.30,000/ha	Rs.50,000 to Rs.60,000/ha
Mushroom production	50	30	-	Rs.25,000/-/unit/yr

### 11.B. Cases of large scale adoption

#### 1) SRI IN RICE

Rice is a predominant crop in Trichy district. Changing the traditional cultivation practices and bringing SRI method (System of rice intensification) was a gift to the farmers. Optimum utilization of the resources is the concept of SRI. Impact of this SRI was studied among the farmers of the rice growing area. Slowly the conventional rice growing areas are shifting towards SRI. Due to reduction of the inputs usage in SRI method cost of cultivation is reduced. There is a drastic reduction in the seed requirement from conventional method to SRI method. Labour required for the management aspect is also less. Mechanization from seed to seed is highly conducive in the SRI field rather than the conventional field. These are the technical impact of SRI cultivation.

Considering the overall impact the socio economic status of the people has also increased drastically. The yield of SRI paddy is considerably high than conventional method. Apart from quantity the quality of the seed is also increased, due to cleanliness and proper maintenance in main field. The grain size also increased due to physiological reaction. Hence seed weight and seed germination percentage increased which in turn increase the economic impact of the farmers.

Due to increase in the economic growth social growth of the farmers also increased. The mass media exposure, innovativeness, scientific orientation and technical orientation of the farmers also increased. In addition to socio economic impact the effective utilization of the farm

resources enhancement recommends towards the environmental impact. Farmers feel that the SRI method of rice cultivation was economically viable to them.

The data were collected by personal interview with 40 farmers with group discussions. The respondents were adopting SRI method from 2006-2007. The main motivating factors for the observed trend was on the demonstration and trainings given by the KVK. In addition, Radio talks and television programmes on success stories of progressive farmers acted as complimentary and supplementary efforts. The impact of the project among the beneficiaries was transparent on most of the parameters selected for the investigation.

Majority of the farmers were old (50-55) studied upto secondary level. Agriculture was their main occupation apart from some having other business ventures. Some have small units of cows and goat for family use. Every farmers were having an average size of land holding of 5 to 7 acres. their experience in farming was more than 25 years. KVK scientists were having regular contacts with the beneficiaries and effective in rendering need based timely technical guidance and inputs to them followed by agriculture and horticulture extension officials. among mass media radio and news paper played a dominant role in transfer of technologies from KVK, Trichy. The impact was on their expenditure level from house repair, education, local festivals, and marriages. The dietary pattern of the farmers has also increased from food security to nutritional security. The constraints expressed by the farmers were transporting problem, storage and price fluctuation of the produce.

### **Advantages of SRI cultivation as perceived by the farmers.**

The interaction with the farmers revealed about the following advantages of the system.

- 1) Knowledge level of the farmers on rice production technologies has increased.
- 2) Skill in operations has increased.
- 3) It has created a favorable attitude towards rice cultivation.
- 4) The cost of production has reduced.
- 5) The overall income of the farmers increased.
- 6) Due to mechanized operations the labour problems has been solved.

The overall efficiency has increased in terms of

Inputs	-	40 to 50%
Labours	-	50 to 60%
Socio economic status of the farmers	-	60%

## **2) BIOLOGICAL CONTROL OF PAPAYA MEALY BUG**

Severe infestation of papaya mealy bug *Paracoccus marginatus* on various crops viz. Papaya, cotton, tapioca, guava, and ornamental crops resulted in severe yield reduction and heavy loss to the farmers. The farmers struggled a lot to control the pest problem through chemicals. Since the spread and infestation of the pest is high, Krishi Vigyan Kendra has taken

initiation to control the pest through biological means. Mass production and release of the introduced parasitoid *Acerophagus papayae* in the farmers field was carried out by Krishi Vigyan Kendra for the biological control of papaya mealy bug *Paracoccus marginatus*. Nearly 450 acres of cotton and tapioca fields have been covered by the supply of *Acerophagus papayae*. Awareness programmes on biological control of papaya mealy bug have been conducted throughout the district. More than 80% of the farmers of the district have good knowledge level on biological control of papaya mealy bug and releasing the parasitoid *Acerophagus papayae* in the field to reduce the infestation of Papaya mealy bug.

