ANNUAL REPORT 2010-11

(FOR THE PERIOD APRIL 2010 TO MARCH 2011)

KRISHI VIGYAN KENDRA, THIRUVARUR

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, Needamangalam Thiruvarur District PIN – 614 404	04367- 260666 04367- 261444	04367- 260666	kvkndm@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- 2431222	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. T. Senguttuvan	04362- 246980	9443450818	senguttuvant@.yahoo.co.in

1.4. Year of sanction: 01.08.2004

1.5. Staff Position (as 31st March 2011)

Sl. No.	Sanctioned post	Name of the incumbent	Designation	M/F	Discipline	Highest Qualification	Pay Scale	Basic pay	Date of joining KVK	Permanent /Temporary	Category (SC/ST / OBC/ Others)
1	Programme Coordinator	Dr. T. Senguttuvan	Professor & Head	M	Agrl. Entomology	Ph.D	37400-67000+ AGP 10000	59,310	05.08.2009	Permanent	OBC
2	SMS	Dr. G. Sudhagar	Asst. Professor	M	Agronomy	Ph.D	15600-39100+ AGP 7000	29,830	12.04.2010	Permanent	SC
3	SMS	Dr. M. Ramasubramanian	Asst. Professor	M	Agrl. Extension	Ph.D	15600-39100+ AGP7000	29,830	14.07.2010	Permanent	OBC
4	SMS	Dr.P. Geetha	Asst.Professor	F	Food Science & Nutrition	Ph.D	15600-39100+ AGP 7000	29,830	23.07.2010	Permanent	FC
5	SMS	Dr. K. Kumanan	Asst.Professor	M	Horticulture	Ph.D	15600-39100+ AGP 6000	25,600	30.12.2009	Permanent	SC
6	SMS	Dr. S. Anandhakrishnaveni	Asst.Professor	F	Agronomy	Ph.D	15600-39100+ AGP 6000	25,600	12.01.2010	Permanent	SC
7	SMS	Dr. M. Senthilkumar	Asst.Professor	M	Agrl. Entomology	Ph.D	15600-39100+ AGP 6000	25,600	20.01.2010	Permanent	SC
8	Programme Assistant (Lab Tech.)/T-4	Mrs. D. Reka	Programme Assistant (Technical)	F	Home Science	B.Sc	9300-34800-GP 4400	15,995	04.06.2007	Permanent	OBC
9	Programme Assistant (Computer)/ T-4	Mrs. R. Sakunthala	Programme Assistant (Computer)	F	Computer application	MCA	9300-34800-GP 4400	15,070	03.12.2008	Permanent	OBC
10	Programme Assistant/ Farm Manager	Mr. C. Bakkiyanathan	Farm Manager	M	Agriculture	B.Sc	9300-34800-GP 4400	13,700	24.02.2011	Permanent	MBC
11	Assistant	Mr. S. Swaminathan	Suprintendent	M	-	-	9300-34800-GP 4900	19,280	07.03.2011	Permanent	FC

12	Jr. Stenographer	Ms. C. Thillaiselvi	Junior Assistant cum typist	F	-	-	5200-20200-GP 2000	7,600	28.02.2011	Permanent	MBC
13	Driver	Mr. J. Senthil	Driver	M	-	-	5200-20200-GP 2000	7,700	02.02.2011	Permanent	
14	Driver	Mr. N. Jaishankar	Office Attendant	M	-	-	4800-10000-GP 1300	8,810	02.02.2011	Permanent	MBC
15	Supporting staff	Mr.S.Arockiadoss	PUSM	M	-	-	4800-10000-GP 1300	7,560	01.07.2008	Permanent	SC
16	Supporting staff	Mr..M.Kumaran	MTSP	M	-	-	2500-5000-GP 500	3,090	01.04.2009	Permanent	SC

1.6. Total land with KVK (in ha) : 19.40 ha

S. No.	Item	Area (ha)
1	Under Buildings and demo units	2.96
2.	Under Road	0.50
3.	Under Crops	7.90
4.	Old threshing floor, ditch & Others	8.04

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	ICAR	23.2.08	548.24	42.47			
2.	Farmers Hostel	ICAR	23.2.08	353.00	27.00			
3.	Staff Quarters	ICAR	23.2.08	459.00	32.00			
4.	Demonstration Units							
	1. Vermicompost	ICAR-RF	31.03.07	30	-			
	2.Mushroom	ICAR-RF	31.03.07	20	-			
	3. Community shade net nursery	NADP	03.02.08	930	1.0			
	4. Precision farming	NADP	31.03.08	10,000	2.0			
	5. Azolla production	ICAR-RF	05.07.09	120	-			
	6.Organic farm	GOI- NCOF	01.04.07	14,000	4.0			
	7. Slatted house goat rearing	ICAR-RF	30.11.09	24	15,000			
	8. Back yard poultry	ATMA	30.11.09	36	50,000			
	9. Farm pond –composite fish culture demo	ICAR	18.11.10	3500	2,00,000			
	10. Demo unit -biocontrol production unit	ICAR	20.03.11	160	4,00,000			
5	Fencing	ICAR		1200 RM	5,00,000			
6	Rain Water harvesting system	Govt. of TN	31.03.07	1320	36,000			
7	Threshing and drying yard	ICAR	20.3.11	394	2,00,000			
8	Farm godown	Govt. of TN-SSF	-	3 Nos	-			
9	Vehicle and Implement shed	ICAR	20.03.11	37	3,00,000/-			
10	Farm road	ICAR	29.3.11	2200	2,00,000/-			
11.	Irrigation system	ICAR	18.11.10	282 RM	1,00,000/-			

B) Vehicles

Type of vehicle	Year of purchase	Cost (Rs.)	Total kms. Run	Present status
Jeep - Bolero-LX-2HD	2004	4,40,751	85076	Good running condition
Tractor with Trailer - Mahindra & Mahindra D1-475-40 HP (MICO)	2004	4,37,607	988 hrs	Good running condition
Two wheeler - TVS STAR CITY	2006	39,400	20955	Good running condition
Two wheeler – Honda Activa	2009	50,000	6449	Good running condition
Power tiller – VST Sakti	2011	1,35,870	-	Good running condition

C) Equipments & AV aids

Name of the equipment	Year of purchase	Cost (Rs.)	Present status
Computer with accessories	March, 2005	74,950/-	Good
Digital Copier cum Printer	March, 2005	71,400/-	Good
Samsung 4521 F Laser jet model Fax and printer	February, 2009	14,400/-	Good
Video camera – Sony with accessories	March , 2011	25,000/-	Good
LCD projector with accessories	March , 2011	97,000/-	Good
Generator	March , 2011	1,35,980/-	Good
PAS	March , 2011	20,820/-	Good
Land leveler	Jan’ 2011	10,000/-	Good
Furniture and furnishing	March , 2011	2,00,000/-	Good
SWTL	March , 2011	10,00,000	Good
EPABX	March , 2011	43,310	Good

1.8. Details SAC meeting conducted in 2010-11

S.No	Date	Number of Participants	No. of absentees	Salient Recommendations	Action taken
Nil					

PART II - DETAILS OF DISTRICT

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

S. No	Farming system/enterprise
1.	Rice based cropping system

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

S. No	Agro-climatic Zone	Characteristics
1.	Cauvery delta zone	Alluvial terrain with gentle slope

S. No	Agro ecological situation	Characteristics
1.	Wet land eco system	Low land delta plain

2.3 Soil types

S. No	Soil type	Characteristics	Area in ha
1.	Clay to clay loam- old delta	Low land	1,27,506
2.	Sandy to sandy clay loam- New delta	Light textured low level laterite soil	27,048

2.4. Area, Production and Productivity of major crops cultivated in the district (2008-09)

Total geographical area : 2,09,709 ha

Net area sown : 1,54,554 ha (73.7%)

Net area sown more than once : 1,08,319 ha (51.7%)

Total cropped area : 2, 62,873 ha

Area under food crops : 2,53,878 ha

Area under non food crops : 8995 ha

Area, Production and Productivity of major crops cultivated in the district (2008-09)

S. No	Crop	Area (ha)	Production (Metric tons)	Productivity (kg /ha)
1.	Rice	1, 78,040	2,06,611	1,160
2.	Maize	1	6	5,992
3.	Pulses Black gram Green gram	72,198 41360 30838	12,242 10290 1952	312 249 63
4.	Sugar cane	2,370	2,51,727	1,06,000 (in terms of cane)
5.	Cotton	493	1054 (in bales of 170 kg lint)	363 (in terms of lint)
6.	Groundnut	1223	2457	2009
7.	Gingelly	1026	369	359
8.	Coconut	5366	953	17762 (nuts)
9.	Horticultural crops	1251	-	-
10.	Others	7523	-	-
	Total cropped area	**2,62,873**	-	-

Source: Season and Crop Report, Tamil Nadu 2008-09

2.5. Weather data

Month	Rainfall (mm)	Temperature ^{0} C		Relative Humidity (%)
		Maximum	Minimum	
April 10	8.0	34.7	26.8	86
May 10	57.5	35.3	27.1	86
June 10	83.5	34.4	26.5	83
July 10	15.5	33.9	26.1	78
August 10	93.0	34.6	25.7	82
September 10	89.0	32.3	25.0	86
October 10	164.0	32.3	25.1	85
November 10	307.5	28.6	23.8	88
December 10	187.0	27.4	22.2	87
January 11	-	28.6	20.7	87
February 11	-	30.2	21.0	82
March 11	-	32.4	22.4	86

Source: AWS at KVK

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

Category	Population	Production	Productivity
Cattle			
Crossbred			
Indigenous	332022		
Buffalo	56666		
Sheep			
Crossbred			
Indigenous	16050		
Goats	375318		
Pigs	2047		
Crossbred			
Indigenous			
Rabbits			
Poultry			
Hens			
Desi	25545		
Improved			
Ducks			
Turkey and others			
C**ategory**	**Area**	**Production**	**Productivity**
Fish			
Marine	47 km	500 t	
Inland	200ha	8700t	
Prawn			
Scampi			
Shrimp			

Source : Thiruvarur district statistical hand book 2005-2006

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

2.8 Details of Operational area / Villages

S. No.	Taluk	Name of the block	Name of the village	How long the village is covered under operational area of the KVK	Major crops & enterprises	Major problem identified	Identified Thrust Areas
1.	Needamangalam Valangaiman	Needamangalam Valangaiman	Ayyampettai, Keela amaravathy & Mela amaravathy	5	Sugarcane	Low yield in existing variety	Increasing the productivity of sugarcane
2.	Needamangalam, Mannargudi	Needamangalam, Mannargudi	Nagar, Karikkottai, Vadamangalam	2	Rice	Severe weed infestation and high weed seed inoculums	Integrated weed management
3.	Mannargudi	Mannargudi	Melanagai	6	Vegetables	Yield reduction due to fusarium wilt infection during hot summer	Eco friendly management of pests and diseases through Integrated Pest Management
4.	Kudavasal	Kudavasal	Manaparavai, Melapalaiyur, thathangudi	1	Rice	Severe yield losses due to stem borer, Indiscriminate application of pesticides	Eco friendly management of pests and diseases through Integrated Pest Management
5.	Needamangalam	Needamangalam	Vepanthangudi, Nathangudi, Vadakkucheryy	1	Rice	Drudgery in cono weeder operation. Non availability of labour for hand weeding.	Farm mechanization in rice
6.	Needamnagalam	Needamangalam	Rayapuram, Keelapattu	1	Rice	Non availability of hybrid quality seeds.	Integrated crop management
7.	Needamangalam	Needamangalam	Pullavarayankudikadu, Devangudi	5	Fishery	Low income from composite carp culture	Popularization of Polyculture to boost farmer's income

8.	Needamangalam	Needamangalam	Devangudi, Keelalvandancheri,	5	Dairy cows	Low milk yield due to no supplementation of mineral mixture	Animal health management
9.	Mannargudi	Mannargudi	Mahadevapattinam, Melanagai	5	Groundnut	Non adoption of high yielding variety, Poor soil and crop management practices.	Integrated crop management
10.	Mannargudi, Needamangalam	Kottur, Needamangalam	Palaiyur , Vadamangalam	2	Black gram	Low yield due to use of traditional/local variety, Non adoption of seed treatment & Poor nutritional management	Increasing the productivity of rice and rice fallow crops
11.	Valangaiman	Valangaiman	Pulavarnatham	4	Green gram	Low yield due to the use of local varieties & Inadequate nutrient management	Increasing the productivity of rice and rice fallow crops
12.	Kudavasal, Needamangalam	Kudavasal, Needamangalam	Chikkapattu, Pilavadi, Chitthadi, Poovanur, Perambur	3	Rice	Delayed operation due to labour scarcity leads to poor yield.	Farm mechanization
13.	Mannargudi	Mannargudi	Alankottai		Rice	Heavy infestation of algae in paddy field.	Integrated crop management
14.	Needamangalam	Needamangalam	Parappanamedu, keelapoovanur, Perambur, Chitthamalli	2	Rice	Low productivity due to traditional method of cultivation with low yielding varieties.	Saving of inputs and increasing the returns through SRI

15.	Kudavasal	Kudavasal	Paruthiyur	3	Rice	Severe yield losses due to stem borer, Indiscriminate application of pesticides.	Eco friendly management of pests and diseases through Integrated Pest Management
16.	Needamangalam	Needamangalam	Vadakkupattam, Nadupadugai, Orathur	3	Banana	Low income under local vegetable production system	Promoting horticultural crops for enhancing the returns
17.	Thiruvarur, Mannargudi, Needamangalam	Thiruvarur, Koradacherry, Mannargudi, Needamangalam	Enkan, Devangudi, Boothamangalam, Mangudi	2	Fodder grass	No awareness about fodder grass	Enhancing the farm revenue through alternate farming / cropping
18.	Mannargudi, Thiruthuraipoondi, Needamangalam	Mannargudi, Thiruthuraipoondi, Needamangalam	Sundarakottai, Kovilvenni, Thiruthuraipoondi, Ayyampettai	2	Fodder bank	No awareness about fodder grass	Enhancing the farm revenue through alternate farming / cropping
19.	Mannargudi, Needamagalam	Mannargudi, Needamagalam	Sundarakottai, Ullikottai, Paravakootai, Edamelaiyur	3	Cocoa	Non- utilization of interspaces and thus low income from coconut as sole crop	Inter cropping
20.	-	-	-	-	Rice fallow pulses & oilseeds	Low yield in rice fallow due to terminal drought	Popularization of mobile sprinklers for pulses as water saving techniques
21.	Needamangalm	Needamangalm	Chithamalli, Orathur	2	Poultry	Improving the status of farm women through backyard poultry with cross breeds	Enhancing the farm revenue through alternate farming / cropping

22.	Needamangalam	Needamangalam	Risiyur	1	Poultry	Improving the status of farm women through backyard poultry with cross breeds	Enhancing the farm revenue through alternate farming / cropping
23.	Needamangalam, Mannargudi	Koracherry, Mannargudi	Enkan, Thirumeni	2	Goat	Improving the status of farm women through backyard poultry with cross breeds	Enhancing the farm revenue through alternate farming / cropping
24.	Needamangalam	Needamangalam	Keelapattu, Vilathur, Vadamangalam	2	Fishery	Low income from existing composite fish culture and thus increasing the profits.	Alternate fish farming

2.9 Priority thrust areas

- Increasing the productivity of rice and rice fallow crops
- Enhancing the farm revenue through alternate farming / cropping
- Farm mechanization in rice
- Saving of inputs and increasing the returns through SRI
- Promoting horticultural crops for enhancing the returns
- Popularization of mobile sprinklers for pulses as water saving techniques
- Popularization of inland fish culture to boost farmer's income
- Mounting income through Integrated Crop Management
- Eco friendly management of pests and diseases through Integrated Pest Management
- Integrated Weed Management
- Improving the soil fertility
- Animal health management

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
8	8	44	44	16	16	220	220

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
77	77	2393	2393	916	916	10569	10569

Seed Production (Qtl.)		Planting materials (Nos.)	
5		6	
Target	Achievement	Target	Achievement
160	180.1	-	584

Livestock, poultry strains and fingerlings (No.)		Bio-products (Kg)	
7		8	
Target	Achievement	Target	Achievement
-	172	-	8349

3.B 1. Abstract of interventions undertaken based on thrust areas identified for the district as given in Sl.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 (extension personnel)	Extension activities (No.)	Supply of seeds (Qtl.)	Supply of planting materials (No.)	Supply of live stock (No.)	Supply of bio products	
													No.	Kg
1.	Increasing the productivity	Sugarcane	Non availability of promising sugarcane varieties	Evaluation of sugarcane varieties	-	-	-	-	Demo – 1	-	Sugar cane setts – 15,000	-	-	-
2.	Eco friendly management of pests and diseases through Integrated Pest Management	Rice	Yield reduction due to fusarium wilt infection during hot summer	Management of Fusarium wilt	-	-	-	-	Demo - 1	-	-	-	-	Pseudomonas – 1 Kg Neem cake – 100 Kg
3.	Integrated weed management	Rice	Severe weed infestation and high weed seed inoculums	Integrated weed management for direct sown wet seeded rice	-	-	-	-	Demo -1	-	-	-	-	Sofit – 3.5 l
4.	Integrated crop management	Rice	Drudgery in cono weeder operation. Non availability of labour for hand weeding.	Assessing different weeders in SRI	-	-	-	-	Demo -1	-	-	-	-	-

5.	Integrated Pest Management	Rice	Yield reduction due to False Smut disease in Samba paddy	Management of False Smut disease in Samba paddy	-	-	-	-	Demo -1	-	-	-	-	Copper hydroxide – 550 g Propiconozole -500 ml Pseudomonas –5 Kg Carbendzim + Mancozeb - 1Kg
6.	Integrated crop management	Rice	Non availability of hybrid quality seeds.	Production of Hybrid rice CORH3 in farmer's participatory approach.	-	-	-	-	Demo -1 Leaflet - 1	CORH3 Rice A line – 16 Kg R line – 8 Kg ADT 43 – 56 Kg	-	-	-	-
7.	Popularization of Polyculture and Murrel fish culture to boost farmer's income	Fishery	Low income from composite carp culture	Polyculture in Inland Fisheries in Delta Region using Stunted Fingerlings	-	-	-	-	-	-	-	Stunted fingerlings – 2500 Fresh water prawn – 2500	-	-
8.	Animal health management	Dairy cows	Low milk yield due to no supplementation of mineral mixture	Area specific mineral mixture for dairy cows	-	-	-	-	Demo – 1 Leaflet - 1	-	-	-	-	200 kgs of mineral mixture.

9.	Integrated crop management	Ground nut	Non adoption of high yielding variety, Poor soil and crop management practices.	-	Farmers' participatory seed production in groundnut	1	-	-	Demo -1 Field day-1 Paper news - 1	300 kg of groundnut	-	-	-	Pseudomonas – 2 Kg TNAU groundnutrich – 20 Kg
10.	Increasing the productivity of rice and rice fallow crops	Black gram	Low yield due to use of traditional/local variety, Non adoption of seed treatment & Poor nutritional management	-	ICM in rice fallow black gram	1	-	1	Demo – 3. Field day-1	ADT 3 – 180kg.	-	-	-	Pseudomonas –2 Kg Rhizopium – 3 kg Phosphobacteria – 3 Kg
11.	Increasing the productivity of rice and rice fallow crops	Green gram	Low yield due to the use of local varieties & Inadequate nutrient management	-	ICM in rice fallow green gram	1	-	-	Demo -3 Field day-1	ADT 3 – 180kg.	-	-	-	Pseudomonas –2 Kg Rhizopium – 3 kg Phosphobacteria – 3 Kg
12.	Farm mechanization	Rice	Delayed operation due to labour scarcity leads to poor yield.	-	Mechanization in rice	2	-	-	Demo -1 Filed day - 1	-	-	-	-	-

13.	Integrated crop management	Rice	Heavy infestation of algae in paddy field	-	Integrated algal management in rice eco system	1	-	-	Field day-1	-	-	-	Rotary weeder - 10	Potash – 500 Kg $CuSO_4$ – 12 Kg
14.	Saving of inputs and increasing the returns through SRI	Rice	Low productivity due to traditional method of cultivation with low yielding varieties.	-	Popularization of CORH3 under SRI.	3	-	-	Demo -1 Field day - 1	CORH3 – 50 Kg	-	-	Drum type weeder -5, Nursery frame -5, Rose cane -5 & PE sheet – 12 Kg	-
15.	Eco friendly management of pests and diseases through Integrated Pest Management	Rice	Severe yield losses due to stem borer, Indiscriminate application of pesticides	-	Integrated pest and disease management in samba paddy	3	-	Demo -3 Field day - 1	-	-	-	-	-	Pseudomonas – 20 kg Parasite egg card - 27 cc. Fame -300ml Hexaconazole – 2 l Imidacloprid – 2 l Neem oil – 2l
16.	Promoting horticultural crops for enhancing the returns	banana	Low income under local vegetable production system	-	ICM in banana	-	-	Demo -1	-	-	-	-	-	Banana nutrient mixture – 50 Kg. Pseudomonas – 20 Kg. Urea – 750 Kg. MOP – 500 Kg. DAP – 50 kg.

17.	Enhancing the farm revenue through alternate farming / cropping	Fodder grass	No awareness about fodder grass	-	Popularization of high yielding fodder cumbu napier grass Co4	-	-	Demo – 1 Field day - 1	-	-	Co4 slips - 8000	-	-	Urea – 250 Kg DAP – 200 Kg Potash – 250 Kg
18.	Enhancing the farm revenue through alternate farming / cropping	Fodder grass	No awareness about fodder grass	-	Popularization of fodder bank at village level	1	-	-	-	Desmanthus seeds – 2.5 Kg	CO4 slips – 10,000 Guinea grass – 8700 Guinea grass rooted slips - 2000	-	-	-
19.	Inter cropping	Cocoa	Non-utilization of interspaces and thus low income from coconut as sole crop	-	Popularization of cocoa as intercrop in coconut plantation	1	-	Demo -2 Leaflet – 1 Folder - 1	1	-	Cocoa seedlings – 2000 Nos.	-	-	Vermicompost – 500 kg Fertilizer – 1500 Kg
20.	Popularization of mobile sprinklers for pulses as water saving techniques	Rice fallow pulses & oilseeds	Low yield in rice fallow due to terminal drought	-	Popularization of mobile sprinkler in rice fallow pulses and oil seeds	-	-	-	-	-	-	-	-	-

21.	Enhancing the farm revenue through alternate farming / cropping	Poultry	Improving the status of farm women through backyard poultry with cross breeds	-	Introduction of Nandanam Broiler II in Thiruvarur District of Tamil Nadu	1	-	Field day – 1 Demo -1	-	-	-	Chicks - 500		Starter feed – 1 Kg
22.	Enhancing the farm revenue through alternate farming / cropping	Poultry	Improving the status of farm women through backyard poultry with cross breeds	-	Popularization of low cost poultry egg incubator	-	-	-	-	-	-	-	-	-
23.	Enhancing the farm revenue through alternate farming / cropping	-	Improving the status of farm women through backyard poultry with cross breeds	-	Popularization of crossing boer cross bucks with local non descript goats	1	-	-	-	-	-	-	-	-
24.	Alternate fish farming	-	Low income from existing composite fish culture and thus increasing the profits	-	Popularization of Scientific Composite Culture in Inland Fisheries	2	-	-	Demo – 3 Field day - 1	-	-	Fingerlings – 12,500	-	Fish feed – 200 Kg

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.	Evaluation of promising sugarcane clones	TNAU	Sugarcane	5	-	-	Demo -1
2.	Management of Fusarium wilt in Brinjal	TNAU	Brinjal	5		-	Demo -1
3.	Integrated weed management for direct sown wet seeded rice	TNAU	Rice	5		-	Demo -1
4.	Assessing different weeders in SRI	TNAU	Rice	5		-	Demo -1
5.	Production of Hybrid rice CORH 3 in farmers participatory approach	TNAU	Rice	4		-	Demo -1 Leaflet - 1
6.	Management of False Smut disease in Samba paddy	TNAU	Rice	5		-	Demo -1
7.	Poly culture in inland fisheries in Delta region using stunted finger lings	TNAUVAS	Fishery	5		-	Demo -1
8.	Area Specific Mineral Mixture for Dairy cows	TNAUVAS	Dairy cows	10 (3 cows each)		-	Demo -1 Leaflet -1
9.	Farmers' participatory seed production in groundnut	TNAU	Groundnut	-	4	1	Demo -1 Field day-1 Paper news - 1
10.	Integrated Crop Management in Black gram	TNAU	Black gram	-	15	1	Demo – 3. Field day-1
11	Integrated Crop Management in green gram	TNAU	Green gram	-	12	1	Demo – 3. Field day-1
12	Mechanization in Rice	TNAU	Rice	-	5	2	Demo -1 Filed day - 1
13	Integrated algal management in rice eco system	TNAU	Rice	-	10	1	Demo -1 Field day-1
14	Popularization of CORH 3 Hybrid Rice under SRI	TNAU	Rice	-	10	3	Demo -1 Field day - 1
15	IPDM for Samba rice	TNAU	Rice	-	10	3	Demo -3 Field day - 1
16	ICM in Banana	TNAU	Banana	-	10	-	Demo -1

17	Popularization of high yielding fodder cumbu napier grass Co4	TNAU	Fodder grass	-	10		Demo – 1 Field day - 1
18	Popularization of fodder bank at village level	TNAU	Fodder grass	-	5	-	-
19	Popularization of Cocoa as inter crop in Coconut plantation	CPCRI	Cocoa	-	10	1	Demo -2 Leaflet – 1 Folder - 1
20	Popularization of mobile sprinkler in rice fallow pulses and oil seeds	TNAU	Rice fallow pulses	-	10	-	-
21	Introduction of Nandanam broiler II in Thiruvarur district of TN.	TANUVAS	Poultry	-	50	1	Field day – 1 Demo -1
22	Popularization of low cost poultry egg incubator	TANUVAS	Poultry	-	5	-	-
23	Popularization of crossing local non descript goats with Boer cross bucks	TANUVAS	Goat	-	5	-	-
24	Popularization of Composite fish culture in inland fisheries	TANUVAS	Fishery	-	4	2	Demo – 3 Field day -1

3. B2 contd.

S. No	**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**
1	5	-	-	-	-	-	-	-	-	-	-	-	15	7	4	1
2	4	-	-	-	-	-	-	-	-	-	-	-	17	5	5	3
3	5	-	-	-	-	-	-	-	-	-	-	-	28	13	7	4
4	5	-	-	-	-	-	-	-	-	-	-	-	22	3	10	2
5	8	-	2	-	-	-	-	-	-	-	-	-	47	5	20	22
6	4	-	1	-	-	-	-	-	-	-	-	-	36	17	12	5
7	5	-	-	-	-	-	-	-	-	-	-	-	19	12	11	7

8	-	-	-	-	9	11	-	-	19	11	2	7	25	12	-	-
9	-	-	-	-	3	-	1	-	14	2	-	-	52	29	21	18
10	-	-	-	-	10	-	1	4	25	-	5	-	48	31	11	9
11	-	-	-	-	12	-	-	-	44	-	-	-	65	32	25	7
12	-	-	-	-	3	-	2	-	10	-	-	-	70	28	22	8
13	-	-	-	-	8	-	2	-	26	5	-	10	21	14	8	3
14	-	-	-	-	7	-	3	-	19	20	-	15	45	17	12	10
15	-	-	-	-	10	-	-	-	28	-	-	-	38	12	15	12
16	-	-	-	-	8	-	2	-	-	-	-	-	22	7	5	4
17	-	-	-	-	10	-	-	-	17	4	2	-	20	4	13	5
18	-	-	-	-	3	-	2	-	-	-	-	-	-	-	-	-
19	-	-	-	-	6	-	4	-	7	-	42	-	13	7	-	-
20	-	-	-	-	10	-	-	-	-	-	-	-	-	-	-	-
21	-	-	-	-	20	13	7	10	-	-	-	-	-	-	-	-
22	-	-	-	-	2	-	2	-	-	-	-	-	-	-	-	-
23	-	-	-	-	3	2	-	-	-	-	-	-	-	-	-	-
24	-	-	-	-	2	-	2	-	8	-	13	-	43	20	22	18

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										
Varietal Evaluation				1						1
Integrated Pest Management	1				1					2
Integrated Crop Management	1									1
Integrated Disease Management										
Small Scale Income Generation Enterprises										
Weed Management	1									1
Resource Conservation Technology										
Farm Machineries	1									1
Integrated Farming System										
Seed / Plant production										
Value addition										
Drudgery Reduction										
Storage Technique										
Mushroom cultivation										
Total	**4**			**1**	**1**					**6**

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										
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										
Total										

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	1	-	-	-	-	1
Disease of Management	-	-	-	-	-	-
Value Addition	-	-	-	-	-	-
Production and Management	-	-	-	-	1	1
Feed and Fodder	-	-	-	-	-	-
Small Scale income generating enterprises	-	-	-	-	-	-
TOTAL	**1**	-	-	-	**1**	**2**

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

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

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					
Varietal Evaluation	Sugarcane	Evaluation of sugarcane varieties	5	5	2
Integrated Pest Management	Rice	Management of False Smut disease in Samba paddy	5	5	2
	Brinjal	Management of Fusarium Wilt in Brinjal	5	5	2
	Rice	Production of Hybrid rice CORH3 in farmer's participatory approach.	4	4	2
Integrated Disease Management					

Small Scale Income Generation Enterprises					
Weed Management	Rice	Integrated weed management for direct sown wet seeded rice	5	5	2
Farm Machineries	Rice	Assessing different weeders in SRI	5	5	2
Integrated Farming System					
Value addition					
Drudgery Reduction					
Storage Technique					
Mushroom cultivation					
Total			**29**	**29**	**12**

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					
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					
Total					

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	Dairy cows	Area specific mineral mixture for dairy cows	10 (3 cows each)	20
Disease management				
Value addition				
Production and management	Fishery	Polyculture in Inland Fisheries in Delta Region using Stunted Fingerlings	5	5
Feed and fodder				
Small scale income generating enterprises				
Total			**15**	**23**

4. B.4. Technologies Refined 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				
Value addition				
Production and management				
Feed and fodder				
Small scale income generating enterprises				
Total				

4. C1. Results of Technologies Assessed

Results of On Farm Trial (2009-10)

1. Evaluation of sugarcane varieties

Crop/ Enterprise	Farming situation	Problem definition	Title of OFT	No. of trials
1	2	3	4	5
Sugarcane	Irrigated	Non availability of promising sugarcane varieties.	Evaluation of sugarcane varieties	5

Technology Assessed	Parameters of assessment	Data on the Parameter (8)			Results of assessment	Feedback from the farmer	Any refinement done / needed	Justification for refinement
6	7	T_1	T_2	T_3	9	10	11	12
Tech.1: CO 86032 (FP)	No. of tillers/m^2	26	31	37	Co Si 7 is promising in cane yield and commercial cane sugar (CCS).	The variety Co Si 7 gave more yield, non lodging, non flowering and moderately resistant to red rot	-	-
Tech.2: CO Si 6	No. of millable canes	15	21	25				
Tech. 3: Si – 2000 – 133 (CO Si 7)	Yield (t/ha)	109	135	148				
	CCS %	10.2	11.4	11.9				

Technology Assessed	Source of Technology	Productivity	Unit	Net Return (Profit) in Rs. / ha	B:C Ratio
13	14	15	16	17	18
Technology option 1 (Farmer's practice)	SBI, Coimbatore	109	t / ha	1,27,600	1:2.60
Technology option 2	TNAU	135	t / ha	1,77,000	1:3.15
Technology option 3	TNAU	148	t / ha	2,01,700	1:3.53

4. C2. 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	:	Evaluation of sugarcane varieties
2	Problem Definition	:	Non availability of promising sugarcane varieties
3	Details of technologies selected for assessment	:	**Tech.1:** CO 86032 (FP) **Tech.2:** CO Si 6 **Tech.3:** Si – 2000 – 133 (CO Si 7)
4	Source of technology	:	TNAU
5	Production system and thematic area	:	Sugarcane; Increasing the productivity of sugarcane
6	Performance of the Technology with performance indicators	:	The sugarcane variety CO Si 7 recorded more No. of tillers, millable canes, Yield and commercial cane sugar (CCS).
7	Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques	:	**Nil**
8	Final recommendation for micro level situation	:	The sugarcane variety CO Si 7 is highly suitable for Thiruvarur district, since, it is non lodging, non flowering and moderately resistant to red rot.
9	Constraints identified and feedback for research	:	Nil.
10	Process of farmers participation and their reaction	:	Good participation during demonstration.

2. Management of Fusarium wilt in Brinjal

Crop/ Enterprise	Farming situation	Problem definition	Title of OFT	No. of trials
1	2	3	4	5
Brinjal	Irrigated	Yield reduction due to fusarium wilt infection during hot summer	Management of Fusarium Wilt in Brinjal	5

Technology Assessed	Parameters of assessment	Data on the Parameter (8)			Results of assessment	Feedback from the farmer	Any refinement done / needed	Justification for refinement
6	7	T_1	T_2	T3	9	10	11	12
Tech. 1: Insecticide **Tech. 2:** Copper Oxy Chloride drenching @ 2.5 g/lit **Tech. 3:** Basal application of Neem cake @ 100 kg/acre +Soil application of *Pseudomonas* @ 1 kg/acre at 30 DAT + Copper oxy chloride drenching @2.5g/lit	% Disease incidence Yield (t/ha) B/C ratio	96.3 1.06 0.09	5.0 51.5 5.69	0.0 60.5 5.79	Soil application of Neem cake as basal @ 100 kg/acre and *Pseudomonas* @ 1 kg/acre at 30 DAT followed by drenching with Copper oxy chloride @ 2.5 g/lit gave good control of fusarial wilt	Combination of Soil application of Neem cake and *Pseudomonas* and drenching with copper oxy chloride gave good control of fusarial wilt	-	-

Technology Assessed	Source of Technology	Production	Unit	Net Return (Profit) in Rs. / unit	BC Ratio
13	14	15	16	17	18
Technology option 1 (Farmer's practice)	-	1.06	T/ha	-29325	-
Technology option 2	TNAU	51.5	T/ha	324500	4.71
Technology option 3	TNAU	62.5	T/ha	402500	5.13

4. C2. 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 Fusarium Wilt in Brinjal
2	Problem Definition	:	Yield reduction due to Fusarium wilt infection during hot summer
3	Details of technologies selected for assessment	:	**Tech 1**: Insecticide (Farmers practice) **Tech 2**: Copper Oxy Chloride drenching @ 2.5 g/lit **Tech 3**: Basal application of Neem cake @ 100 kg/acre +Soil application of *Pseudomonas* @ 1 kg/acre at 30 DAT +Copper oxy chloride drenching @2.5g/lit
4	Source of technology	:	TNAU
5	Production system and thematic area	:	Rice-Vegetable and Integrated Pest and Disease Management
6	Performance of the Technology with performance indicators	:	Tech. 3 gave good control of wilt and good yield (66.5 t/ha)
7	Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques	:	Nil
8	Final recommendation for micro level situation	:	Brinjal wilt can be effectively controlled by basal application of Neem cake @ 100 kg/acre +Soil application of *Pseudomonas* @ 1 kg/acre at 30 DAT +Copper oxy chloride drenching @2.5g/lit on disease occurrence.
9	Constraints identified and feedback for research	:	Nil
10	Process of farmers participation and their reaction	:	Good participation in training, demonstrations and field day.

2010-11

3. Integrated weed management for direct sown wet seeded rice

Crop/ Enterprise	Farming situation	Problem definition	Title of OFT	No. of trials
1	2	3	4	5
Rice	Irrigated	Severe weed infestation and high weed seed inoculums	Integrated weed management for direct sown wet seeded rice	5

Technology Assessed	Parameters of assessment	Data on the Parameter (8)			Results of assessment	Feedback from the farmer	Any refinement done / needed	Justification for refinement
6	7	T_1	T_2	T_3	9	10	11	12
Tech.1: Hand weeding (FP) **Tech.2:** Pretilachlor + Safener (Sofit) @ 0.45 kg/ha on 3-4 DAS and one hand weeding on 40 DAS **Tech .3:** Pre emergence Pretilachlor @ 0.45 kg/ha on 3DAS fb Azimsulfuron 50 DF 35 g/ha on 20 DAS + hand weeding on 45 DAS	Weed population/m^2 Weed dry matter(Kg ha^{-1}) WCE (%) Plant height(cm) No of tillers/m^2 No of panicles/hill Panicle length No of grains/panicle 1000 grain weight Grain yield (t/ha) B:C ratio	18.5 524 - 89.0 358 9.2 21.5 125 19.5 37.5 1.59	7.34 91.5 82.5 96.5 369 12.5 21.9 139 19.3 42.5 1.85	7.50 74.8 85.7 103.0 381 14.7 22.5 148 19.8 43.2 1.92	Pre emergence Pretilachlor @ 0.45 kg/ha on 3 DAS fb Azimsulfu-ron 50 DF 35 g/ha on 20 DAS + hand weeding on 45 DAS resulted in very good weed control	Pre emergence fb. One post emergence has a good weed control in direct seeding of rice.	-	-

Technology Assessed	Source of Technology	Production	Unit	Net Return (Profit) in Rs. / ha	B:C Ratio
13	14	15	16	17	18
Technology option 1(Farmer's practice)	-	37.5	q / ha	16,750	1.59
Technology option 2	TNAU	42.5	q / ha	23,475	1.85
Technology option 3	TNAU	44.2	q / ha	26,015	1.96

4. C2. 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	:	Integrated weed management for direct sown wet seeded rice
2	Problem Definition	:	Severe weed infestation and high weed seed inoculums
3	Details of technologies selected for assessment	:	**Tech 1:** Hand weeding (FP) **Tech 2:** Pretilachlor + Safener (Sofit) @ 0.45 kg/ha on 3-4 DAS and one hand weeding on 40 DAS **Tech 3:** Pre emergence Pretilachlor @ 0.45 kg/ha on 3 DASfb Azimsulfuron 50 DF 35 g/ha on 20 DAS + hand weeding on 45 DAS
4	Source of technology	:	TNAU
5	Production system and thematic area	:	Rice – Rice – Rice and alternate cropping
6	Performance of the Technology with performance indicators	:	High weed control efficiency indicates the good performance of the technology (T_3) fb. T_2
7	Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques	:	**Nil**
8	Final recommendation for micro level situation	:	Farmers can go for one pre emergence herbicide followed by the post emergence herbicide if labour availability is scarce
9	Constraints identified and feedback for research	:	Nil
10	Process of farmers participation and their reaction	:	Good participation during demonstration and trainings