### **11.C. Details of impact analysis of KVK activities carried out during the reporting period**

#### **PRECISION FARMING TECHNOLOGY**

##### **Setting:**

One of the successful and result oriented programmes undertaken by the KVK, Sirugamani is implementation of precision farming project during 2007-08. It is imperative for any programme to evaluate its impact on the socio-economic conditions of the project beneficiaries, which in turn facilitated the continuance of the projects on a sustainable basis. Hence it was decided to carry out an impact analysis of the precision farming implemented in Kolakudi cluster of Thottiam taluk of Trichy District. The farmers were asked to give their response (i.e) before and after implementation of the project.

##### **Methodology:**

The data were collected by personal interview technique with 20 farmers besides having group discussion and observations methods. The salient findings emerged are presented hereunder.

The respondents were enthusiastic and forthcoming in adopting the precision farming techniques especially in cultivating the vegetable crops followed by paddy and sugarcane. The main motivating factors for the observed trend was due to exposure visits to precision farming fields at Dharmapuri and Krishnagiri districts on-campus training programmes on precision farming and its benefits by KVK, Sirugamani besides publications of articles in newspaper. In addition, Radio talks and Television programmes on success stories of progressive farmers of precision farming acted as complimentary and supplementary efforts, the farmers acknowledged. Before the project implementation farmers used to grow either chillies or onion in our area ranging from 25 cents to 50 cents only that too with less water availability. Groundnut and paddy were cultivated in 1 to 2 acres. However, due to implementation of the project, new vegetable hybrid crops like brinjal, bitter gourd, tomato, chillies were grown in an area of  $\frac{3}{4}$  to 1 acre, registering an 50 to 100 per cent increase, paddy and sugarcane crops also witnessed a quantum jump in acreage (i.e) upto 2 to 3 acres from  $\frac{1}{2}$  ac to 1 ac.

The impact of the project among the beneficiaries was transparent on most of the parameters selected for the investigation as given below.

#### **I. Chillies:**

The productivity of dry chillies on an average was 500 – 700 kg/ with Rs.15,000/- as cost of cultivation with a net return of Rs.40000/-. The green chillies production on an average was 1000 to 1200 kg/ac with Rs.20000 production cost. The net profit was Rs.40000/-. However after adopting precision farming techniques, farmers prepared to grow green chillies rather than dry chillies. The productivity rose to 1600 to 1800 kg/la (60 to 80% increase) with a production cost of Rs.25,000/-. The farmers were able to get 100 to 156 per cent increased net profit (i.e) Rs.50000/- to Rs.64000/-.

#### **II. Onion:**

The farmers considered onion as one of their revenue earning crops. The raised mostly in less areas with available irrigation water. The productivity ranged from 6000kg to 8000kg per acre in 2005-06 which has increased to 10000 to 11000 kg per acre under Precision Farming System in 2007-08. The net returns doubled due to techniques of storage and marketing techniques.

#### **III. Brinjal and Tomato:**

Cultivation of brinjal and tomato hybrids after introduction of precision farming project since they were considered as labour intensive and vulnerable to severe pests and disease attacks. The study tour to Dharmapuri and Krishnagiri dispelled the fears of farmers in this regard. The farmers knowledge and awareness level increased due to the on campus training programmes and interaction with KVK's Subject Matter Specialists. Most of the success stories were due to the higher yield of the crops, uniform in shape and size, quality of the produce obtained etc. Besides, regular follow up by the scientists to their fields from sowing to harvest boosted their conviction to go in for aggressive marketing of the produce in Uzhavar Sandhai and Gandhi Market. However, this arrangement could not be sustained now due to slump in demand and lesser price offered especially for brinjal due to preference. A local variety "Manapparai local" is preferred much over hybrids for its taste and keeping quality.

The brinjal productivity ranged from 25 to 40 tonnes/acre with cost of cultivation of Rs.38000/ac. The average net returns is Rs.92000 per acre. Similarly the average tomato productivity was 22 tonnes/acre with a production cost of Rs.20000/acre fetching a net return of Rs.25000/ac.

#### **IV. Bitter Gourd:**

Bitter gourd was cultivated for a longer time since returns are normally high, unlike the fluctuating trend in price of tomato and brinjal crops. However, this crop was also raised on a smaller area only. During 2005-06, the farmers were able to get an average yield of 10 tonnes/acre. The cost of cultivation was Rs.20000/ac and net returns was Rs.30000/ac.

After introduction of precision farming at kolakudi village, the yield increase was 60 per cent (i.e) 16 tonnes/ac. The average production cost was Rs.28000. The net returns witnessed a spectacular increase of 300 per cent (i.e) 1 lakh/acre. Many vegetable growers are preferring the bitter melon due to high returns compared to other crops. These growers were earlier grape growers and the Pandal System has come in handy for them to raise the crop.

#### **V. Other crops of interest to farmers:**

Due to the successful nature of the project, of late, few farmers are now growing crops like Turmeric, groundnut, bhendi, sunflower on an experimental basis in 25 cents to 40 cents which have to be studied in future. Paddy and sugarcane are other crops grown traditionally whenever monsoon rains are favourable to them.

#### **VI. Advantages of precision farming as felt by the farmers:**

The interaction with the farmers revealed interesting findings about various advantages of the project and they are given below.

- Increased knowledge level.
- Increased skill in operations.
- Favourable attitude towards farming.
- Less risk in agricultural operations.
- Overall efficiency increased in terms of

Water	- 40 to 50%
Fertilizer	- 60 to 75%
Energy	- 30 to 45%
Labour	- 40 to 50%
Plant Protection	- 25 to 35%
Sustainability	- 70%
Environmental pollution decreased	- 20 to 30%
Socio economic status improved	- 50 to 60%

#### **VII. Profile analysis of beneficiaries:**

Majority of the farmers are old (50 – 58 Years) studied up to secondary level. Agriculture was their main occupation followed by having small units of cows and goat for family use. It is interesting to note that every farmer had an average size holding of 5 to 7 acres and never had any land either leased out or leased in. Farming experience was more than 15 years. Not much difference was observed in cropping pattern during the last two years but the trend towards cultivating crops as per market demand are percolating into the minds of beneficiaries and neighbourhood farmers.



Farmers possessed to TV and cycle in 2005. They have scaled up to two wheelers now. Some have gone in for latest energy efficient scooters and motorbikes due to higher income earned. Tractor and its accessories have either been repaired or modified.

The project had made them to form precision farming association which in turns promoted 'We' feeling, team spirit communal harmony, zeal for progress, innovative ways of promoting agriculture as a viable, sustainable and ecofriendly business unemployed youths have been motivated to take up farming because of the subsidy given under the project.

KVK scientists were rated by the farmers as having regular contact with the beneficiaries and effective in tendering need based and timely technical guidance and inputs to them, followed by Agriculture and Horticulture extension officials. Among mass media, radio and news papers played a dominant role in transfer of technologies from KVK, Trichy.

Farmers are aware about market intelligence and assessment with the help of the computer and net connectivity provided to them every day at the house of the progressive farmer. The prices of the commodities are known to them either to move their produce nearby towns and cities which is slowly catching up among them.

Farmers have created additional assets by ay of more net returns realized. The project had helped than to undertake house repairs, vehicle which were kept pending for long time (Rs.15000 to Rs.50000). On an average they spent about Rs.50000/- for their children education, generous in sponsoring local festivals (Rs.2000 to 3000) and marriages (Rs.50000). An interesting trend observed was repayment of privies loan from money lenders. Most of the farmers ploughed back their profit upto (15-20%) for further expansion of their farming activities.