4. Assessing different weeders in SRI

Crop/ Enterprise	Farming situation	Problem definition	Title of OFT	No. of trials
1	2	3	4	5
Rice	Irrigated	• Drudgery in cono weeder operation. • Non availability of labour for hand weeding.	Assessing different weeders in SRI	5

Technology Assessed	Parameters of assessment	Data on the Parameter (8)			Results of assessment	Feedback from the farmer	Any refinement done / needed	Justification for refinement
6	7	T_1	T_2	T_3	9	10	11	12
Tech.1: Hand weeding (FP) **Tech.2:** Cono weeder (TNAU) **Tech. 3:** TNAU Power weeder	Weed population/m^2	15.2	9.8	7.4	Among the different weeders assessed in the SRI method of rice cultivation, weeding by TNAU power weeder gave more no. of productive tillers, panicles and grain yield than other weeding methods. The net income and B:C ratio were also high in the Tech: 3.	Handling of TNAU power weeder is very easier than cono weeder. The drudgery also very much reduced while operating the TNAU power weeder. Farmers are interested to operate TNAU power weeder than cono weeder, as it covers more area in lesser time.	-	-
	Weed dry matter (Kg ha^{-1})	425	36.4	27.8				
	WCE (%)	-	91.4	93.5				
	Plant height(cm)	89.0	104.8	106.2				
	No of tillers/m^2	448	512	576				
	No of panicles/hill	19	24	28				
	Panicle length	22.8	23.7	24.1				
	No of grains/ panicle	172	186	193				
	1000 grain weight	20.4	20.7	20.9				
	Grain yield (t/ha)	4.08	4.62	4.78				
	B:C ratio	2.20	2.61	2.81				
	No.of laborers required/ha	30	23	4				
	Area covered / day	0.8	0.8	1.0				
	Cost of operation	2400	1840	1240				

Technology Assessed	Source of Technology	Productivity	Unit	Net Return (Profit) in Rs. / ha	B:C Ratio
13	14	15	16	17	18
Technology option 1 (Farmer's practice)	-	4,080	Kg / ha	23,300	2.20
Technology option 2	TNAU	4,620	Kg / ha	28,550	2.61
Technology option 3	TNAU	4,780	Kg / ha	30,800	2.81

4. C2. 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	:	Assessing different weeders in SRI
2	Problem Definition	:	• Drudgery in cono weeder operation. • Non availability of labour for hand weeding.
3	Details of technologies selected for assessment	:	**Tech.1:** Hand weeding (FP) **Tech2:** Cono weeder (TNAU) **Tech 3:** TNAU Power weeder
4	Source of technology	:	TNAU
5	Production system and thematic area	:	Rice – Rice – Rice; Rice-Rice-Pulses; Increasing the productivity of rice
6	Performance of the Technology with performance indicators	:	• Weed control efficiency is higher in TNAU power weeder than cono weeder. • Handling of TNAU power weeder is very easier than cono weeder.. • More area is covered in less time with less labour
7	Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques	:	Nil
8	Final recommendation for micro level situation	:	TNAU power weeder is highly suitable for weeding under SRI method of cultivation than cono weeding.
9	Constraints identified and feedback for research	:	Nil
10	Process of farmers participation and their reaction	:	Good participation during demonstration and training.

5. Management of False Smut disease in Samba paddy

Crop/ Enterprise	Farming situation	Problem definition	Title of OFT	No. of trials
1	2	3	4	5
Rice	Irrigated	Yield reduction due to False Smut disease in Samba paddy	Management of False Smut disease in Samba paddy	5

Technology Assessed	Parameters of assessment	Data on the Parameter (8)					Results of assessment	Feedback from the farmer	Any refinement done / needed	Justification for refinement
6	7	T_1	T_2	T3	T4	T5	9	10	11	12
Tech. 1: Farmers practice (No spray)	% panicle infestation	16.00	3.60	3.00	6.55	5.50	Prophylactic spraying of propiconazole @ 500 ml/ha twice at during boot leaf stage and milky stage gave good control of disease with less panicle infection (3.60 %) and less grain infection (1.46 %) and higher yield (4880 kg/ha).	Prophylactic spraying alone could control the false smut. Propiconazole spraying @ 500 ml/ha twice during boot leaf and milky stage gave good control of false smut.	-	-
Tech .2: Propiconazole @ 500 ml/ha	% grain infestation	18.00	1.46	1.33	4.20	3.00				
Tech. 3: Copper hydroxide @ 1 kg/ha	Grain yield (Kg/ha)	3600	4880	4800	4150	4220				
Tech. 4: Carbendazim + Mancozeb @ 750 g/ha	BC ratio	1.70	2.37	2.31	2.03	2.07				
Tech. 5: Pseudomonas @ 5 kg/ha										

Technology Assessed	Source of Technology	Production	Unit	Net Return (Profit) in Rs. / ha	BC Ratio
13	14	15	16	17	18
Technology option 1 (FP)	Farmers practice	3600	Kg/ha	14824	1.70
Technology option 2	ICAR	4880	Kg/ha	28210	2.37
Technology option 3	TNAU	4800	Kg/ha	27221	2.31
Technology option 4	CRRI	4150	Kg/ha	21057	2.03
Technology option 5	TNAU	4220	Kg/ha	21814	2.07

4. C2. 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 False Smut disease in Samba paddy.
2	Problem Definition	:	Yield reduction due to False smut during Samba paddy.
3	Details of technologies selected for assessment	:	**Tech 1**: Farmers practice **Tech 2**: Propiconazole @ 500 ml/ha **Tech 3**: Copper hydroxide @ 1 kg/ha **Tech 4**: Carbendazim + Mancozeb @ 750g/ha **Tech 5**: Pseudomonas @ 5 kg/ha
4	Source of technology	:	Tech 1: Farmers practice, Tech 2: ICAR, Tech 3&5: TNAU, Tech 4: CRRI
5	Production system and thematic area	:	Rice-Rice-Rice; Rice-Rice-Pulses; IPDM
6	Performance of the Technology with performance indicators	:	Spraying of propiconazole @ 500 ml/ha during boot leaf and milky stage gave excellent control of false smut with lesser panicle infection (3.60 %) and grain infection (1.46 %) and gave more grain yield of 4880 kg/ha.
7	Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques	:	Nil
8	Final recommendation for micro level situation	:	Spraying of propiconazole @ 500 ml/ha during boot leaf and milky stage gave excellent control of false smut.
9	Constraints identified and feedback for research	:	**Nil**
10	Process of farmers participation and their reaction	:	Good participation in training and demonstration.

6. Production of Hybrid rice CORH3 in farmer's participatory approach

Crop/ Enterprise	Farming situation	Problem definition	Title of OFT	No. of trials
1	2	3	4	5
Rice	Irrigated	Non availability of hybrid quality seeds.	Production of Hybrid rice CORH3 in farmer's participatory approach.	4

Technology Assessed	Parameters of assessment	Data on the Parameter (8)			Results of assessment	Feedback from the farmer	Any refinement done / needed	Justification for refinement
6	7	T_1	T_2	T_3	9	10	11	12

Tech.1: No practice of seed production (FP) **Tech. 2:** Production of seeds of ADT 43 **Tech. 3:** Production of seeds of CORH3	Yield (Kg/ha) Straw yield (Kg/ha)	3,860 4,385	3,120 3,850	330 – A 360 – R 3840– A 960– R	Seed production of CORH3 during Navarai (Dec-Jan) season is not suitable in Thiruvarur District. The unfavourable climatic condition prevailed during this season leads poor seed setting.	Even though adoption of all hybrid seed production techniques, the CORH3 seed yield will be very low compared with ADT 43 seed production.	-	-

Technology Assessed	Source of Technology	Productivity	Unit	Net Return (Profit) in Rs. / ha	B:C Ratio
13	14	15	16	17	18
Technology option 1 (Farmer's practice)	-	38.6	q / ha	22,293	2.20
Technology option 2	TNAU	31.2	q / ha	42,465	2.94
Technology option 3	TNAU	3.30	q / ha	14,354	1.46

4. C2. 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	:	Production of Hybrid rice CORH3 in farmer's participatory approach.
2	Problem Definition	:	Non availability of hybrid quality seeds.
3	Details of technologies selected for assessment	:	**Tech.1:** No practice of seed production (FP) **Tech. 2:** Production of seeds of ADT 43 **Tech. 3:** Production of seeds of CORH3
4	Source of technology	:	TNAU
5	Production system and thematic area	:	Rice – Rice – Rice or Rice-Rice-Pulses; Increasing the productivity of rice and rice fallow crops
6	Performance of the Technology with performance indicators	:	CORH3 hybrid seed production is not remunerative as the yield was very low compared with ADT 43.
7	Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques	:	**Nil**
8	Final recommendation for micro level situation	:	Seed production of CORH3 is not suitable in Thiruvarur District
9	Constraints identified and feedback for research	:	Climatic conditions prevailed during the season was unfavourable for CORH3 hybrid seed production.

10 Process of farmers participation and their reaction : Good participation during demonstration.

7. Polyculture in Inland Fisheries in Delta Region using Stunted Fingerlings

Crop/ Enterprise	Farming situation	Problem definition	Title of OFT	No. of trials
1	2	3	4	5
Fisheries	-	Low income from composite carp culture	Polyculture in Inland Fisheries in Delta Region using Stunted Fingerlings	5

Technology Assessed	Parameters of assessment	Data on the Parameter (8)		Results of assessment	Feedback from the farmer	Any refinement done / needed	Justification for refinement
6	7	T_1	T_2	9	10	11	12
Tech.1: Stunted fingerlings of fresh water fish carp varieties (Composite fish culture) @2500/ac	Fish Yield (Kg/ha)	4975	4806 + 75 (Carp varieties + Prawn) = 4881	The growing of fresh water prawn along with stunted carp varieties did not result in substantial rise in income when compared to solo rising of stunted fingerlings of carp varieties. The B:C Ratio is low for polyculture (5.11) when compared to composite carp culture (5.57)	The growing of prawn along with stunted carp varieties does not provide remunerative income and farmers are comfortable with stunted composite carp culture alone.	-	-
	Fish Utilization Efficiency	1:1.5	1:1.35				
Tech.2: Stunted fingerlings of Carp varieties with fresh water prawn (Poly culture) @2500+ 2500/ac	B:C Ratio	5.57	5.11	The survival percentage was very low for fresh water prawn. Only 10-15% of survival has been recorded			

Technology Assessed	Source of Technology	Productivity	Unit	Net Return (Profit) in Rs. / ha	B:C Ratio
13	14	15	16	17	18
Technology option 1	TANUVAS	4975	Kg/ ha	285750 (Carp alone)	5.57
Technology option 2	TANUVAS	4881	Kg/ ha	279670 (Carp+ Prawn)	5.11

4. C2. 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 : Polyculture in Inland Fisheries in Delta Region using Stunted Fingerlings
2 Problem Definition : Low income from Composite carp culture
3 Details of technologies selected for assessment : **Tech.1:** Stunted fingerlings of fresh water fish carp varieties (Composite fish

			culture)@2500/ac **Tech2:** Stunted fingerlings of Carp varieties with fresh water prawn (Poly culture) @2500+ 2500/ac
4	Source of technology	:	TANUVAS
5	Production system and thematic area	:	Fisheries
6	Performance of the Technology with performance indicators	:	The B:C Ratio and the yield of Technology option 1 ie., solo rising of stunted carp varieties are found to supersede Technology option 2 ie., Polyculture of growing prawn along with stunted carp varieties
7	Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques	:	**Nil**
8	Final recommendation for micro level situation	:	In Cauvery delta Polyculture is not found to be suitable and the scientific stunted carp culture could be remunerative.
9	Constraints identified and feedback for research	:	Survival rate of fresh water prawn is low
10	Process of farmers participation and their reaction	:	Dynamic participation during all stages of OFT

8. Area specific mineral mixture for dairy cows

Crop/ Enterprise	Farming situation	Problem definition	Title of OFT	No. of trials
1	2	3	4	5
Live Stock	-	Low milk yield due to no supplementation of mineral mixture	Area specific mineral mixture for dairy cows	10 (3 cows each)

Technology Assessed	Parameters of assessment	Data on the Parameter (8)			Results of assessment	Feedback from the farmer	Any refinement done / needed	Justification for refinement
6	7	T_1	T_2	T_3	9	10	11	12
Tech.1: Farmer's practice (No/ Irregular mineral supplementation) **Tech .2:** Supplementation with general mineral mixture(30-50 g/day for one year from the day after calving) **Tech.3:** Supplementation with area specific mineral mixture (30-50	• Milk yield /day/animal. • Milk density. • Onset of first estrum after calving (No. of cows out of 10 assessed). • Inseminations required for conception.	4.0 17 - -	5.5 23 8 one	5.5 23 2 one	Supplementation with Area Specific mineral mixture showed very effective in higher milk yield (10%), increased milk density, Gain in weight and Early onset of	Area specific mineral mixture increased the milk yield, milk density and the taste of the milk also improved.	-	-

g/day for one year from the day after calving)	• Weight gain (%) (after 5 months). • B:C ratio.	- 2	3.7 2.02	0.74 2.03	estrum after calving			

Technology Assessed	Source of Technology	Production (milk)	Unit	Net Return (Profit) in Rs. / animal	B:C Ratio
13	14	15	16	17	18
Technology option 1 (Farmer's practice)	-	4.0	Lit/day/animal	32.00	2.00
Technology option 2	TANUVAS	5.5	Lit/day/animal	44.50	2.02
Technology option 3	TANUVAS	5.5	Lit/day/animal	44.65	2.03

4. C2. 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	:	Area specific mineral mixture for dairy cows
2	Problem Definition	:	Low milk yield due to no supplementation of mineral mixture
3	Details of technologies selected for assessment	:	**Tech 1:** No/ Irregular mineral supplementation (FP) **Tech 2:** Supplementation with general mineral mixture **Tech 3:** Supplementation with Area specific mineral mixture
4	Source of technology	:	TANUVAS
5	Production system and thematic area	:	- ; Alternate farming
6	Performance of the Technology with performance indicators	:	Supplementation with Area specific mineral mixture showed early onset of estrum after calving with increased milk yield, milk density and gain in weight of animal.
7	Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques	:	Taste of the milk is also increased in cows supplemented with General and Area specific mineral mixture compared to no supplementation
8	Final recommendation for micro level situation	:	Farmers can go for supplementation with area specific mineral mixture for better milk yield and easy onset of estrum.
9	Constraints identified and feedback for research	:	Nil
10	Process of farmers participation and their reaction	:	Good participation during demonstration, trainings and review.

4.D1. Results of Technologies Refined: NIL

Results of On Farm Trial

Crop/ enterprise	Farming situation	Problem definition	Title of OFT	No. of trials	Technology refined	Parameters of refined t	Data on the parameter	Results of refinement	Feedback from the farmer	Details of refinement done
1	2	3	4	5	6	7	8	9	10	11

Contd..

Technology Refined	Source of Technology for Technology Option1 / Justification for modification of assessed Technology Option 1	Production	Please give the unit	Net Return (Profit) in Rs. / unit	BC Ratio
13		14	15	16	17
Technology Option 1 (best performing Technology Option in assessment)					
Technology Option 2 (Modification over Technology Option 1)					
Technology Option 3 (Another Modification over Technology Option 1)					

4.D.2. 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
2. Problem Definition
3. Details of technologies selected for refinement
4. Source of technology
5. Production system and thematic area
6. Performance of the Technology with performance indicators
7. Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques
8. Final recommendation for micro level situation
9. Constraints identified and feedback for research
10. Process of farmers participation and their reaction

PART V - FRONTLINE DEMONSTRATIONS

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

S. No.	Category	Farming Situation	Season and Year	Crop	Variety/ breed	Hybrid	Thematic area	Technology Demonstrated	Area (ha)/ Unit/ No/area (m^2)		No. of farmers/ demonstration			Reasons for shortfall in achievement
									Proposed	Actual	SC/ST	Others	Total	
1.	Oilseeds	Irrigated	Rabi – 2010-11	Groundnut	TMV 13	-	Integrated crop management	Farmers' participatory seed production in groundnut	2	2	1	3	4	
2.	Pulses	Rice fallow	Rice fallow 2011	Black gram	ADT 3	-	Increasing the productivity of rice and rice fallow crops	ICM in rice fallow black gram	6	6	10	5	15	
3.		Rice fallow	Rice fallow 2011	Green gram	ADT 3	-	Increasing the productivity of rice and rice fallow crops	ICM in rice fallow green gram	4.8	4.8	-	12	12	
4.	Cereals	Irrigated	Kuruvai 2010	Rice	CR 1009	-	Farm mechanization	Mechanization in rice	2	2	2	3	5	
5.		Irrigated	Kuruvai 2010	Rice	ADT 43	-	Integrated crop management	Integrated algal management in rice eco system	5	5	2	8	10	
6.	Millets	irrigated	Kuruvai 2010	Rice	-	CORH3	Saving of inputs and increasing the returns through SRI	Popularization of CORH3 under SRI.	5	5	3	7	10	

7.		Irrigated	Samba 2010 - 11	Rice	CR 1009	-	Eco friendly management of pests and diseases through Integrated Pest Management	Integrated pest and disease management in samba paddy	5	5	-	10	10	
	Vegetables													
	Flowers													
	Ornamental													
	Fruit													
	Spices and condiments													
8.	Commercial	Irrigated	December 2009 to January 2010	Banana	Poovan	-	Promoting horticultural crops for enhancing the returns	ICM in banana	5	5	2	8	10	
	Medicinal and aromatic													
9.	Fodder	Irrigated	December 2009 to January 2010	Fodder grass	Co CN 4	-	Enhancing the farm revenue through alternate farming / cropping	Popularizatio n of high yielding fodder cumbu napier grass Co4	1	1	-	10	10	
10.		Irrigated	Novemb er 2010	Fodder grass	Co 4 CN Guinea grass Desmanthes	-	Enhancing the farm revenue through alternate farming / cropping	Popularization of fodder bank at village level	1	1	On going			

11.	Plantation		Novemb er 2010	Cocoa	-	-	Inter cropping	Popularization of cocoa as intercrop in coconut plantation	4	4	4	6	10	
	Fibre													
	Dairy													
12.	Poultry	-	Febraury 2010	Poultry	Nandhana m Broiler II	-	Enhancing the farm revenue through alternate farming / cropping	Introduction of Nandanam Broiler II in Thiruvarur District of Tamil Nadu	50	50	17	33	50	
13.		-	October 2010	Poultry egg	-	-	Enhancing the farm revenue through alternate farming / cropping	Popularization of low cost poultry egg incubator	1	1	On going			
	Rabbitry													
	Pigerry													
14.	Sheep and goat			Goat	Boer cross	-	Enhancing the farm revenue through alternate farming / cropping	Popularization of crossing boer cross bucks with local non descript goats	4 Nos	4 No s	2	2	4	
	Duckery	-								-				
15.	Common carps		October 2010	Carp	Catla, Rogu, Mirgal and other carps	-	Alternate fish farming	Popularization of Scientific Composite Culture in Inland Fisheries	800 0	8000	2	2	4	

	Mussels	-												
	Ornamental fishes													
	Oyster mushroom													
	Button mushroom													
	Vermicompost													
	Sericulture													
	Apiculture													
	Implements													
16.	Others (specify)	Drought area	Rabi 2010 - 2011	Pulses	-	-	Popularization of mobile sprinklers for pulses as water saving techniques	Popularization of mobile sprinkler in rice fallow pulses and oil seeds	4	4	On going			