The impact was crystal clear in changing their dietary pattern as farmers moved from food security to nutritional security by way of spending more on items like pulses, fruits and vegetables. Consumption of move of eggs and poultry to an extent of 30 to 50 per cent of their earnings.

#### **Demands of the Farmers:**

The farmers expressed some constraints like sedimentation of salt in pipes/laterals, rat menace, difficult in transporting their produce to far away cities. They also wanted remunerative price for tomato and brinjal crops.

Farmers suggested increasing the subsidy amount, replacement of pipes after five years, supply of water soluble fertilizers at subsidized rate and also more quantity, supply of quality vegetable seeds in time etc.

On the whole, the KVK, Trichy has created a definite, spectacular impact on the Socio-economic conditions of the farmers at Kolakudi and its surrounding areas in Trichy District

## PART XII - LINKAGES

### 12.A. Functional linkage with different organizations

Sl. No.	Name of organization	Nature of Linkage
1.	<b>State Department</b> a) Department of Agriculture b) Department of Horticulture c) Department of Animal Husbandry d) Department of Forestry e) Department of Fisheries f) Department of Sericulture g) Department of Water Resources(PWD) h) Dist. Administration	<ul style="list-style-type: none"> <li>- A component of Agricultural technology Management Agency</li> <li>- Joint Diagnostic Survey and identification of problems and training needs, ATMA</li> <li>- For implementing developmental programmes under NHM</li> <li>- For implementing precision farming project</li> <li>- Joint Veterinary and animal health campaign</li> <li>- Conducting training programmes and demonstrations at field level.</li> <li>- Participation in mass contact programmes</li> <li>- Farm Advisory service</li> <li>- Impact analysis</li> <li>- Conducting OFT</li> <li>- Conducting entrepreneurial training programme</li> <li>- Sharing of resource persons</li> <li>- Village adoption programme</li> <li>- Participation in Scientific Advisory Committee Meeting.</li> <li>- Participation in district level advisories.</li> </ul>
2.	<b>Government Of India</b> a. National Research Centre for Banana, Trichy b. Central Integrated Pest Management Centre, Trichy c. Indian Institute of Crop Processing Technology, Thanjavur d. IIHR, Bangalore e. CIPHET	<ul style="list-style-type: none"> <li>- Exchange of technologies developed, Organising Workshops, Seminars on Banana.</li> <li>- Sharing of resource persons and joint field surveys</li> <li>- Collaborative research under NAIP.</li> <li>- Evaluation of elm mushroom</li> <li>- Banana Comb cutter OFT collaboration</li> </ul>
3.	<b>Financial Institutions</b> a) NABARD b) Nationalised Banks c) Indian Overseas Bank (Lead Bank)	<ul style="list-style-type: none"> <li>- Conducting training programme for the selected cluster of villages on sponsored basis by NABARD</li> <li>- Participation in village meetings.</li> <li>- Capacity Building of bank official</li> </ul>