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	
1.	Oilseeds	Irrigated	Rabi – 2010-11	Groundnut	TMV 13	-	Integrated crop management	Farmers' participatory seed production in groundnut	Rabi – 2010-11	L	M	M	Rice
2.	Pulses	Rice fallow	Rice fallow 2011	Black gram	ADT 3	-	Increasing the productivity of rice and rice fallow crops	ICM in rice fallow black gram	Rice fallow 2011	L	M	M	Rice

3.		Rice fallow	Rice fallow 2011	Green gram	ADT 3	-	Increasing the productivity of rice and rice fallow crops	ICM in rice fallow green gram	Rice fallow 2011	L	M	M	Rice
4.	Cereals	Irrigated	Samba 2010	Rice	CR 1009	-	Farm mechanization	Mechanization in rice	Samba 2010	L	H	M	Rice
5.		Irrigated	Kuruvai 2010	Rice	ADT 43	-	Integrated crop management	Integrated algal management in rice eco system	Kuruvai 2010	L	M	M	Rice
6.		irrigated	Kuruvai 2010	Rice	-	CORH3	Saving of inputs and increasing the returns through SRI	Popularization of CORH3 under SRI.	Kuruvai 2010	L	H	M	Rice
7.		Irrigated	Samba 2010 - 11	Rice	CR 1009	-	Eco friendly management of pests and diseases through Integrated Pest Management	Integrated pest and disease management in samba paddy	Samba 2010 - 11	L	M	M	Fallow
	Millets												
	Vegetables												
	Flowers												
	Ornamental												
8.	Fruit	Irrigated	December 2009 to January 2010	Banana	Poovan	-	Promoting horticultural crops for enhancing the returns	ICM in banana	December 2009 to January 2010	L	M	M	banana

	Spices and condiments												
	Commercial												
	Medicinal and aromatic												
9.	Fodder	Irrigated	December 2009 to January 2010	Fodder grass	Co4	-	Enhancing the farm revenue through alternate farming / cropping	Popularization of high yielding fodder cumbu napier grass Co4	December 2009 to January 2010	L	M	M	Rice
10.			November 2010	Fodder grass	Co4 CN Guinea Desmanthes	-	Enhancing the farm revenue through alternate farming / cropping	Popularization of fodder bank at village level	November 2010	On going			
11.	Plantation		November 2010	Cocoa	-	-	Inter cropping	Popularization of cocoa as intercrop in coconut plantation	November 2010	On going			
	Fibre												
	Dairy												
12.	Poultry	-		Poultry	Nandhanam Broiler II	-	Enhancing the farm revenue through alternate	Introduction of Nandanam Broiler II in Thiruvarur District of Tamil	-	-	-	-	-

							farming / cropping	Nadu					
13.		-	October 2010	Poultry egg	-	-	Enhancing the farm revenue through alternate farming / cropping	Popularization of low cost poultry egg incubator	October 2010	-	-	-	-
	Rabbitry												
	Pigerry												
14.	Sheep and goat	-	-	Goat	Boer cross	-	Enhancing the farm revenue through alternate farming / cropping	Popularization of crossing boer cross bucks with local non descript goats	-	-	-	-	-
	Duckery												
15.	Common carps	-	October 2010	Carp	Catla, Rogu, Mirgal and other carps	-	Alternate fish farming	Popularization of Scientific Composite Culture in Inland Fisheries	October 2010	-	-	-	-
	Mussels												
	Ornamental fishes												
	Oyster mushroom												

	Button mushroom												
	Vermicompost												
	Sericulture												
	Apiculture												
16.	Implements	Drought area	Rabi 2010 - 2011	Pulses	-	-	Popularization of mobile sprinklers for pulses as water saving techniques	Popularization of mobile sprinkler in rice fallow pulses and oil seeds	Rabi 2010 - 2011	On going			
	Others (specify)												

5. B. Results of Frontline Demonstrations

5. B.1. Crops

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										
Oilseeds (groundnut)	Farmers' participatory seed production in groundnut	TMV13	-	Irrigated	4	2	24.00	15.75	19.88	18.00	10.44	8,201	22,400	4,199	2.73	9,035	22,400	13,365	2.47
Pulses (Black gram)	ICM in rice fallow black gram	ADT 3	-	Rice fallow	15	6	5.3	2.1	3.7	2.1	43.2	8,950	18,500	9,550	2.07	7,400	10,500	3,100	1.42
Green gram	ICM in rice fallow green gram	ADT 3	-	Rice fallow	12	4.8	6.3	2.6	4.5	2.6	42.2	9,250	18,000	8,750	1.95	7,700	10,400	2,700	1.35
Cereals (Rice)	Mechanization in rice	CR1009	-	Irrigated	5	2	56.50	49.25	51.75	40.17	28.83	14000	52500	38500	3.75	22125	46500	24375	2.11
Rice	Integrated algal management in rice eco system	ADT 43	-	Irrigated	10	5	42.6	34.9	38.75	32.60	18.9	16,750	38,750	22,000	2.31	15,500	32,500	19,000	2.09
Rice	Popularization of CORH3 under SRI.	CORH3	-	Irrigated	10	5	54.82	48.90	51.86	46.48	11.6	17,500	51,860	34,360	1.96	18,750	40,200	21,450	1.14
Rice	Integrated pest and disease management in samba paddy	CR1009	-	Irrigated	10	5	44.9	40.1	42.5	41.8	1.64	16166	42500	26334	2.63	18366	41870	23504	2.28
Millets																			
Vegetables																			

Flowers																			
Ornamental																			
Fruit	ICM in banana	Poovan	-	Garden land	10	5	39.85	38.55	39.20		22.05	90,000	2,35,200	1,45,200	1.61	84,500	1,92,744	1,08,244	2.61
Spices and condiments																			
Commercial																			
Medicinal and aromatic																			
Fodder	Popularization of high yielding fodder cumbu napier grass Co4	Co 4	-	Irrigated	10	1	4975	2865	3920	-	-	39,000	4,85,000	4,46,000	1:12	-	-	-	-
Fodder	Popularization of fodder bank at village level	Co4 Guinea grass			5	1	**On going**												
Plantation	Popularization of cocoa as intercrop in coconut plantation				10	4	**On going**												

Fibre																			
Others (pl.specify)	Popularization of mobile sprinkler in rice fallow pulses and oil seeds				10	4	**On going**												

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

Farmers' participatory seed production in groundnut

Data on other parameters in relation to technology demonstrated		
Parameter with unit	**Demo**	**Local**
No. of plants/ Sq.m	26	22
No. of pods/plant	25	20
No. of filled kernel/plant	24	17
Shelling percentage	72	65

ICM in rice fallow black gram

Data on other parameters in relation to technology demonstrated		
Parameter with unit	**Demo**	**Check**
No. of pods /plant	23	17
No. of seeds /pod	7	6

ICM in rice fallow Green gram

Data on other parameters in relation to technology demonstrated		
Parameter with unit	**Demo**	**Check**
No. of pods /plant	27	19
No. of seeds /pod	9	7

Mechanization in rice

Data on other parameters in relation to technology demonstrated		
Parameter with unit	**Demo**	**Local**
No. of tillers /hill	29.0	21.0

No. Productive tillers	19.0	11.0
No. of grains /panicle	135.0	119.0
Grain yield (Kg/ha)	5650	4017
Straw yield (Kg/ha)	8126	5668
	Transplanter	**Manual Transplanting**
Capacity Output (ha/hr)	0.35	0.05
Man (hr/ha)	10	300
Cost of Operation (Rs/ha)	6750	9375
	Power Weeder	**Manual weeding**
Capacity Output (ha/hr)	0.2	0.07
Man (hr/ha)	5	100
Cost of Operation (Rs/ha)	1250	2500
	Combine Harvester	**Manual Harvesting**
Capacity Output (ha/hr)	0.6	0.1
Man (hr/ha)	2	300
Cost of Operation (Rs/ha)	4750	7500

Integrated algal management in rice eco system

Data on other parameters in relation to technology demonstrated		
Parameter with unit	**Demo**	**Local**
Plant height (cm)	105.4	94.8
No. of tillers /hill	18.0	15.0
No. Productive tillers	11.0	9.0
Panicle length (cm)	24.7	23.9
No. of grains /Panicle	118.0	105.0
Grain yield (Kg/ha)	3,875	3,250
Straw yield (Kg/ha)	5,254	4,147

Popularization of CORH3 under SRI

Data on other parameters in relation to technology demonstrated		
Parameter with unit	**Demo**	**Local**
No. of tillers /hill	32.0	18.0

No. Productive tillers	21.0	11.0
Panicle length (cm)	27.6	23.2
No. of grains /Panicle	148.0	112.0
Grain yield (Kg/ha)	5,186	4,020
Straw yield (Kg/ha)	8,600	6,500

Integrated pest and disease management in samba paddy

Data on other parameters in relation to technology demonstrated		
Parameter with unit	**Demo**	**Check**
Grain yield (Kg/ha)	4250	4187
YSB catch /Pheromone trap	10.2	-
% dead heart	0.58	5.20
% white ear	0.75	4.05
Leaf folder % leaf infestation Vegetative stage Flowering stage	 1.3 1.9	 6.10 10.22
Disease index False smut % panicle infestation % grain infestation	 4.9 4.1	 7.14 12.72
Natural enemies population Spider (No/hill) Carabids (No/hill) Coccinellids (No/hill)	 6 2 2	 1 0 0

ICM in Banana

Data on other parameters in relation to technology demonstrated		
Parameter with unit	**Demo**	**Local**
No. hands/bunch	9	7
No. of fingers /hand	18	15
Yield (t/ha)	39.20	32.12

Popularization of high yielding fodder cumbu napier grass Co4

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

Green fodder yield (q/ha)	3920	-
No. of tillers / Hill	28 – 30	-
Leaf : Stem ratio	0.68	-

5. B.2. Livestock and related enterprises

Type of livestock	Name of the technology demonstrated	Breed	No. of Demo	No. of Units	Yield (q/ha) Weight (Kg/Ram) at 6th month				% 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	Introduction of Nandanam Broiler II in Thiruvarur District of Tamil Nadu	Nandanam Broiler II	50	-	3.5	3.0	3.25	1.5	53.8	31000	102375	72375	3.41	21000	36750	15750	1.75
	Popularization of low cost poultry egg incubator		5	1	**On going**												
Rabbitry																	
Pigerry																	
Sheep and goat	Popularization of crossing boer cross bucks with local non descript goats	Boer bucks	50	-	26	24	25	13	48	1800	4500	2700	2.5	1440	2340	900	1.63
Duckery																	
Others (pl.specify)																	

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

Popularization of crossing boer cross bucks with local non descript goats

Data on other parameters in relation to technology demonstrated		
Parameter with unit	**Demo**	**Check**
Birth weight (Kg)	0.65	0.31
Weight of the ram after one month (Kg)	4	1.5
Height of the ram after one month (cm)	47	23
Weight of the ram after six months (Kg)	25	13

Introduction of Nandanam broiler II in Thiruvarur District of Tamil Nadu

Data on other parameters in relation to technology demonstrated		
Parameter with unit	**Demo**	**Check**
Feed conversion ratio	1:2.1	1:3.6
Broilers performance efficiency index	80%	60%
Mortality percentage	10%	30%
4^{th} week body weight	350 grams	120 grams
6^{th} week body weight	1290 grams	600 grams

5. B.3. Fisheries

Type of Breed	Name of the technology demonstrated	Breed	No. of Demo	Units/ Area (m^2)	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
					H	L	A										
Common carps	Popularization of Scientific Composite Culture in Inland Fisheries	Catla, Rogu, Mirgal, Common carp, Silver carp and Grass carp in 40:20: 30:10 ratio	4	8000	43.18	39.97	41.49	33.21	24.93	59000	248940	189940	4.22	54500	199260	144760	3.6
Mussels																	
Ornamental fishes																	
Others																	

Data on additional parameters other than yield (viz., reduction of percentage diseases, effective use of land etc.)

Popularization of Scientific Composite Culture in Inland Fisheries

Data on other parameters in relation to technology demonstrated		
Parameter with unit	**Demo**	**Local**
Weight gain in four months/fish	524.17	437.21
Feed conversion ratio	1:1.5	1:1.74

5. B.4. Other enterprises

Enterprise	Name of the technology demonstrated	Variety/ species	No. of Demo	Units/ Area {m^2}	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
					H	L	A										
Oyster mushroom																	
Button mushroom																	
Vermicompost																	
Sericulture																	
Apiculture																	
Others (pl.specify)																	

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

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**

Data on additional parameters other than labour saved (viz., reduction in drudgery, time etc.)

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

5. B.6. Cotton

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																	
Herbacium Varieties																	
Hirsutum Varieties																	
Arboreum Varieties																	

5.B.6.3 Integrated pest management demonstrations

Farming situation	Variety	Hybrid	No. of blocks	Total No. of Demo.	Area (ha)	Incidence of pest and diseases (%)			Seed Cotton Yield (q/ha)			Economics of demonstration (Rs./ha)				Economics of local check (Rs./ha)			
						IPM	Non IPM	% Change	IPM	Non IPM	% Change	Gross Cost	Gross Return	Net Return	BCR	Gross Cost	Gross Return	Net Return	BCR

5.B.6.4 Demonstrations on farm implements

Name of the implement	Area (Ha)	No. of Demo.	Name of the technology demonstrated	Labour requirement for operation (Rs./ha)		
				Demo	Local check	% change
Total						

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							
Group discussions							
Kisan Mela							
Training for Extension Functionaries							
Training for farmers							
Newspaper coverage							
Popular articles							
Publication							
Radio talks							
T.V. Programme							
Others (Pl. specify)							
TOTAL							

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	Groundnut	New variety TMV 13	Good variety with higher yield and shelling percentage
		Seed treatment with bioinputs	The seed treatment with bioinputs resulted in less disease incidence
		Application of TNAU Groundnut rich	Reduced the flower shedding and increased the filled kernel ratio
2	ICM in Rice fallow green gram	• High yielding Variety (ADT 3) • Enhanced seed quantity (20 %) @ 25 kg/ha • Optimum time of sowing (Dec 15th to Jan 31st) • Seed treatment with bio inputs like *Rhizobium, Phosphobacteria* and *Pseudomonas.* • Foliar nutrition with TNAU pulse wonder @ 2. 25kg /ac • Moisture stress mitigation through mobile sprinkler • Need based plant protection measures (Systemic insecticide for thrips and whitefly control, poison bait, pheromone trap and chlorpyriphos @ 500 ml / ac for *Spodoptera* control)	Increased yield was observed due to adoption of all demonstrated technologies as 42.2 % in green gram and 43.2 % in Black gram.
3.	ICM in Rice fallow black gram		
4.	Mechanization in rice	• Transplanter operation • Power weeder operation • Combine Harvester	The success of transplanter depends on preparation of field and tray preparation. The field should be prepared in such a way that a thin film of water should be maintained without any

			undulations. The medium for tray should facilitate the easy pulling of seedlings.
5.	Integrated algal Management in rice eco system	• Frequent racking by cono weeder • Application $CuSO_4$ @ 2.5 Kg/ha followed by application excess potassium @ 100 Kg/ha	Basal application of higher dosage of DAP increased the algal load in rice eco system. Hence, application of DAP may be restricted or applied based on the soil test.
6.	Popularization of CORH3 hybrid rice under SRI	• Tray nursery preparation • Planting method under SRI • Cono weeding • Usage of LCC card	Non availability of hybrid seeds in time. Less market preference due to boldness of grains.
7.	IPDM in samba rice	Pseudomonas seed treatment	Very effective in controlling diseases during summer samba season
		Trichogramma japonicum	Effective in controlling yellow stem borer results in less percentage of dead heart &white ear
		Trichogramma chilonis	Effective in controlling leaf folder results in less damage to leaf during vegetative & flowering phase
		Pheromone trap	Due to the attraction of male stem borer adults results in disruption of mating causing lower fecundity
		Bird perches	Effective in controlling grown up larvae during day time and moths during night time
8.	ICM in banana	• Application of micro nutrients • Application of bio inoculants. • Foliar application of SSP • Covering of bunch with poly sheets	Unawareness of specific MN mixture for Banana and bio inoculants since, NRC, Banana Trichirapalli is the only centre producing Banana MN Mixture in Cauvery delta zone.
9.	Popularization of high yielding fodder cumbu napier grass Co4	• New high yielding hybrid • Planting method • Nutrient management	Fodder scarcity can be overcome by raising high yielding good quality cumbu napier hybrid grass
10.	Introduction of Nandhanam broiler II in Thiruvarur district of Tamil Nadu	Introduction of Nandhanam broiler II	Higher body weight, less mortality and good feed conversion ratio found to be highly economical and profitable.
11.	Popularization of scientific composite fish culture	• Balanced fish diet preparation and feeding • Stocking density • Water quality management	There is much to be transferred related to water quality management since farmers have a notion that anything could be fed to fish. Intensive campaigning for water quality management is the need of the hour.

5. B.6.7 Farmers' reactions on specific technologies

S. No	Crop / Enterprise	Name of the technology demonstrated	Feed Back
1	Groundnut	Application of TNAU groundnut rich	Very good technology as it increased the number of filled grain and shelling percentage
		New variety TMV 13	Red coloured kernel not preferred
2	ICM in Rice fallow green gram	• High yielding Variety (ADT 3) • Enhanced seed quantity (20 %) @ 25 kg/ha • Optimum time of sowing (Dec 15th to Jan 31st) • Seed treatment with bio inputs like *Rhizobium, Phosphobacteria* and *Pseudomonas.* • Foliar nutrition with TNAU pulse wonder @ 2. 25kg /ac • Moisture stress mitigation through mobile sprinkler • Need based plant protection measures (Systemic insecticide for thrips and whitefly control, poison bait, pheromone trap and chlorpyriphos @ 500 ml / ac for *Spodoptera* control)	More yield with good quality grains can be obtained by the demonstrated technologies
3.	ICM in Rice fallow black gram		
4.	Mechanisation in rice	• Transplanter operation • Power weeder operation • Combine Harvester	The availability and rent for the transplanter is a big concern for the farmers.
5.	Integrated algal Management in rice eco system	• Frequent racking by cono weeder • Application $CuSO_4$@ 2.5 Kg/ha followed by application excess potassium @ 100 Kg/ha	Frequent racking by cono weeder and drain out the algal population by irrigation water followed by application of $CuSO_4$@ 2.5 Kg/ha and excess potassium @ 100 Kg/ha effectively controlled the algal growth.
6.	Popularization of CORH3 hybrid rice under SRI	• Tray nursery preparation • Planting method under SRI • Cono weeding • Usage of LCC card	• Very difficult for adoption in large scale. • Labourers are reluctant to do square planting, cono weeding. • Low preference n the maret.
7.	IPDM in samba rice	Pseudomonas seed treatment	Very effective in controlling diseases during summer samba season.
		Trichogramma japonicum	Effective in controlling yellow stem borer.
		Trichogramma chilonis	Effective in controlling leaf folder.
		Pheromone trap	Lower population of stem borer results in more yield.
		Bird perches	Effective in controlling grown up larvae and moths.
8.	ICM in banana	• Application of micro nutrients • Application of bio inoculants.	Non availability of Banana MN Mixture and bio inoculants.