Sl. No.	Name of organization	Nature of Linkage
	d) Primary Agrl.Co-operative Societies	<ul style="list-style-type: none"> <li>- Participation in Scientific Advisory Committee meetings.</li> <li>- Participation in training need assessment-farmers scientist interface.</li> <li>- Guidance to Agri Clinic cum Mini Soil Testing Labs maintained by the PACS.</li> </ul>
4.	<p><b>Mass Media</b></p> <p>a) All India Radio, Trichirapalli</p> <p>b) T.V. Channels</p> <p>c) Doordarshan</p> <p>c) Newspapers and magazines (Dhina Malar, Dhina Thanthi, Dina karan, The Hindu, Kisan World)</p>	<ul style="list-style-type: none"> <li>- Spreading of Success Stories of Entrepreneurs of KVK</li> <li>- Dissemination of latest technologies for farmers adoption.</li> <li>- Participation in Rural Advisory Committee meetings.</li> <li>- Providing radio messages and talks.</li> <li>- Announcing KVK training programmes.</li> <li>- Lectures and Demonstrations on latest agricultural Technology.</li> <li>- Publication of research and popular articles.</li> <li>- Publication of TOT activities.</li> </ul>
5.	<p><b>Non-Government Organisations (NGO)</b></p> <p>a) AME</p> <p>b) SPPD</p> <p>c) SEVAI</p> <p>d) LEAD</p>	<ul style="list-style-type: none"> <li>- Providing Resource Scientists for FFS under ATMA</li> <li>- Providing trainings to animators and Self Help Groups.</li> <li>- Conducting off-campus trainings and village meeting</li> <li>- Helping in implementing developmental programmes</li> </ul>
6.	<p><b>Agro Chemical and Fertilizer Firms</b></p> <p>a) IFFCO</p> <p>b) SPIC</p> <p>d) Mangalore Chemical and Fertilizers</p> <p>e) Karnataka Agro Chemical</p>	<p>Organising collaborative agrl.programmes for farmers and broadcast thro' AIR.</p> <p>Farmers' Day and arranging Exhibition.</p> <ul style="list-style-type: none"> <li>- Conducting demonstrations in farmer's holding.</li> <li>- Capacity building of the input dealers.</li> </ul>
7.	<p><b>Research &amp; Educational Institutions</b></p> <p>a) Cotton Research Station, Perambalur</p> <p>b) Anbil Dharmalingam Agrl. College &amp; Res. Institute, Trichy</p> <p>c) Agrl. Engg. College and Research Institute, Kumulur.</p> <p>d) Sugarcane Research Station, Sirugamani</p>	<ul style="list-style-type: none"> <li>- Sharing Technical expertise and resource persons for training.</li> <li>- Participation in village meetings in the adopted villages.</li> <li>- Providing trainings to students and farmers.</li> </ul>

Sl. No.	Name of organization	Nature of Linkage
	e) Horticultural college & research Institute, Periyakulam f) National Pulse Research Centre, Vamban g) Agricultural Research Station, Vaigaidam	- Collaboration in research activities. - Participation in Kisan Melas and Fairs. - Diagnosis of problems and analysis. - Technology identification and prioritization - Processing and Value addition in mushroom. - Supply of foundation and certified seeds.
8.	<b>District Administration</b> a) Trichy District b) Karur District c) Perambalur district	- Technical expertise on agricultural development of the district under ATMA - Providing entrepreneurship trainings to Self-Help Groups. - Participation in Farmer's Grievances Day. - Membership in district level Co-ordination committee viz., Waste land development, watershed development and free land distribution etc.,
9.	<b>Other institutes</b> a. University Training and Research Centre(UTRC) of TANUVAS , Trichy b. Irrigation Management & Training Institute(IMTI) Trichy c.EID Parry Sugar factory, Pettavaithalai	- Diagnostic field visits and sharing of resource persons. - Participation of KVK scientist as resource persons. - Conducting exhibitions, trainings, implementation of schemes.

**12.B. List special programmes undertaken by the KVK and operational now, which have been financed by State Govt./Other Agencies**

Name of the scheme	Date/ Month of initiation	Funding agency	Amount (Rs.)
Precision farming			

**12.C. Details of linkage with ATMA**

a) Is ATMA implemented in your district : Yes

If yes, role of KVK in preparation of SREP of the district?