		• Foliar application of SSP	
9.	Popularization of high yielding fodder cumbe napier grass Co4	• New high yielding hybrid • Planting method • Nutrient management	Farmers could able to feed their animals with high yielding nutritious fodder. They felt that animals are healthy and given more milk.
10.	Introduction of Nandhanam broiler II in Thiruvarur district of Tamil Nadu	Introduction of Nandhanam broiler II	Higher body weight, less mortality and good feed conversion ratio found to be highly economical and profitable.
11.	Popularization of scientific composite fish culture	• Balanced fish diet preparation and feeding • Stocking density • Water quality management	The farmers felt that they could not bring about a perfect blend of feed due to non availability of certain ingredients.

5.B.6.8 Extension and Training activities under FLD

Sl.No.	Activity	No. of activities organized	Number of participants	Remarks
1	Field days	11	246	
2	Farmers Training	23	501	
3	Media coverage	18	-	-
4	Training for extension functionaries	3	111	

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										
Cereals																	
Rice	Popularization of CORH3 under SRI.	CORH3	10	5	54.82	48.90	51.86	46.48	11.6	17,500	51,860	34,360	1.96	18,750	40,200	21,450	1.14
Bajra																	
Maize																	
Paddy																	
Sorghum																	
Wheat																	
Others (pl.specify)																	
Total																	
Oilseeds																	

Castor																		
Mustard																		
Safflower																		
Sesame																		
Sunflower																		
Groundnut																		
Soybean																		
Others (pl.specify)																		
Total																		
Pulses																		
Greengram																		
Blackgram																		
Bengalgram																		
Redgram																		
Others (pl.specify)																		
Total																		
Vegetable crops																		
Bottle gourd																		
Capsicum																		
Others (pl.specify)																		
Total																		
Cucumber																		
Tomato																		
Brinjal																		
Okra																		
Onion																		
Potato																		
Field bean																		
Others (pl.specify)																		
Total																		
Commercial crops																		
Sugarcane																		
Coconut																		
Others (pl.specify)																		

Total																		
Fodder crops																		
Maize (Fodder)																		
Sorghum (Fodder)																		
Others (pl.specify)																		
Total																		

H-High L-Low, A-Average

Popularization of CORH3 under SRI

Data on other parameters in relation to technology demonstrated		
Parameter with unit	**Demo**	**Local**
No. of tillers /hill	32.0	18.0
No. Productive tillers	21.0	11.0
Panicle length (cm)	27.6	23.2
No. of grains /Panicle	148.0	112.0
Grain yield (Kg/ha)	5,186	4,020
Straw yield (Kg/ha)	8,600	6,500

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
Crop Production	-	-	-	-	-	-	-	-	-	-
Weed Management	-	-	-	-	-	-	-	-	-	-
Resource Conservation Technologies	3	51	-	51	15	-	15	67	-	67
Cropping Systems	-	-	-	-	-	-	-	-	-	-
Crop Diversification	-	-	-	-	-	-	-	-	-	-
Integrated Farming	2	52	-	52	3	-	3	55	-	55
Micro Irrigation/Irrigation	-	-	-	-	-	-	-	-	-	-
Seed production	-	-	-	-	-	-	-	-	-	-
Nursery management	-	-	-	-	-	-	-	-	-	-
Integrated Crop Management	3	97	6	103	-	-	-	97	6	103
Soil and Water Conservation	-	-	-	-	-	-	-	-	-	-
Integrated Nutrient Management	-	-	-	-	-	-	-	-	-	-
Production of organic inputs	-	-	-	-	-	-	-	-	-	-
Others (pl.specify)	-	-	-	-	-	-	-	-	-	-
Horticulture	-	-	-	-	-	-	-	-	-	-
a) Vegetable Crops	-	-	-	-	-	-	-	-	-	-
Production of low value and high volume crop	-	-	-	-	-	-	-	-	-	-
Off-season vegetables	-	-	-	-	-	-	-	-	-	-
Nursery raising	2	45	7	52	3	9	12	48	16	64
Exotic vegetables	-	-	-	-	-	-	-	-	-	-
Export potential vegetables	-	-	-	-	-	-	-	-	-	-
Grading and standardization	-	-	-	-	-	-	-	-	-	-
Protective cultivation	-	-	-	-	-	-	-	-	-	-

Others (pl.specify)	-	-	-	-	-	-	-	-	-	-
b) Fruits	-	-	-	-	-	-	-	-	-	-
Training and Pruning	-	-	-	-	-	-	-	-	-	-
Layout and Management of Orchards	-	-	-	-	-	-	-	-	-	-
Cultivation of Fruit	-	-	-	-	-	-	-	-	-	-
Management of young plants/orchards	-	-	-	-	-	-	-	-	-	-
Rejuvenation of old orchards	-	-	-	-	-	-	-	-	-	-
Export potential fruits	-	-	-	-	-	-	-	-	-	-
Micro irrigation systems of orchards	-	-	-	-	-	-	-	-	-	-
Plant propagation techniques	-	-	-	-	-	-	-	-	-	-
Others (pl.specify)	-	-	-	-	-	-	-	-	-	-
c) Ornamental Plants	-	-	-	-	-	-	-	-	-	-
Nursery Management	-	-	-	-	-	-	-	-	-	-
Management of potted plants	-	-	-	-	-	-	-	-	-	-
Export potential of ornamental plants	-	-	-	-	-	-	-	-	-	-
Propagation techniques of Ornamental Plants	-	-	-	-	-	-	-	-	-	-
Others (pl.specify)	-	-	-	-	-	-	-	-	-	-
d) Plantation crops	-	-	-	-	-	-	-	-	-	-
Production and Management technology	-	-	-	-	-	-	-	-	-	-
Processing and value addition	-	-	-	-	-	-	-	-	-	-
Others (pl.specify)	-	-	-	-	-	-	-	-	-	-
e) Tuber crops	-	-	-	-	-	-	-	-	-	-
Production and Management technology	-	-	-	-	-	-	-	-	-	-
Processing and value addition	-	-	-	-	-	-	-	-	-	-
Others (pl.specify)	-	-	-	-	-	-	-	-	-	-
f) Spices	-	-	-	-	-	-	-	-	-	-
Production and Management technology	-	-	-	-	-	-	-	-	-	-
Processing and value addition	-	-	-	-	-	-	-	-	-	-
Others (pl.specify)	-	-	-	-	-	-	-	-	-	-

g) Medicinal and Aromatic Plants	-	-	-	-	-	-	-	-	-	-
Nursery management	-	-	-	-	-	-	-	-	-	-
Production and management technology	-	-	-	-	-	-	-	-	-	-
Post harvest technology and value addition	-	-	-	-	-	-	-	-	-	-
Others (pl.specify)	-	-	-	-	-	-	-	-	-	-
Soil Health and Fertility Management	-	-	-	-	-	-	-	-	-	-
Soil fertility management	-	-	-	-	-	-	-	-	-	-
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)	-	-	-	-	-	-	-	-	-	-
Livestock Production and Management	-	-	-	-	-	-	-	-	-	-
Dairy Management	-	-	-	-	-	-	-	-	-	-
Poultry Management	1	11	8	19	-	-	-	11	8	19
Piggery Management	-	-	-	-	-	-	-	-	-	-
Rabbit Management	-	-	-	-	-	-	-	-	-	-
Animal Nutrition Management	-	-	-	-	-	-	-	-	-	-
Animal Disease Management	-	-	-	-	-	-	-	-	-	-
Feed and Fodder technology	-	-	-	-	-	-	-	-	-	-
Production of quality animal products	-	-	-	-	-	-	-	-	-	-
Others (pl.specify)	2	67	10	77	4	-	4	71	10	81
Home Science/Women empowerment	-	-	-	-	-	-	-	-	-	-
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	3	6	30	36	2	10	12	8	40	48
Women empowerment	-	-	-	-	-	-	-	-	-	-
Location specific drudgery production	-	-	-	-	-	-	-	-	-	-
Rural Crafts	-	-	-	-	-	-	-	-	-	-
Women and child care	-	-	-	-	-	-	-	-	-	-
Others (pl.specify)	-	-	-	-	-	-	-	-	-	-
Agril. Engineering	-	-	-	-	-	-	-	-	-	-
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)	-	-	-	-	-	-	-	-	-	-
Plant Protection	-	-	-	-	-	-	-	-	-	-
Integrated Pest Management	-	-	-	-	-	-	-	-	-	-
Integrated Disease Management	-	-	-	-	-	-	-	-	-	-
Bio-control of pests and diseases	-	-	-	-	-	-	-	-	-	-
Production of bio control agents and bio pesticides	-	-	-	-	-	-	-	-	-	-
Others (pl.specify)	-	-	-	-	-	-	-	-	-	-
Fisheries	-	-	-	-	-	-	-	-	-	-

Integrated fish farming	-	-	-	-	-	-	-	-	-	-
Carp breeding and hatchery management	-	-	-	-	-	-	-	-	-	-
Carp fry and fingerling rearing	-	-	-	-	-	-	-	-	-	-
Composite fish culture	-	-	-	-	-	-	-	-	-	-
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)	-	-	-	-	-	-	-	-	-	-
Production of Inputs at site	-	-	-	-	-	-	-	-	-	-
Seed Production	-	-	-	-	-	-	-	-	-	-
Planting material production	-	-	-	-	-	-	-	-	-	-
Bio-agents production	-	-	-	-	-	-	-	-	-	-
Bio-pesticides production	-	-	-	-	-	-	-	-	-	-
Bio-fertilizer production	-	-	-	-	-	-	-	-	-	-
Vermi-compost production	2	41	16	57	1	2	3	42	18	60
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	3	36	38	74	12	17	29	48	55	103
Apiculture	-	-	-	-	-	-	-	-	-	-
Others (pl.specify)	-	-	-	-	-	-	-	-	-	-

Capacity Building and Group Dynamics	-	-	-	-	-	-	-	-	-	-
Leadership development	-	-	-	-	-	-	-	-	-	-
Group dynamics	-	-	-	-	-	-	-	-	-	-
Formation and Management of SHGs	-	-	-	-	-	-	-	-	-	-
Mobilization of social capital	-	-	-	-	-	-	-	-	-	-
Entrepreneurial development of farmers/youths	-	-	-	-	-	-	-	-	-	-
Others (pl.specify)	2	44	-	44	2	-	2	46	-	46
Agro-forestry	-	-	-	-	-	-	-	-	-	-
Production technologies	-	-	-	-	-	-	-	-	-	-
Nursery management	-	-	-	-	-	-	-	-	-	-
Integrated Farming Systems	-	-	-	-	-	-	-	-	-	-
Others (Pl. specify)	-	-	-	-	-	-	-	-	-	-
TOTAL	**25**	**493**	**125**	**618**	**43**	**41**	**84**	**536**	**166**	**702**

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**
Crop Production	2	26	10	36	2	3	5	28	13	41
Weed Management	3	45	8	53	13	6	19	58	14	72
Resource Conservation Technologies	-	-	-	-	-	-	-	-	-	-
Cropping Systems	-	-	-	-	-	-	-	-	-	-
Crop Diversification	-	-	-	-	-	-	-	-	-	-
Integrated Farming	-	-	-	-	-	-	-	-	-	-
Micro Irrigation/Irrigation	-	-	-	-	-	-	-	-	-	-
Seed production	-	-	-	-	-	-	-	-	-	-
Nursery management	8	159	14	173	39	17	56	198	31	229
Integrated Crop Management	-	-	-	-	-	-	-	-	-	-

Soil and Water Conservation	1	12	-	12	1	-	1	13	-	13
Integrated Nutrient Management	-	-	-	-	-	-	-	-	-	-
Production of organic inputs	-	-	-	-	-	-	-	-	-	-
Others (pl.specify)	-	-	-	-	-	-	-	-	-	-
Horticulture	-	-	-	-	-	-	-	-	-	-
a) Vegetable Crops	-	-	-	-	-	-	-	-	-	-
Production of low value and high volume crop	-	-	-	-	-	-	-	-	-	-
Off-season vegetables	-	-	-	-	-	-	-	-	-	-
Nursery raising	-	-	-	-	-	-	-	-	-	-
Exotic vegetables	-	-	-	-	-	-	-	-	-	-
Export potential vegetables	-	-	-	-	-	-	-	-	-	-
Grading and standardization	-	-	-	-	-	-	-	-	-	-
Protective cultivation	-	-	-	-	-	-	-	-	-	-
Others (pl.specify)	-	-	-	-	-	-	-	-	-	-
b) Fruits	-	-	-	-	-	-	-	-	-	-
Training and Pruning	-	-	-	-	-	-	-	-	-	-
Layout and Management of Orchards	-	-	-	-	-	-	-	-	-	-
Cultivation of Fruit	-	-	-	-	-	-	-	-	-	-
Management of young plants/orchards	-	-	-	-	-	-	-	-	-	-
Rejuvenation of old orchards	-	-	-	-	-	-	-	-	-	-
Export potential fruits	-	-	-	-	-	-	-	-	-	-
Micro irrigation systems of orchards	-	-	-	-	-	-	-	-	-	-
Plant propagation techniques	-	-	-	-	-	-	-	-	-	-
Others (pl.specify)	-	-	-	-	-	-	-	-	-	-
c) Ornamental Plants	-	-	-	-	-	-	-	-	-	-
Nursery Management	-	-	-	-	-	-	-	-	-	-
Management of potted plants	-	-	-	-	-	-	-	-	-	-
Export potential of ornamental plants	-	-	-	-	-	-	-	-	-	-
Propagation techniques of Ornamental Plants	-	-	-	-	-	-	-	-	-	-

Others (pl.specify)	-	-	-	-	-	-	-	-	-	-
d) Plantation crops	-	-	-	-	-	-	-	-	-	-
Production and Management technology	-	-	-	-	-	-	-	-	-	-
Processing and value addition	-	-	-	-	-	-	-	-	-	-
Others (pl.specify)	-	-	-	-	-	-	-	-	-	-
e) Tuber crops	-	-	-	-	-	-	-	-	-	-
Production and Management technology	-	-	-	-	-	-	-	-	-	-
Processing and value addition	-	-	-	-	-	-	-	-	-	-
Others (pl.specify)	-	-	-	-	-	-	-	-	-	-
f) Spices	-	-	-	-	-	-	-	-	-	-
Production and Management technology	-	-	-	-	-	-	-	-	-	-
Processing and value addition	-	-	-	-	-	-	-	-	-	-
Others (pl.specify)	-	-	-	-	-	-	-	-	-	-
g) Medicinal and Aromatic Plants	-	-	-	-	-	-	-	-	-	-
Nursery management	-	-	-	-	-	-	-	-	-	-
Production and management technology	-	-	-	-	-	-	-	-	-	-
Post harvest technology and value addition	-	-	-	-	-	-	-	-	-	-
Others (pl.specify)	-	-	-	-	-	-	-	-	-	-
Soil Health and Fertility Management	-	-	-	-	-	-	-	-	-	-
Soil fertility management	-	-	-	-	-	-	-	-	-	-
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)	-	-	-	-	-	-	-	-	-	-

Livestock Production and Management	1	10	9	19	-	2	2	10	11	21
Dairy Management	-	-	-	-	-	-	-	-	-	-
Poultry Management	-	-	-	-	-	-	-	-	-	-
Piggery Management	-	-	-	-	-	-	-	-	-	-
Rabbit Management	-	-	-	-	-	-	-	-	-	-
Animal Nutrition Management	-	-	-	-	-	-	-	-	-	-
Animal Disease Management	-	-	-	-	-	-	-	-	-	-
Feed and Fodder technology	-	-	-	-	-	-	-	-	-	-
Production of quality animal products	-	-	-	-	-	-	-	-	-	-
Others (pl.specify)	-	-	-	-	-	-	-	-	-	-
Home Science/Women empowerment	-	-	-	-	-	-	-	-	-	-
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	1	-	27	27	-	-	-	-	27	27
Processing and cooking	-	-	-	-	-	-	-	-	-	-
Gender mainstreaming through SHGs	-	-	-	-	-	-	-	-	-	-
Storage loss minimization techniques	2	-	45	45	-	3	3	-	48	48
Value addition	-	-	-	-	-	-	-	-	-	-
Women empowerment	-	-	-	-	-	-	-	-	-	-
Location specific drudgery production	-	-	-	-	-	-	-	-	-	-
Rural Crafts	-	-	-	-	-	-	-	-	-	-
Women and child care	-	-	-	-	-	-	-	-	-	-
Others (pl.specify)	-	-	-	-	-	-	-	-	-	-
Agril. Engineering	-	-	-	-	-	-	-	-	-	-
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)	-	-	-	-	-	-	-	-	-	-
Plant Protection	2	32	-	32	2	-	2	34	-	34
Integrated Pest Management	1	17	-	17	3	-	3	20	-	20
Integrated Disease Management	2	25	1	26	2	-	2	27	1	28
Bio-control of pests and diseases	-	-	-	-	-	-	-	-	-	-
Production of bio control agents and bio pesticides	-	-	-	-	-	-	-	-	-	-
Others (pl.specify)	-	-	-	-	-	-	-	-	-	-
Fisheries	-	-	-	-	-	-	-	-	-	-
Integrated fish farming	-	-	-	-	-	-	-	-	-	-
Carp breeding and hatchery management	-	-	-	-	-	-	-	-	-	-
Carp fry and fingerling rearing	-	-	-	-	-	-	-	-	-	-
Composite fish culture	-	-	-	-	-	-	-	-	-	-
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)	-	-	-	-	-	-	-	-	-	-
Production of Inputs at site	-	-	-	-	-	-	-	-	-	-
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)	-	-	-	-	-	-	-	-	-	-
Capacity Building and Group Dynamics	-	-	-	-	-	-	-	-	-	-
Leadership development	-	-	-	-	-	-	-	-	-	-
Group dynamics	-	-	-	-	-	-	-	-	-	-
Formation and Management of SHGs	-	-	-	-	-	-	-	-	-	-
Mobilization of social capital	-	-	-	-	-	-	-	-	-	-
Entrepreneurial development of farmers/youths	-	-	-	-	-	-	-	-	-	-
Others (pl.specify)	-	-	-	-	-	-	-	-	-	-
Agro-forestry	-	-	-	-	-	-	-	-	-	-
Production technologies	-	-	-	-	-	-	-	-	-	-
Nursery management	-	-	-	-	-	-	-	-	-	-
Integrated Farming Systems	-	-	-	-	-	-	-	-	-	-
Others (Pl. specify)	-	-	-	-	-	-	-	-	-	-
TOTAL	**23**	**326**	**144**	**440**	**62**	**31**	**93**	**388**	**145**	**533**

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	1	21	3	24	9	6	15	30	9	39
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	1	26	3	29	4	1	5	30	4	34
Any other (pl.specify)	-	-	-	-	-	-	-	-	-	-
TOTAL	**2**	**47**	**6**	**53**	**13**	**7**	**20**	**60**	**13**	**73**

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	-	-	-	-	-	-	-	-	-	-
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)	-	-	-	-	-	-	-	-	-	-
TOTAL	-	-	-	-	-	-	-	-	-	-

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	5	195	14	209	11	1	12	206	15	221

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)	-	-	-	-	-	-	-	-	-	-
Total	**5**	**195**	**14**	**209**	**11**	**1**	**12**	**206**	**15**	**221**

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)	-	-	-	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-	-	-	-

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
1	Crop production and management	-	-	-	-	-	-	-	-	-	-
1.a.	Increasing production and productivity of crops	-	-	-	-	-	-	-	-	-	-
1.b.	Commercial production of vegetables	8	289	38	327	27	13	40	316	51	367
2	Production and value addition	-	-	-	-	-	-	-	-	-	-
2.a.	Fruit Plants	-	-	-	-	-	-	-	-	-	-
2.b.	Ornamental plants	-	-	-	-	-	-	-	-	-	-
2.c.	Spices crops	-	-	-	-	-	-	-	-	-	-
3.	Soil health and fertility management	-	-	-	-	-	-	-	-	-	-
4	Production of Inputs at site	2	18	62	80	2	-	2	20	62	82
5	Methods of protective cultivation	-	-	-	-	-	-	-	-	-	-
6	Others (pl.specify)	-	-	-	-	-	-	-	-	-	-
7	Post harvest technology and value addition	-	-	-	-	-	-	-	-	-	-
7.a.	Processing and value addition	-	-	-	-	-	-	-	-	-	-
7.b.	Others (pl.specify)	-	-	-	-	-	-	-	-	-	-
8	Farm machinery	-	-	-	-	-	-	-	-	-	-
8.a.	Farm machinery, tools and implements	-	-	-	-	-	-	-	-	-	-
8.b.	Others (pl.specify)	-	-	-	-	-	-	-	-	-	-
9.	Livestock and fisheries	-	-	-	-	-	-	-	-	-	-
10	Livestock production and management	-	-	-	-	-	-	-	-	-	-

10.a.	Animal Nutrition Management	4	125	17	142	9	5	14	134	2	156
10.b.	Animal Disease Management	-	-	-	-	-	-	-	-	-	-
10.c	Fisheries Nutrition	-	-	-	-	-	-	-	-	-	-
10.d	Fisheries Management	1	13	4	17	8	-	8	21	4	25
10.e.	Others (pl.specify)	-	-	-	-	-	-	-	-	-	-
11.	Home Science	-	-	-	-	-	-	-	-	-	-
11.a.	Household nutritional security	-	-	-	-	-	-	-	-	-	-
11.b.	Economic empowerment of women	-	-	-	-	-	-	-	-	-	-
11.c.	Drudgery reduction of women	-	-	-	-	-	-	-	-	-	-
11.d.	Others (pl.specify)	-	-	-	-	-	-	-	-	-	-
12	Agricultural Extension	-	-	-	-	-	-	-	-	-	-
12.a.	Capacity Building and Group Dynamics	1	34	3	37	4	2	6	38	5	43
12.b.	Others (pl.specify)	-	-	-	-	-	-	-	-	-	-
	Total	**16**	**479**	**124**	**603**	**50**	**20**	**70**	**529**	**144**	**673**

Details of sponsoring agencies involved

1. NABARD
2. NGOs - Sheela, World vision.
3. Irrigation Management Research Institute, Trichy

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
1	**Crop production and management**	-	-	-	-	-	-	-	-	-	-
1.a.	Commercial floriculture	-	-	-	-	-	-	-	-	-	-
1.b.	Commercial fruit production	-	-	-	-	-	-	-	-	-	-
1.c.	Commercial vegetable production	1	52	-	52	8	-	8	60	-	60
1.d.	Integrated crop management	1	50	-	50	-	-	-	50	-	50
1.e.	Organic farming	-	-	-	-	-	-	-	-	-	-
1.f.	Others (pl.specify)	-	-	-	-	-	-	-	-	-	-
2	**Post harvest technology and value addition**	-	-	-	-	-	-	-	-	-	-
2.a.	Value addition	1	-	13	13	-	2	2	-	15	15
2.b.	Others (pl.specify)	-	-	-	-	-	-	-	-	-	-
3.	**Livestock and fisheries**	-	-	-	-	-	-	-	-	-	-
3.a.	Dairy farming	-	-	-	-	-	-	-	-	-	-
3.b.	Composite fish culture	1	33	-	33	3	-	3	36	-	36
3.c.	Sheep and goat rearing	-	-	-	-	-	-	-	-	-	-
3.d.	Piggery	-	-	-	-	-	-	-	-	-	-

3.e.	Poultry farming	-	-	-	-	-	-	-	-	-	-
3.f.	Others (pl.specify)	-	-	-	-	-	-	-	-	-	-
4.	**Income generation activities**	-	-	-	-	-	-	-	-	-	-
4.a.	Vermi-composting	-	-	-	-	-	-	-	-	-	-
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	-	-	-	-	-	-	-	-	-	-
4.f.	Sericulture	-	-	-	-	-	-	-	-	-	-
4.g.	Mushroom cultivation	1	13	14	27	3	-	3	16	14	30
4.h.	Nursery, grafting etc.	-	-	-	-	-	-	-	-	-	-
4.i.	Tailoring, stitching, embroidery, dying etc.	-	-	-	-	-	-	-	-	-	-
4.j.	Agril. para-workers, para-vet training	-	-	-	-	-	-	-	-	-	-
4.k.	Others (pl.specify)	-	-	-	-	-	-	-	-	-	-
5	**Agricultural Extension**	-	-	-	-	-	-	-	-	-	-
5.a.	Capacity building and group dynamics	-	-	-	-	-	-	-	-	-	-
5.b.	Others (pl.specify)	-	-	-	-	-	-	-	-	-	-
	Grand Total	**5**	**148**	**27**	**175**	**14**	**2**	**16**	**162**	**29**	**191**

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	106	42	148	23	11	34	12	2	14
Kisan Mela	-	-	-	-	-	-	-	-	-	-
Kisan Ghosthi	-	-	-	-	-	-	-	-	-	-
Exhibition	5	5935	1467	7402	-	-	-	65	7	72
Film Show	73	403	65	468	43	16	59	85	3	88
Method Demonstrations	32	424	82	506	104	22	126	8	2	10
Farmers Seminar	-	-	-	-	-	-	-	-	-	-
Workshop	12	-	-	-	-	-	-	576	37	613
Group meetings		-	-	-	-	-	-	-	-	-
Lectures delivered as resource persons	68	-	-	-	-	-	-	-	-	-
Newspaper coverage	62	-	-	-	-	-	-	-	-	-
Radio talks	6	-	-	-	-	-	-	-	-	-
TV talks	-	-	-	-	-	-	-	-	-	-
Popular articles	18	-	-	-	-	-	-	-	-	-
Extension Literature	10	-	-	-	-	-	-	-	-	-
Advisory Services	240	196	32	228	7	5	12	-	-	-
Scientific visit to farmers field	96	80	6	86	-	-	-	10	-	10
Farmers visit to KVK	183	140	21	161	15	6	21	-	-	-
Diagnostic visits	92	240	32	272	13	11	24	-	-	-
Exposure visits	6	160	11	171	4	-	4	-	-	-
Ex-trainees Sammelan	-	-	-	-	-	-	-	-	-	-
Soil health Camp	-	-	-	-	-	-	-	-	-	-
Animal Health Camp	-	-	-	-	-	-	-	-	-	-
Agri mobile clinic	-	-	-	-	-	-	-	-	-	-
Soil test campaigns	-	-	-	-	-	-	-	-	-	-
Farm Science Club Conveners meet	1	40	-	40	-	-	-	-	-	-
Self Help Group Conveners meetings	-	-	-	-	-	-	-	-	-	-
Mahila Mandals Conveners meetings	-	-	-	-	-	-	-	-	-	-
Celebration of important days (specify)	-	-	-	-	-	-	-	-	-	-
Any Other (Specify)	-	-	-	-	-	-	-	-	-	-
Total	**916**	**7724**	**1758**	**9482**	**209**	**71**	**280**	**756**	**51**	**807**

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)	Rice	ADT 43 CR 1009 BPT 5204 Co(R) 50 CO 49 CO 43 CO 48 White Ponni	-	90.12 57.75 20.38 1.25 3.40 4.30 1.90 0.60	1,80,240 1,03,950 40,760 2,500 6,800 7,740 3,800 1,200	225 128 49 7 8 5 2 2
	Total	-	-	**179.70**	**3,46,990**	**426**
Oilseeds	-	-	-	-	-	-
Pulses	-	-	-	-	-	-
Commercial crops	-	-	-	-	-	-
Vegetables	-	-	-	-	-	-
Flower crops	-	-	-	-	-	-
Spices	-	-	-	-	-	-
Fodder crop seeds	Daincha	-	-	0.40	1600	4
Fiber crops		-	-	-	-	-
Forest Species		-	-	-	-	-
Others (specify)	Kitchen seed pockets	-	-	95 pockets	1900	95
Total				**180.1 95 pockets**	**3,48,590 1900**	**430 90**

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	-	-	-	-	-	-
Fruits	-	-	-	-	-	-
Ornamental plants	-	-	-	-	-	-
Medicinal and Aromatic	-	-	-	-	-	-
Plantation	-	-	-	-	-	-
Spices	-	-	-	-	-	-

Tuber	-	-	-	-	-	-
Fodder crop saplings	-	-	-	-	-	-
Forest Species	Teak	-	-	583	2915	140
Others(specify)	Rice nursery	ADT 43	-	10 cent	2000	2
Total				**584**	**4915**	**142**

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	Azolla	635	3175	38
Bio-pesticide	-	-	-	-
Bio-fungicide	-	-	-	-
Bio Agents	-	-	-	-
Others (specify)	Vermicompost	1,077	5,385	14
	Biocompost	3,400	8,300	4
	Paddy MN mixture	3,237	79,200	380
Total		**8,349**	**96,060**	**436**

9.D. Production of livestock materials

Particulars of Live stock	Name of the breed	Number	Value (Rs.)	Number of farmers to whom provided
Dairy animals	-	-	-	-
Cows	-	-	-	-
Buffaloes	-	-	-	-
Calves	-	-	-	-
Others (Pl. specify)	Boer bucks	3	18,270	3
Poultry	-	-	-	-
Broilers	Nandhanam II	38	4,035	30
Layers	Coloured layer	33	4,965	12
Duals (broiler and layer)	-	-	-	-
Japanese Quail	-	-	-	-
Turkey	Local	10	4,410	5
Emu	-	-	-	-

Ducks	-	-	-	-
Others (Pl. specify)	Guinea	21	3,785	11
	Tturkey and guinea eggs	67	330	24
Piggery	-	-	-	-
Piglet	-	-	-	-
Others (Pl.specify)	-	-	-	-
Fisheries	-	-	-	-
Fingerlings	-	-	-	-
Others (Pl. specify)	-	-	-	-
Total		**172**	**35,795**	**85**

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

The KVK, Thiruvarur news letter is being periodically published at quarterly interval.

Name	:	**Nerkalangiyam**
Data of start	:	September 2006
Periodicity	:	Quarterly
No. of copies distributed every quarter	:	100

(B) Literature developed/published

Item	Title	Authors name	Number
Research papers	-	-	-
Technical reports	-	-	-
News letters	-	-	-
Extension literatures	Karavai modukalukkana uttachathu kalavai	P. Geetha and T. Senguttuvan	350
	Vanaigareethiyil urukai thayarithal.	P. Geetha, D. reka and T. Senguttuvan	300
	Cumbu Napier Hybrid grass Co 4 cultivation.	S. Anandhakrishnaveni and T. Senguttuvan	500
	Weedicides in rice	G. Sudhagar, K. Kumanan and T. Senguttuvan	500
	Fertilizer management in rice	G. Sudhagar, K. Kumanan and T. Senguttuvan	300
	Cocoa as intercrop in coconut garden	G. Sudhagar, K. Kumanan and T. Senguttuvan	500
	Herbicides in rice	G. Sudhagar, K. Kumanan and T. Senguttuvan	100
	Inorganic fertilizer for rice	G. Sudhagar, K. Kumanan and T. Senguttuvan	100
Popular articles	Integrated weed management in rice	Sudhakar, G., K. Kumanan and T. Senguttuvan	Valarum velanmai 2(6) :41-43
	Enemies for earthworm	Sudhakar, G., K. Kumanan and T. Senguttuvan	Valarum velanmai 2(6) :41-43.

	Seed production in oilseed crops	Sudhakar, G., K. Kumanan and T. Senguttuvan	Nilavalamm, 43(12):20-27
	Integrated farming system in Cauvery delta zone	Sudhakar, G., K. Kumanan and T. Senguttuvan	Naveena Velanmai, 8: 50-53
	Cocoa as intercrop in Coconut Garden	Kumanan.K, Sudhakar, G., and T. Senguttuvan	Thinamalar dt. 09.02.2011 P.no 9.
	Integrated Pest and Disease Management in Cocoa'	Kumanan.K, Sudhakar, G., and T. Senguttuvan	Nilavalam Dec 2010 p10-13.
	Man valam kakkum manpulu uram	Anandhakrishnaveni.S and T.Senguttuvan	Nilavalam, jan'2011
	Theevanamae, Theevanamae	Anandhakrishnaveni.S and T.Senguttuvan	Valarum velanmai ,Jan'2011.
	Kudal punnai kunamakkidum keeraigal	D. Reka and T. Senguttuvan	Nam Uzhavar ,August 2010
	Indhiyavil Unavu Padhapathuthalum Uttachauviyalum	Geetha.P.	Valarum Velanmai 2(3):49
	LCC based Nitrogen management in Rice	Anandhakrishnaveni.S and T.Senguttuvan	Namm Uzhavar, October 2010 p. 47.
	Thennayil Mathiputtapatta Unavu Porutkal	Geetha.P. and T. Senguttuvan	Nam Uzhavar, 8-2, p.23-25.
	Production techniques on Co 4 cumbu napeir hybrid grass	Anandhakrishnaveni.S and T.Senguttuvan	Naam Uzhavar, December 2010,p.56
	Integrated pest and disease management in Cocoa	Senthil Kumar .M and T.Senguttuvan	Nila Valam, December 2010,p:10-13.
Technical bulletins	-	-	-
Booklets	Participatory Approaches for Grass Root Extension Work	Ramasubramaniam, M and T. Senguttuvan	40
	Thulliya Pannaiyam	Kumanan.K, Sudhakar.G and T. Senguttuvan	40
	Semmai Karumbu Sagupadi Tholil nutpangal	Anandhakrishnaveni.S and T. Senguttuvan	40
Books	Cultivation of vegetables under precision farming	Dr.K.Kumanan, Dr.E.Vadivel, Dr.T.Senguttuvan	40
News paper message	Paper news about training/ demonstration Paper news after conduct of training/ demonstration Paper news about technology dissemination		5 50 44
Others (Pl. specify)			
TOTAL	**26**		**2923**

10.B. Details of Electronic Media Produced

	Type of media (CD / VCD / DVD/ Audio-Cassette)	**Title of the programme**	**Number**
-	-	-	-

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. Stunted Carp Culture transformed the fisheries sector in Thiruvarur District

Composite carp culture is being taken up in a vast area in Cauvery delta region. The yield loss in crop due to floods and droughts can be mitigated through composite fish culture since much health conscious people have added fish in their food basket which increases the damand for fish. A farmer can earn upto Rs1,00,000 and above in an year from an acre of fish pond. While demand for fish is on the rise, the production does not commensurate with the demand due to poor management of fish pond. Realising this gap the KVK, Needamangalam has identified the promotion of Composite carp culture as one of the thrust area and channelized its efforts to diffuse the scientific growing of carmposite carp culture.

Stunted Carp Culture

Recently a technology called Stunted Carp culture is being promoted in a bigger way. This is an Indigenous technology which had its origin from fisherfolk of Andhrapradesh wherein the fisherfolk stock two to three lakhs of fingerlings in an acre of fish pond and stunt the growth of fish through limited feeding. Once they reached a size of 30-40 grams they are released in grow out ponds wherein the weight gain is found to be very high. A single fingerling can attain 1and half kg weight in just four to five months. Using these technology farmers could get more than 2 tonnes from an acre. Further the fingerlings could be stocked for an year which facilitates the availability of fingerlings to be grown in grow out pond throughout the year.

Interventions of KVK to diffuse the Stunted Carp Culture technology

- The training programmes are exclusively designed to impart the composite carp culture technology. A NABARD Sponsored CAT programme on Inland Fisheries as Remunerative Alternate option in Cauvery Delta Region has been organized between 10.02.2011 to 12.02.2011 at KVK premises to disseminate the message that Inland fish culture can enhance the economic condition of farmers substantially, if it is pursued with scientific rigour.
- An Exhibition showcasing the ingredients of fish feed, lime, fish medicines has been conducted in the sidelines of the training.
- A two day vocational training was organized between 15.03.2011 to 16.03.2011 in which the technology of stunted fingerlings has been demonstrated to 42 farmers of Thiruvarur District.
- An on- farm testing to assess the feasibility of Stunted fingerling technology has been organized in five farmers field in Pullavarayankudikadu, Devangudi and Vadamangalam.
- A demo unit has been set up at KVK premises to demonstrate the technology of stunted fingerlings to the visiting farmers, trainees and other visitors.

The Case of Mr.A.Karthick Kumar of Pullavarayankudikadu who mastered the Stunted Fingerling Technology

Hailed from a middle class family, Mr.A.Karthick kumar studied upto plus two. A native of Pullavarayankudikadu of Needamangalam block, the family's shift to fish culture in 1990s was due to twin reasons of lack of drainage facility in their farm and acute labour shortage for crop cultivation. Mr.Karthick Kumar developed interest in fish culture, discontinued his studies and started helping his father in Composite carp culture. His father converted his entire three acres of land into fish pond. 25% land was converted as nursery pond and 75% land was converted into grow out pond. In those days the awareness about the balanced fish diet was very low. Only combination of rice flour, bran and groundnut oil cake were used to feed the fish due to which the weight gain was not that much effective. An amount of Rs.10-15 was to be spent to attain fish growth of 1 kg. Ultimately, the family could earn Rs. 20000 to 25000 from one acre of land/year. Accidentally, Mr.Karthick Kumar attended a vocational training programme conducted by KVK, Needamangalam where an idea of growing stunted fingerlings sparked in his mind and he was counseled by the Professor and Head of the KVK, Needamangalam. Further, the scientists at KVK, Needamangalam helped him establish

rapport with Assistant Director of Fisheries, Thiruvarur District and Fisheries scientist of VUTRC, Thanjavur. He started learning the nuances in composite carp culture and gained confidence. He took seven and half acre land for lease. He maintained a nursery pond of one and half acre wherein he stocked 300000 to 400000 fingerlings and stunted them with underfeeding. He allocated six acres as grow out pond wherein he grew six carp varieties which were transferred from nursery pond. His success in fish culture could be attributed to two reasons.

1. Balanced diet for fish which has got all nutrients and micronutrients in perfect combination and he himself prepare the feed by sourcing the raw materials. He also market the surplus feed over and above his requirement.

2. Stunting a huge number of fingerlings in nursery pond and transfer 30-40 gram sized fingerlings to grow out pond which resulted in quick weight gain

Apart from growing stunted fingerlings in grow out ponds, Mr.Karthick kumar is selling the 30-40 gram stunted fingerlings to other farmers who regularly come and procure stunted fingerlings form him. He used to regularly update himself by keeping in touch with Krishi Vigyan Kendra, Needamangalam and now he has become a master in stunted fingerling technology which made him famous in Thiruvarur district. Realising his potential, scientists of Needamangalam used to ask him to be a resource farmer in vocational training on fish culture which would motivate the participants to go in for fish culture in a bigger way since a former trainee of KVK, Needamangalam himself has become a resource farmer for the training

Economics of Production of Stunted fingerlings in Mr.A.Karthick Kumar's Fish Pond		
Area of Nursery Pond: 1½ acre		
Area of Grow out Pond:6 acre		
Expenditure details (Input)		
1.	Lease amount for 7½ acres@ Rs.25,000/ac	Rs. 1,87,500
2.	Feed and Labour for 7½ acres@ Rs.1,25,000/ac	Rs.9,37,500
	Total Expenditure	Rs. 11,25,000
Income (Output)		
1.	3000 kg fish from one acre/year for 7½ acres @ Rs. 100/kg	22,50,000
2.	From the sale of fingerlings	3,00,000
	Total Income	25,50,000
A total of ***Rs. 14,25,000*** is the annual profit of Mr. A.Karthick Kumar		

2. KVK's Intervention produced an IFS Entrepreneur

Integrated Farming System models have been recommended from time immemorial to enhance the income of farmers through effective utilization of all resources in the farm. The concept of IFS for Cauvery delta zone has been anchored well in the minds of farmers of Thiruvarur District through planned interventions of Krishi Vigyan Kendra, Needamangalam.