S. No.	Programme	Nature of linkage	Remarks
1	District level action plan has been finalized. Series of training programme were organized about ATMA guidelines and implementation for the benefit of different stake holders and extension officials at various levels.	District level co-ordination with all development departments and NGOs for holistic perspective planning and implementation	SREP prepared

#### Coordination activities between KVK and ATMA during 2010-11

S. No.	Programme	Particulars	No. of programmes attended by KVK staff	No. of programmes Organized by KVK	Other remarks (if any)
01	<b>Meetings</b>		6		
02	<b>Research projects</b>			1	
03	<b>Training programmes</b>				
04	<b>Demonstrations</b>				
05	<b>Extension Programmes</b>				
	Kisan Mela				
	Technology Week				
	Exposure visit				
	Exhibition		1		
	Soil health camps				
	Animal Health Campaigns				
	Others (Pl. specify)				
06	<b>Publications</b>				
	Video Films				
	Books				
	Extension Literature				
	Pamphlets				
	Others (Pl. specify)				
07	<b>Other Activities</b> (Pl. specify)				
	Watershed approach				
	Integrated Farm Development				

S. No.	Programme	Particulars	No. of programmes attended by KVK staff	No. of programmes Organized by KVK	Other remarks (if any)
	Agri-preneurs development				

**12.D. Give details of programmes implemented under National Horticultural Mission**

S. No.	Programme	Nature of linkage	Funds received if any Rs.	Expenditure during the reporting period in Rs.	Constraints if any
NIL					

**12.E. Nature of linkage with National Fisheries Development Board**

S. No.	Programme	Nature of linkage	Funds received if any Rs.	Expenditure during the reporting period in Rs.	Remarks
NIL					

**12.F. Details of linkage with RKVY**

S. No.	Programme	Nature of linkage	Funds received if any Rs.	Expenditure during the reporting period in Rs.	Remarks
NIL					

**12. G Kisan Mobile Advisory Services**

Month	No. of SMS sent	No. of farmers to which SMS was sent	No. of feedback / query on SMS sent
April 2010			
May			
June			
July			
August			
September			
October			
November			
December			
January 2011			
February			
March			

### PART XIII- PERFORMANCE OF INFRASTRUCTURE IN KVK

#### 13.A. Performance of demonstration units (other than instructional farm)

Sl. No.	Demo Unit	Year of establishment	Area (ha)	Details of production			Amount (Rs.)		Remarks
				Variety	Produce	Qty.	Cost of inputs	Gross income	
1.	Shade net	2005	40 sq.m	Vegetable seedlings	Seedlings	20905 nos	1450	8371	-
2.	Vermicompost unit	2006	60 sq.m	Vermicompost	VermiGold	2000 kg	2500	10000	-
3.	Mushroom production unit	2006	15 sq.m	Mushroom	Fresh mushroom	120 kg	600	8400	-

#### 13.B. Performance of instructional farm (Crops) including seed production

Name of the crop	Date of sowing	Date of harvest	Area (ha)	Details of production			Amount (Rs.)		Remarks
				Variety	Type of Produce	Qty. (qtl)	Cost of inputs	Gross income	
Cereals									
Paddy	09.09.10	04.02.11	1.4	BPT 5204	TFL	55	52000	110000	-
Pulses									
Blackgram	01.02.11								In progress. Will be harvested in February 2011
Oilseeds									
Fibers									

Spices & Plantation crops									
Curry leaf		Perennial	0.1	Shenkambu	Seedlings	200 nos	400	1000	-
Coconut	22.09.09		0.1	ECT	Seedlings	1656 nos	18216	41400	-
Floriculture									
Ornamentals		Perennial	0.2	Foliage ornamentals	Cuttings	450 nos	850	3500	-
Fruits									
Guava		Perennial	0.1	Red flesh, Lucknow 49 & 46	Fruits	5	875	2500	-
Mango		Perennial	0.1	Neelam, Bangalora	Fruits	1.5	450	1500	-
Vegetables									
Tomato			0.1	Lakshmi	Seedlings	6090 nos	450	2436	-
Chilli			0.1	Priyanka	Seedlings	4478 nos	300	1800	-
Brinjal			0.1	Manapparai, Ravia	Seedlings	10337 nos	700	4135	-
(Others) Fodder grass		Perennial	0.2	Co4	Slips	255845 nos	41450	115130	-