Interventions of KVK, Needamangalam to diffuse the technologies of IFS

The interventions are planned in such a way that the components in a farm should be functionally integrated and the farm budget should primarily depend on recycling of wastes so that the dependence on external inputs could be reduced. The extension programmes were planned on animal, crop components separately and also on integrated farming system management. The interventions include on campus trainings, off-campus trainings, demonstrations in farmers field, Exhibitions and field days. The following list gives a glimpse of interventions carried out by KVK scientists.

- An Exhibition has been arranged at Soil and Water Management Research Institute, Thanjavur wherein a stall has been put up to showcase the benefits of IFS. A model showing appropriate components in IFS for Cauvery Delta and live model of Slatted Goat rearing have been put on display
- Series of on campus trainings are being conducted to take the technologies of IFS to the farmers. During the reporting period one such on campus training was conducted on 23.12.2010 wherein 30 farmers across Thiruvarur District have participated and learnt the technologies related to IFS
- An on campus training on slatted goat rearing was conducted on 7.4.2010 which was inaugurated by the District Collector and attended by sixty participants who took the idea of slatted goat rearing
- During a vocational training between 3.3.2011 to 5.3.2011 on vermicomposting, the idea of waste recycling and Integrated farming system was imparted to twenty five selected farmers of NABARD farmers club
- An on-campus training on backyard poultry was conducted on 3.2.2011 wherein 40 male and female participants learnt the technologies related to backyard poultry rearing.

Apart from these interventions, in KVK premises demo units on Slatted Goat rearing, Rice-Fish-Azolla integration, backyard poultry, vermicompost and Mushroom shed are being maintained. The visiting farmers used to enthusiastically enquire about these demo units and evinced keen interest to start their own units in their farm.

One of the intervention as a part of IFS promotion is to popularize the high yielding cumbu napier grass CO4 among Thiruvarur farmers which can increase the fodder availability to milch animals and to increase the income from farm. This was done through a Front Line Demonstration in 10 farmers field in different parts of Thiruvarur district. Notably, Mr.Masilamani of Mannargudi, Ganesh Kamalakannan of Arasavanangadu, Syed Mohammed of Boothamangalam and Ravichandran of Koradacherry took interest in growing Cumbu Napier grass and they converted this into a business. Besides feeding their milch animals, they started selling cuttings to other farmers from which they could earn impressively. The principle of IFS is that one component should compliment other which is evident in CO4 grass popularization.

The Case of Mr.Ganesh Kamalakannan of Arasavanangadu who reached the pinnacle of glory through IFS

Mr.S.Ganesh Kamalakannan, a B.Com graduate belonging to Arasavanangadu village of Thiruvarur District has meticulously planned IFS in his farm with the guidance of scientists of KVK, Needamangalam and earned huge dividends out of this. Forced to leave a job in Singapore due to sudden demise of his father and close relatives, Mr.Kamalakannan had no choice other than looking after his father's farm. He established contact with KVK scientists and started venturing into Goat rearing, Milch animal rearing, fish culture apart from raising crops. He started a slatted goat rearing unit in his farm by getting guidance from KVK wherein he initially he reared five bucks and one ram which has been developed into a flock of 50 goats. In the first year he earned Rs.35,000 and continuously Rs.42,000, Rs.55,000 in second and third year

respectively and his aim is to reach one lakh in one year from goat rearing. He took up Composite carp culture in five acres of fish pond wherein he grew chosen varieties of carp namely Catla, Rogu, Mirgal and Grass carp. He followed intensive feeding with balanced diet and he harvested five tones of fish from his five acres through which he earned Rs.5,00,000 in one year. Similarly in crop husbandry he brilliantly chose pandal vegetables like bittergourd and snake gourd through which he could earn at least Rs.50,000. He has had 5 acres of land under System of Rice Intensification besides 100 coconut trees, 500 banana and 500 teak trees. He also received 10 Nandanam Broilers from KVK, Needamangalam which strengthen the concept of IFS. Totally he could earn Rs. 10 to 15 lakhs in a year from his farm. ***More importantly he integrated the components. He used the cowdung for preparation of panchakavya, poochiviratti and for biogas preparation thereby reducing plant protection cost for crops. He used the excreta of cows, goats and chicks for fish feeding which reduced the cost of feeding fish. He not only practiced IFS but also propogate this idea to the youngster of his village. He had future plans of starting a verimcompost unit and rearing fresh water prawn.***

3. Timely intervention of KVK saved farmers from False smut disease in rice

False smut (***Ustilagnoidea virens)*** in recent years has been emerged into devastating disease in Cauvery Delta Region. The epidemiology of the disease reveals the late samba season in Cauvery delta region is conducive for the dormant air and soil borne pathogens of the disease to become virulent. The intermittent rainfall, high humidity and low temperature favours the disease to spread fastly which results in the entire seed transformed into smut ball.

The severity of the disease warrants KVK's intervention

The severity of the disease incidence could be known from the fact that it has affected almost all varieties of rice which were once designated as resistant varieties to False smut. Previously the disease was found to attack predominantly CO43 but in recent times the incidence is omnipresent in all ruling varieties of Cauvery delta like ADT 46, CO 50, BPT 5204 ,CR 1009 etc., The important nature of the disease which has been a nightmare for the rice growers is that the disease cannot be controlled at any cost once it infects the grains. It is paramount important that a farmer has to take prophylactic measures to avoid the incidence of false smut. He has to spray Propiconozole 500 ml/ha twice during boot leaf and milking stage.

The interventions of KVK, Needamangalam to diffuse the technologies related to false smut management

- An on farm trial has been organized in 10 farmers field of Manaparavai, Melapalaiyur and Thirugudi villages to assess the effectiveness of chemicals namely Propiconozole and Copper hydroxide and it was found that Propiconozole controlled false smut effectively.
- An off- campus training on the control of False smut was conducted on 9.12.2010 followed by the prophylactic spray of recommended chemicals in the farmers field.
- Several on compus trainings on IPDM in rice were conducted in KVK, Needmangalam wherein the Management of false smut was dealt with.

- Timely dissemination of information through local vernacular dailies like Thinakaran, Thinathanthi and Thinamalar caught the attention of many farmers who dialed to KVK for further clarification. During November, December months the new items of control of false smut were published.
- Further the control of false smut has been given as one of the important technology to be disseminated by Extension workers of Department of Agriculture during the Monthly Zonal Workshop of officials of Line Departments.

The case of Mr.R.T.Elangovan, who saved his rice crop from False smut

Mr.R.T.Elangovan, one of the progressive farmer of Manaparavai who owns 10 acres of land has been practicing direct sown wet seeding of rice in his field. He has been one of the enthusiastic innovative farmer who kept his relationship intact with the scientists of KVK,Needamangalam. He was also the leader for Farmers Field School (FFS) on Direct Sown Rice which was organized in his village. He used to visit KVK often to get advice from scientists of Needamangalam. During one such visit he brought information that false smut has been rampant in his village in CR 1009 in the previous season which surprised the scientists. Then the scientists made a preliminary survey during a FFS meeting and could foresee a possible outbreak of False smut in the ensuing season. They have given a recommendation of prophylactic spray of 500 ml of Propiconozole twice at boot leaf stage and milking stage. The recommendation was followed by around 75 farmers of the village and adjoining villages. Instructions were clearly given about the spray dose, spray volume and stages of crop during which the spraying has to be taken up. To the surprise of the scientists at KVK, Needamangalam the incidence of false smut was found to be around only 5% in the three villages namely Manaparavai, Melapalaiyur and Thirugudi villages where around 1500 acres of land under direct sown rice has been saved through KVK's timely intervention

Partial Budgeting of Control Vs Application of Propiconozole to control False smut (For One acre)

Added Cost	**Added Return**
Propiconozole 500 ml = Rs.700 Labour cost 2 labour = Rs.400	4880 Kg instead of 2000 kg in the previous season crop affected by false smut = Rs.20,000
Reduced Return Nil	**Reduced Cost** Nil
Total = 1100 (A)	**Total = 20000 (B)**

(B)-(A) = 18,900

4. Co 4 fodder grass reaches remote villages of Thiruvarur District

Livestock is an integral part of Integrated Farming System which not only gives remunerative income but also support the effective integration of other components in IFS. In Thiruvarur district, the availability of good quality fodder has been a serious concern of farmers which serves as a stumbling block for higher milk production in cows and weight gain in goats. This need has been rightly identified by the KVK, Needamangalam. The scientists in KVK has designed extension programmes to diffuse the technology of CO 4 Cumbu Napier fodder grass due to its salient features of profuse tillering, non lodging, high dry matter, crude protein content and palatability to animals.

Interventions of KVK to diffuse the CO4 Cumbu Napier Hybrid among farmers

The scientists at KVK, Needamangalam has meticulously planned the following interventions to take the CO4 grass to nooks and corners of interior villages.

1. Front line demonstration trials have been laid in ten farmers field in Boothamangalam, Poovanur, Pullavaryankudikadu, Poothalangudi, Kappamangalam and Koradacherry during 2009-10. 800 slips of CO4 fodder has been distributed to farmers. Among the farmers, Mr.Masilamani of Mannargudi, Mr.Ganesh Kamalakannan of Kodavasal, Mr.Syed Mohammed of Boothamangalam have achieved a bumper harvest of the crop
2. A Front line demonstration on fodder bank at village level is being organized in 2010-11. Ten prospective farmers were identified who were given with 1200 slips of CO4 fodder grass. Prominent farmers who have received the slips are J.Sudhakar of Sundarakottai, Mr.P.Bharath of Edamalaiyur, Mr.M.Maheswaran of Ullikottai and Mr.Ramkumar of Ullikottai.
3. Several demonstrations have been organized at KVK, Needamangalam wherein the effective use of bunds of fish pond for rearing CO4 grass has been emphasized. A separate demo unit is being maintained at KVK, Needamangalam to demonstrate to the visiting farmer and trainees. A field day to demonstrate the potential benefits of Co4 grass has been arranged at Enkan, a village in Thiruvarur District on 23.12.2010 which was attended by 25 farmers of the village.

The farmers who received cuttings in turn distributed the slips from their field to other fellow farmers and relatives and the horizontal spread of CO4 fodder grass has been immense which might have touched 200 acres of land around the fields of FLD beneficiaries. The beneficiaries not only feed the animals with CO4 grass but also feed the fish. They were of the opinion that the CO4 fodder has been very succulent which the animals like to feed on and the milk yield is also increased due to the feeding of CO4. Mr.Masilamani of Mangudi has been earning at least Rs.1500/month from the sales of slips and Rs.2000 through selling of fodder. Mr.Ganesh Kamalakannan of Kodavasal who maintained CO4 fodder in 15 cents, extended to 2 acres which could meet out the fodder requirement of 5 goats and seven milch animals.

The Case of Mr.Syed Mohammed of Boothamangalam

Mr. Syed Maohammed of Boothamangalam, an FLD farmer initially raised CO4 grass in 15 cents and later expanded in 2 acres of land on getting technical inputs from the scientists of KVK, Needamangalam. He has erected a slatted goat rearing unit wherein he maintained 60 goats of different breeds like Jhamnabhari, Koraki and Boer cross. Besides he maintained 10 milch animals. Prior to raising CO4 grass he used to spend atleast Rs.200 for the purchase of grass from Mannargudi market. Sometimes he found it hard even sourcing the grass for feeding his animals. Further the milk yield has been 6-7 liters prior to feeding the animals with CO4 fodder grass. Now he overcome all these difficulties. Apart from feeding the cows the two acre CO4 fodder grass could be sufficient to feed his 60 strong goat flock. The milk yield also rose to 10 liters during morning and evening. Besides he also sold about 1,00,000 slips to other needy farmers

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

The following are the innovative methodologies followed by scientists of KVK during 2010-11

Two prominent shifts in extension methodologies have been observed world over. One is the shift from Individual extension approaches to Group Extension approaches and another one is the shift from just lecturing to participatory training methodologies. In line with these changes scientists at KVK, Needamangalam are working to bring to reality the shifts contemplated. At least four innovative attempts could be worth mentioning. They are

1. **Pre training Assessment**: To know the orientation of Extension workers on participatory approaches beforehand a training on "Participatory Approaches for Grass root Extension work" a semi structured interview schedule was constructed and administered among the Extension workers who have attended a Monthly Zonal Workshop at KVK, Needamangalam. **This pre training need assessment gave an idea to the trainer to tailor his *modus operandi* of the training**

2. **Mock Participatory workshops:** Based on the pre training assessment, an Interactive workshop was organized on "Participatory Approaches for Grass Root Extension Work" at KVK Needamangalam on 19.01.2010 to instill in the minds of Extension officials, the importance of participatory approaches which could be employed for the preparation of Strategic Research and Extension Plan (SREP). During the programme the Extension workers were taught with how participatory workshops should be conducted in villages. A mock participatory workshop was arranged during the programme wherein the participants were divided into different groups and they were given an interesting topic of "constraints in adopting participatory approaches in Field Extension and suggestions". Finally one from each group was asked to come and present the group's ideas on the selected topic

3. **Participatory Expenditure Analysis:** During a NABARD sponsored training on "Sustainable Sugarcane Initiative" scientists of KVK, Needamangalam has introduced an innovative tool called **Participatory Expenditure Analysis** wherein the participants were asked to give the cost of cultivation for sugarcane from one acre in a chart paper and they were made to present which was triangulated by the co-participants. Through this exercise the participants understood clearly the difference between cost of cultivation of sugarcane from conventional method and SSI.

4. **Leadership Matrix:** KVK, Needamangalam has organized a NABARD Sponsored Leadership Development Programme for Farmers club leaders on 24.12.2010. During the training an interview schedule containing statements related to leadership was circulated among the participants and they were asked to introspect their leadership qualities vis-à-vis the leadership qualities mentioned in the statements. Finally they were asked to tell the score they obtained from the schedule. Through a leadership matrix the scientists of KVK, Needamangalam categorized the participants as task centric and people centric leaders.

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)

S. No.	Crop / Enterprise	ITK Practiced	Purpose of ITK
1.	Cucumber	Cucumber in rice fallow condition	To get more income
2.	Rice	Raised bed seedlings by using wooden frames for rice transplanter	To save expenditure on plastic trays

10. F. Indicate the specific training need analysis tools/methodology followed forIdentification of courses for farmers/farm women, Rural Youth and In service personnel

The following training need analysis tools were used for identifying courses for farmers, farm women, rural youth and In service personnel

- Pair wise Matrix Ranking.
- Matrix Scoring.
- Preferential Ranking.

10.G. Field activities

1.	Number of villages adopted	**:**	58
2.	No. of farm families selected	**:**	264
3.	No. of survey/PRA conducted	**:**	58

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

Status of establishment of Lab :

1. Year of establishment : March 2011

2. List of equipments purchased with amount :

Sl. No	Name of the Equipment	Qty.	Cost (Rs)
1	Laboratory table	5	78,000
2	a. Physical balance b. Chemical balance	1 1	27,352
3	a. Spectro photometer b. pH meter	1 1	45,074
4	a. Flame photo meter b. Digital conductivity meter	1 1	56,566
5	a. Glass single distillation unit b. Shaker c. Hot air oven d. Hot plate e. Willey mill f. Water bath rectangular	1 1 1 1 1 1	1,22,845
6	a. HCL Desktop computer system b. HP Laserjet Printer P.1566	1 1	37,600
7	Kijeldahl digestion unit	1	2,33,170
	Advertisement charges		5633
Total			6,06,240

Note: Action taken for the remaining amount in the budget for Rs. 3 93,760

Details of samples analyzed so far since establishment of SWTL: Yet to start

Details	No. of Samples analyzed	No. of Farmers benefited	No. of Villages	Amount realized (Rs.)
Soil Samples				
Water Samples				
Plant samples				
Manure samples				
Others (specify)				
Total				

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				
Water Samples				
Plant samples				
Manure samples				
Others (specify)				
Total				

10.I. Technology Week celebration

Period of observing Technology Week : From to
Total number of farmers visited :
Total number of agencies involved :
Number of demonstrations visited by the farmers within KVK campus :

Other Details

Types of Activities	No. of Activities	Number of Farmers	Related crop/livestock technology
Gosthies			
Lectures organized			
Exhibition			
Film show			
Fair			
Farm Visit			
Diagnostic Practicals			
Supply of Literature (No.)			
Supply of Seed (q)			
Supply of Planting materials (No.)			
Bio Product supply (Kg)			
Bio Fertilizers (q)			
Supply of fingerlings			
Supply of Livestock specimen (No.)			
Total number of farmers visited the technology week			

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		
Total		

C. Farmers-scientists interaction on livestock management

State	Livestock components	Number of interactions	No.of participants
Total			

D. Animal health camps organized

State	Number of camps	No.of animals	No.of farmers
Total			

E. Seed distribution in drought hit states

State	Crops	Quantity (qtl)	Coverage of area (ha)	Number of farmers
Total				

F. Large scale adoption of resource conservation technologies

State	Crops/cultivars and gist of resource conservation technologies introduced	Area (ha)	Number of farmers
Tamil nadu	**Rice transplanter**	**56**	**14**
Total			

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
Total												

PART XI IMPACT

11. A. Impact of KVK activities

Name of the specific technology/skill transferred	No of participants	% of Adoption	Change in Income (Rs.)	
			Before (Rs/ha)	After (Rs/ha)
Composite carp culture	325	65.50	165500	325100
Mechanisation in Rice	720	62.00	46500	52500
IPDM in rice	450	80.00	42500	41870

11.B. Cases of large scale adoption

1. Composite carp culture

Composite carp culture has been practiced in around 500 ha of land in Thiruvarur district. Though composite carp culture has been practiced in the district in the recent past, the yield of fish has been plummeting down due to the non scientific practices. One such practice is the indiscriminate feeding of fish with all available waste without any scientific rationale. The water quality management has been given least importance which culminates in poor growth of fish.

KVK, Needamangalam has chosen Composite Carp Culture as one of the thrust area which has been given immense focus for the past three years. The focus was given to sensitizing farmers on scientific stocking ratio, balanced fish feed management and water quality management. The reach out programmes were well planned to cater to the larger number of inland fish growers. Intensified efforts were taken from yesteryear and it is being continued with rigour.