### 13.C. Performance of production Units (bio-agents / bio pesticides/ bio fertilizers etc.,)

Sl. No.	Name of the Product	Qty	Amount (Rs.)		Remarks
			Cost of inputs	Gross income	
1.	VermiGold	2000 kg	2500	10000	-



**13.D. Performance of instructional farm (livestock and fisheries production)**

Sl. No	Name of the animal / bird / aquatics	Details of production			Amount (Rs.)		Remarks
		Breed	Type of Produce	Qty.	Cost of inputs	Gross income	
1.	Fisheries	Cutla, Rogue, Mirgal	Table purpose	75 kg	2500	5400	

**13.E. Utilization of hostel facilities**

Accommodation available (No. of beds)

Months	No. of trainees stayed	Trainee days (days stayed)	Reason for short fall (if any)
April 2010			
May 2010	1	3	-
June 2010	-	-	-
July 2010	2	1	-
August 2010	1	1	-
September 2010	160	8	-
October 2010	83	11	-
November 2010	-	-	-
December 2010	-	-	-
January 2011	200	10	-
February 2011	-	-	-
March 2011	360	18	-

**13.F. Database management**

<b>S. No</b>	<b>Database target</b>	<b>Database created</b>
1.	FLD , OFT , Training, Extension activities	FLD , OFT , Training, Extension activities for the year 2010-11
2.	District profile	District profile for the year 2010-11

**13.G. Details on Rain Water Harvesting structure and micro-irrigation system : NIL**

<b>Amount sanction (Rs.)</b>	<b>Expenditure (Rs.)</b>	<b>Details of infrastructure created / micro irrigation system etc.</b>	<b>Activities conducted</b>					<b>Quantity of water harvested in '000 litres</b>	<b>Area irrigated / utilization pattern</b>
			<b>No. of Training programmes</b>	<b>No. of Demonstrations</b>	<b>No. of plant materials produced</b>	<b>Visit by farmers (No.)</b>	<b>Visit by officials (No.)</b>		

## PART XIV - FINANCIAL PERFORMANCE

### 14.A. Details of KVK Bank accounts

Bank account	Name of the bank	Location	Branch code	Account Name	Account Number	MICR Number	IFSC Number
With Host Institute	State Bank of India	Kulithalai	00863	SB a/c	11253326896		000863
With KVK	-	-	-	-	-	-	-

### 14.B. Utilization of funds under FLD on Cotton (*Rs. in Lakh*) : NIL

S. No	Items / Head	Opening balance if any	Remittance by ZPD VIII Bangalore	Actual expenditure debit to Council A/C	Closing balance if any	Remarks
1	Production Technology – 50 ha					
	a. Essential inputs					
	b. POL, hiring vehicle, Kisan melas, printed materials, reports, demonstration boards					
	Total					
2.	Farm Implements – 75 ha					
	a. New equipments					
	b. Contingencies					
	Total					

**14.C. Utilization of KVK funds during the year 2010-11 (Rs. in lakh)**

S.No.	Particulars	Sanctioned	Released	Expenditure
<b>A. Recurring Contingencies</b>				
1	Pay & Allowances	45.0	5883254	64.22301
2	Traveling allowances	1.25		1.24946
3	Contingencies			
A	Stationery, telephone, postage and other expenditure on office running, publication of Newsletter and library maintenance (Purchase of News Paper & Magazines)	2.0		1.99791
B	POL, repair of vehicles, tractor and equipments	1.6		1.59896
C	Meals/refreshment for trainees (ceiling up to Rs.40/day/trainee be maintained)	1.0		0.99780
D	Training material (posters, charts, demonstration material including chemicals etc. required for conducting the training)	0.4		0.40079
E	Frontline demonstration except oilseeds and pulses (minimum of 30 demonstration in a year)	1.95		1.94607
F	On farm testing (on need based, location specific and newly generated information in the major production systems of the area)	0.9		0.57389
G	Training of extension functionaries	0.25		0.25000
H	Maintenance of buildings	0.3		0.29940
I	Establishment of Soil, Plant & Water Testing Laboratory	0		0
J	Library	0.5		0.4812
K	Extension activities	0.3		0.29449
L	FFS	0.25	0.23764	
<b>TOTAL (A)</b>		<b>55.25</b>		<b>74.11754</b>
<b>B. Non-Recurring Contingencies</b>				
1	Works			
2	Equipments (LCD, EPABX, Powertiller, generator)	4.0		4.0
3	Vehicle	0		0
4	Library (Purchase of assets like books & journals)	0.1		0.1
<b>TOTAL (B)</b>		<b>4.1</b>		<b>4.1</b>
<b>C. REVOLVING FUND</b>				
<b>GRAND TOTAL (A+B+C)</b>		<b>59.35</b>	<b>51.0</b>	<b>78.21754</b>

**14.F. Status of revolving fund (Rs. in lakh) for the three years**

Year	Opening balance as on 1 <sup>st</sup> April	Income during the year	Expenditure during the year	Net balance in hand as on 1 <sup>st</sup> April of each year
April 2008 to March 2009	1.17066	5.96259	4.04771	3.08554
April 2009 to March 2010	3.08554	3.59984	2.77321	3.91217
April 2010 to March 2011	3.91217	5.07116	3.43587	5.54746

**15. Details of HRD activities attended by KVK staff during 2010-11**

Name of the staff	Designation	Title of the training programme	Institute where attended	Dates
L. Karpagapandi	SMS (FSN)	International Conference on Food Technology (Edition II)	IICPT, Thanjavur	30.10.10 – 31.10.10
		Training cum Workshop on Strengthening gender perspective in agricultural sciences and extension	TANUVAS Head Quarters, Chennai	24.01.11 - 25.01.11
		“Recent Trends in Post Harvest Technology”	IICPT, Thanjavur	23.03.2011 - 25.03.2011
M. Malarkodi	SMS (SS&AC)	International Conference on Bioresource Technology	Nirmala College for Women, Coimbatore	7.08.10 - 8.08.10
		Southern Regional Seminar cum training for the soil testing personnel	TNAU, Coimbatore	15.12.10 and 16.12.10
		National Seminar on Soil Health	TNAU, Coimbatore	17.03.11 - 18.03.11
		Training on Advances in Soil Health and Fertility Management	TNAU, Coimbatore	21.03.11 - 23.03.11
Dr.M.Ravi	SMS (PP)	Papaya mealy bug parasitoid production	TNAU, Coimbatore	13.10.10

Name of the staff	Designation	Title of the training programme	Institute where attended	Dates
		National consultation workshop on strategies for the deployment of parasitoids for the classical biological control of papaya mealy bug	NBAII, Bangalore	30.10.10
		Introduction to data analysis using statistical analysis system (SAS)	TNAU, Coimbatore	27.12.10 – 31.12.10
		IPDM strategies for high value crops	TNAU, Coimbatore	24.03.11 & 25.03.11
Dr.C.Cinthia Fernandaz	SMS (Ag.Exn)	International Conference on Bioresource Technology	Nirmala College for Women, Coimbatore	7.08.10 and 8.08.10
		Alternate poultry farming system	KVK, Namakkal	24.11.10 – 26.11.10
Dr.S.Easwaran	SMS (Horti)	Pre and post harvest techniques for seed quality analysis	TNAU, Coimbatore	20.11.10 – 22.11.10
		Protected cultivation of Horticultural crops	TNAU, Coimbatore	28.03.11 – 29.03.11
Ms.P.Yamuna devi	PA (Comp)	Database management	TNAU, Coimbatore	29.03.11 – 31.03.11

16. Please include any other important and relevant information which has not been reflected above (write in detail).

NIL

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