Two NABARD sponsored CAT programme on Inland fisheries as alternative Remunerative option in Cauvery Delta Region has been conducted consecutively for the past two years. A front line demonstration on Composite carp culture has been conducted for two consecutive years with impeccable impact and fifteen farmers got benefitted out of the programme. Vocational trainings on Composite carp culture has been organized from time to time which has been attended by huge number of farmers as the demand for such an enterprise is ever increasing. The complete supply chain of fish production has been dealt with in trainings. Trainings gave a wholistic picture to the participants who got to know production, marketing and value added products of fish

Wider scale adoption of Composite carp culture

The scientists of KVK, Needamangalam through participatory need Assessment selected a cluster of contiguous villages for upscaling scientific composite fish culture. The villages were Keelapattu, Pullavarayankudikadu, Vaduvur and Devangudi. Though Front line demonstrations were conducted in ten villages these four villages were given more focus for wider adoption. The ***FLD beneficiaries acted as Para Extension workers*** who along with the scientists of KVK shoulder the responsibility of disseminating scientific carp culture. Mr.Karthick Kumar of Pullavarayankudikadu, Mr. Manohar of Keelapattu, Mr.Rajkumar of Devangudi, Mr.Pugalenthi of Vaduvur, Mr.R.Kalyanasundaram of Thattaikalpadukai, Mr.Sanmugam of Vilathur are some of the prominent fish growers who helped the KVK scientists to disseminate composite carp culture. ***An income of Rs. 1,50,000 Rs. 70,500, Rs.***

66,000 has been earned by Mr.Karthick kumar, Mr. Manohar and Mr.Sanmugam respectively from one acre of fish pond. They have earned 40%, 35% and 25% more income by substituting rice cultivation with fish pond. Around 325 farmers of the above said villages gained knowledge from KVK, Needamangalam and started growing composite carp varieties. Around 40 of them have processed their application with Fish Farmers Development Agency of Thiruvarur district for digging of fish pond. The mindset of the villagers of the above four villages has been changed fully to allocate atleast a portion of their land for fish pond. Differential adoption of technologies were found to be **55%, 62%, 59% and 65% in Keelapattu, Pullavarayankudikadu, Vaduvur and Devangudi villages respectively.** The item wise adoption of technologies is given elsewhere in this report.

2. Mechanisation in rice

The scientists at KVK, Needamangalam to fulfill one of the most important thrust areas, mechanization in rice cultivation has planned a series of interventions namely on campus demonstration cum interactions, front line demonstrations in farmers field, on campus and off-trainings in farmers field to reinforce the potential of farm mechanization in rice.

Rice transplanting is a labour intensive activity which often suffers in peak season due to scarcity of labour in Cauvery delta zone. Transplanting of rice seedlings with eight row paddy transplanter has been gaining momentum and comes as a harbinger for farmers facing labour scarcity. A one day on campus demonstration has been arranged at KVK, Needamangalam on 21.07.2010 to demonstrate the utility of Eight row Yanmer Rice transplanter to farmers of Thiruvarur District. Twenty farmers from the district participated in the demonstration and witnessed the efficiency of Rice Transplanter.

Efforts have been made to bring to reality the much spoken Public- Private partnership in Agricultural Extension through engaging influential farmers as Para- extension workers who can take the advantage of Mechanisation in Rice cultivation to their fellow farmers. As a starting point, eight row Yanmar Rice Transplanter has been planned to be diffused among rice growers of Thiruvarur district. Two important prerequisites of using the machine is careful tray nursery preparation and proper field preparation. The field should be prepared in such a way that the transplanter can place the seedlings in appropriate depth. A team of scientists of KVK prepared tray nursery in the farmer field and supervised transplantation using Eight row Yanmer Rice Transplanter in two Front line demonstrations on 29.09.2010 and 27.09.2010. The farmers were surprised to see the labour saving hassle free transplantation of rice seedlings which they have never experienced so far.

A demonstration of hydraulic Land Leveller for Extension personnel has been arranged at KVK, Needamangalam on 23.08.2010. Twenty Extension personnel took part in the demonstration. They appreciated the land levelling operation of the leveler according to the contour of the field.

Fillip to the activities was given through conduct of series of field days in the fields of beneficiaries of Front Line Demonstration. The idea of disseminating the technology to the entire village proved to be a great success since around 150 farmers of three villages namely Chithadi, Pilavadi and Chickapattu were convinced

of the total mechanization in rice which was demonstrated in series of field days conducted on 1.02.2011, 02.02.2011, 04.02.2011 at Chickapattu, Pilavadi and Chithadi respectively.

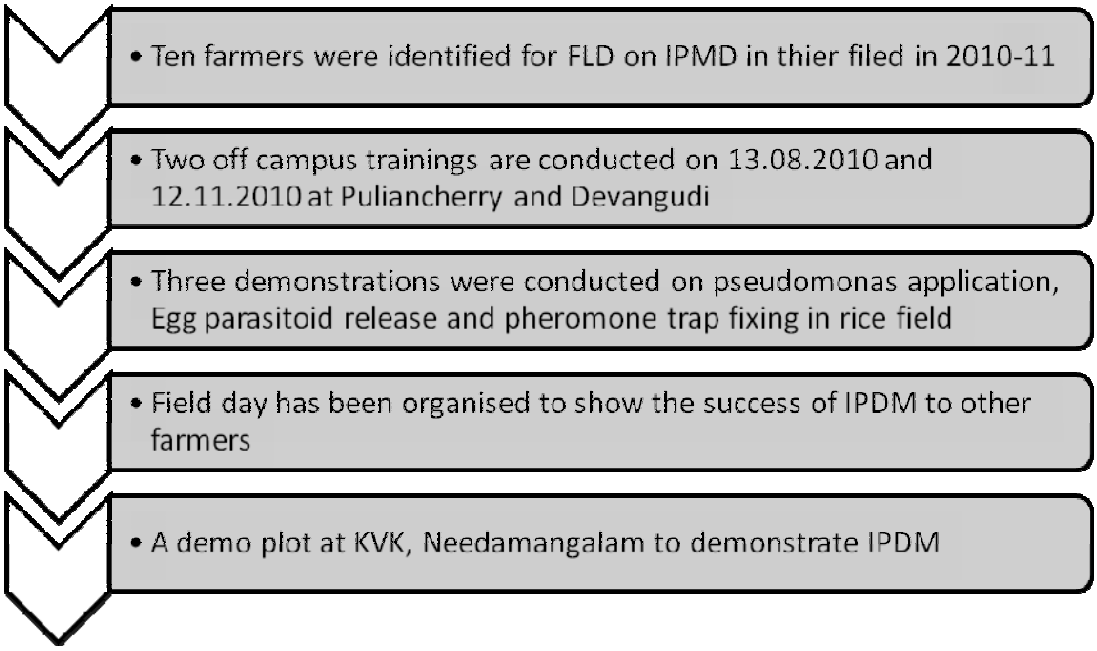
The symbolic adoption of mechanization (ie., likelihood of adoption in near future) of rice has been perceived among large chunk of rice growers of Thiruvarur district. This could be substantiated through the percentage increase in using mechinaries for rice cultivation. The rice transplanter utilization has been increased from 18% in 2009-10 to 25% in 2010-11. The Power weeder utility has been enhanced from 11% in 2009-10 to 18% in 2010-11. Manual harvesting has been completely replaced by Combine harvester. Its utility ranged from 93-96% irrespective of nature of farm holdings. Many farmers evinced interest to shift to complete mechanization due to labour shortage and managing them who will work for lesser hours and demand more in terms of cash and kind. Mr.Sakthi of Chickapattu has been using transplanter for his 30 acres of rice field besides hiring transplanter for 1000s of acres of rice field in Thiruvarur and Nagapattinam districts. Mr.Rajendran of Pilavadi (25 acres) and Mr.Muthaian of Chithadi(12 acres), Mr. Ambigapathy of Perambur (10 acres) and Mr. Kailasam of Poovanur (10 acres) have completely switched to mechanization.

This initiative of KVK, Needamangalam has been welcomed by farmers of Thiruvarur district and they are hopeful of bringing more acres of paddy under mechanization in the current season. Enthused by the overwhelming response, the scientists of KVK, Needamangalam has been on their feet to increase the acerage under mechanized rice cultivation.

3. Integrated Pest and Disease Management in Rice

Pest and diseases are inherent in any cropping system which reduces the yield drastically thereby the income from crops reduced phenomenally. Rice is one of the cereal crop which has been affected by an array of insect pest and diseases. Rice farmers used to resort to indiscriminate use of pesticides which resulted in pest resurgence. More importantly farmers use synthetic pyrethroid which results in pest outbreak in the ensuing season.

KVK, Needamangalam one of the Extension centre of Tamil Nadu Agricultural University has been extending Integrated pest and Disease Management practices to rice farmers of Thiruvarur district in a bigger way. One of the thrust area that scientists at KVK, Needamangalam have been working on is IPDM in rice. The interventions are diverse to reach the farmers effectively. Since its inception it has been organizing Frontline demonstration, On and Off campus trainings, demonstrations, Exhibitions, field visits, field days to convey the technologies to farmers. The Farmers Field School on IPM in rice which was conducted during 2009- 2010 has been a great success and transformed the way the farmers pursue their pest and disease management. In 2010-11 also, the KVK has continued its endeavour to bring into fold still more number of farmers of Thiruvarur district under IPDM category. The following are the interventions that KVK, Needamangalam has been carrying out during 2010-2011.



The impact of IPDM was unique that all the beneficiaries were able to save at least Rs.2000 from one acre of rice by the way of foregoing the pesticide spray. All farmers in Puliancherry village where the FLD on IPDM was conducted irrespective of beneficiary of FLD or not could get to know the potential of IPDM in controlling pest, saving money and also the environment. Mr. Parasuraman, Mr.Sethuraman, Mr.Chithiraikumar and Mr.Kannan of Puliancherry village could save Rs.1700, Rs.2000,Rs. 2500 and Rs. 2700 respectively by adopting IPDM technologies in their field. They were opined that they could observe great difference between IPDM and non IPDM fields. The beneficial insects like spiders, myrids, coccinellids could be seen in large number in their fields. Around 75 farmers of Puliancherry village were found to adopt IPDM technologies by observing the benefits that their fellow farmers are getting from IPDM.

4. The Impact of training on ICT tools for better decision making

Information and Communication technology tools (ICT) have brought sea changes in the way people live their life. The contours of every field have been redrawn by the entry of IT. While tech savvy urban populace tasted the fruits of ICT it is hightime that the farmers, who forms part of majority of population in India need to be moulded to get maximum benefit from these gadgets. Krishi Vigyan Kendra, Needamangalam has taken a step forward to train educated farmers of Thiruvarur District in using ICT tools with the idea that these beneficiaries would act as para- extension workers and teach their fellow farmers. A training on “Role of ICT tools in Agricultural Extension” was conducted by the KVK on 11.1.2011 wherein twenty six young farmers participated with zeal and enthusiasm.

The scientists of KVK primarily focused on “TNAU Agritech portal” recently launched by E-Extension centre of Tamil Nadu Agricultural University. The scientists explored the TNAU Agritechportal online and projecting it so that the participants could get a live experience of how the portal works and how one can be hyperlinked to different webpages. Farmers were told that TNAU Agritechportal is all information on Agriculture and allied technologies under one roof and anybody can browse and view a combination of text, photos and video related to technologies. Further, the information on wide range of issues which forms part of the portal namely Schemes of Government, Crop insurance, banking, agricultural related information in

newspaper, television and radio, farmers groups, success stories, farmer's innovations were shown to the trainees. Farmers had a glance of hearing a clip from podcasting of the Hindu newspaper which has been linked to TNAU Agritechportal. The price forecasting through Domestic and Export Market Intelligence Cell (DEMIC), weather forecasting and Dynamic Market Information (DMI) which gives every day price of agricultural commodities interested most of the trainees as production and marketing decisions are fully depend on weather and price of agricultural commodities in the market. The trainees were facilitated to enroll themselves with DMI through which a farmer can get everyday wholesale price of an agricultural commodity in their cell phone from two markets of their choice among selected twelve markets.

The trainees were also sensitized on other ICT tools like Video conferencing, Interactive Multimedia Compact Discs on selected agricultural technologies, Expert systems for crops, websites pertaining to agricultural technologies and market information and how farmers can make use of the information.

The trainees were encouraged to browse TNAU Agritechportal and other websites on their own. Every trainee tried retrieving information which is a greater impact of the training. The visual impact of the training was seen as the trainer could learn from some of the trainees that they took decision to postpone or advance critical operations like sowing of blackgram or harvesting of paddy as they came to know from weather forecasting for Thiruvarur distict from TNAU Agritechportal that it will rain during 14th or 15th of January 2011. The feedback from the training was exemplary that the trainees urged KVK to conduct more trainings on this line so that more farmers would be benefitted.

The post training analysis was done after one month by personally contacting the participants telephonically. Out of 27 participants only 20 could be contacted and the results of the analysis are as follows (n=20)

S.No	Response of the participants	No	Percent
1.	Regularly getting market information through Dynamic Market Information(DMI) of E-Extension centre, TNAU	15	75.00
2.	Occasionally browsed the Agritechportal for knowing pest and disease information	7	35.00
3.	Browsing Agritech portal for knowing weather information	10	50.00
4.	Browsing other agriculture related websites	2	10.00

It is heartening to note that 15 out of 20 participants could get regularly market information from DMI. Equally good was the response of 10 participants that they were browsing TNAU Agritech portal for knowing weather forecast. A few participants also responded that they browsed Agritech portal for knowing pest and disease information. Though the response was limited, it gave a signal that similar trainings would further amplify the scope of many farmers take the ICT route for knowing agriculture related information in future.

5. The impact of supply of technological inputs

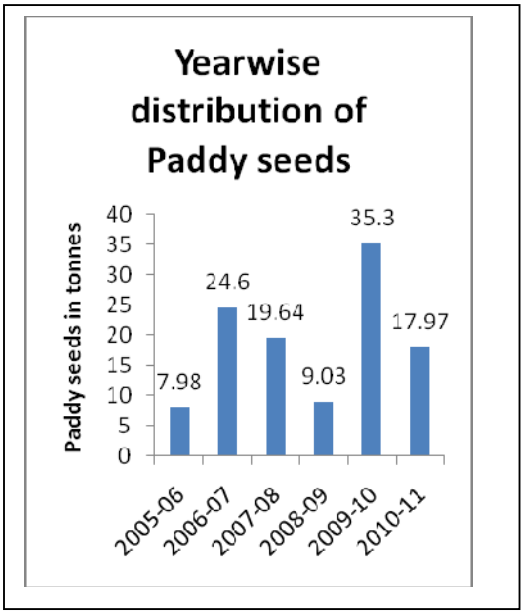
The scientists at KVK Needamangalam not only teach technologies to the farmers but also sell technological inputs from KVK farm in the form of seeds, seedlings, chicks, azolla, and vermicompost. This has got immense impact among farmers since they actually saw the benefit of technologies genuine and quality inputs received from a reputed institution.

Technological Inputs	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	Total	No of farmers
Paddy seeds (Tonnes)	7.98	24.6	19.64	9.03	35.30	17.97	114.52	2450
Blackgram seeds	-	-	-	60	80	-	140	24

(Kg)								
Coconut seedlings (No)	-	-	-	680	-	-	680	47
Teak seedlings (No)	162	45	665	-	-	583	1455	169
Silk Cotton seedlings (No)	375	-	-	-	-	-	375	20
Sun hemp (Kg)	-	-	565	60	-	-	625	65
Daincha (Kg)	-	-	-	-	-	40	40	4
Azolla (Kg)	-	-	-	-	-	635	635	38
Vermicompost and Biocompost (t)	-	-	-	-	-	4.5	4.5	18
Birds (No)	-	-	-	-	-	105	105	61
Bucks (No)	-	-	-	-	-	3	3	3
Total No of Farmers benefitted								**2896**

The table given above would reveal the herculean efforts of KVK, Needamangalam in producing and supplying technological inputs. The total no of farmers who got benefitted is 2896. ***These many farmers not only carried technologies from KVK but also the igniting thoughts from demo units available in KVK, Subject Matter Specialists which will have an indelible impact***.

One such example is that Mr.Ganesh Kamalakannan of Enkan, Mr.Syed Ahamad of Boothamangalam and Mr. Rajendran of Thirumeni who visited slatted goat rearing unit at KVK, motivated by this idea and started their own slatted goat rearing units by getting Boer bucks from the demo unit of KVK. Thus apart from technologies, the input for the technology also were distributed which results in huge and immediate impact.



As KVK, Needamangalam has been serving as a knowledge repository of rice in Thiruvarur district, the utmost concentration of the centre is on production of paddy seeds to cater to the needs of Thiruvarur district. It is evident from the figure given below that distribution of paddy seeds has followed an increasing trend with a maximum of 35.3 tonnes distributed during the year 2009-10. The reason for sudden reduction in the current year (2010-11) is that a part of the produce (16.5 t) has been given as grain due to discolouration by continuous rain and flood. In the coming years the trend would be sustained. The striking impact which needs to be documented for the year 2010-11 is that the provision of inputs has been widened and it has not been confined to paddy seeds alone.

The first time supply of 635 kg Azolla, 4.5 tonnes of vermicompost, 105 birds and 3 bucks, besides the supply instill in the minds of farmers that paddy seeds alone is not the input that they can get from KVK but an array of input are available. Sometimes, the demand for azolla has exceeded which KVK could not meet out. Enthused by the overwhelming response of farmers, the KVK scientists have sorted out plans to meet out the demand in coming years.

The green manure seeds like sunhemp (625 kg) and daincha (40 kg) were also distributed. Over years 680 coconut seedlings and 1455 teak seedlings were also distributed to 47 and 169 farmers respectively.

Another striking indicator which substantiate the impact of distribution of technological input is that the Revolving fund generation (RF) has phenomenally rose from ***Rs.79,000 in 01.04.2010 to Rs. 5,71,000 in 31.03.2011***. The amount may increase in coming years since demo units like composite fish culture is to be accounted for in ensuing year.

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

Impact Analysis of KVK on Composite Carp Culture

Inland fish culture has been proved to be a remunerative option to compliment the income of farmers. Inland composite fish culture is popular in Cauvery delta region of Tamil Nadu since the water in fish ponds could be maintained for at least six months. The increasing consciousness among people about their health made them to include fish as an important component in their food basket which has increased the demand for fish in the market. A farmer can earn a profit of at least Rs.50,000 from half acre of fish pond in six months provided he should bestow best of his attention to the pond. Further it serves as an important component in Integrated Farming System where a farmer can effectively utilize the farm wastes as fish feed.

The Harnessed Efforts of KVK, Needamangalam

Several planned interventions has been carried out by KVK, Needamangalam to diffuse the scientific rearing of carp varieties in ponds. Front line demonsrations has been laid down in fifteen ponds of farmers for the past two years which resulted in multiplier effect. The technology reached a wider population through word of mouth of beneficiaries of FLD. On campus and off campus trainings and field days were conducted to reinforce the technologies in the minds of farmers. The important technologies of feed management, water quality management were given focused attention during the trainings. Exhibitions and field visits to successful farms like Aranvindh fish farm, Vaduvur fish farm has further amplified the scope of diffusion of technologies pertaining to composite fish culture. Four villages namely Pullavarayan kudikadu, Vaduvur, Keelapattu and Devangudi were considered as ***Social Laboratory*** wherein the scientists of KVK, Needamangalam have implemented interventions.

Impact Analysis Methodology

The impact of the technology demonstrated was assessed through two broad dimensions. They are

1. **Macro level impact**
2. **Micro level Impact**

Macro impact deals with the intangible consequences of the interventions which is happening at the district level. The indicators which are used for this assessment are

1. The increase in production under composite fish culture over the years
2. The increase in number of inland fish farmers over years
3. The increase in number of farm ponds sanctioned by Dept of Agricultural Engineering

The Micro level impact is the tangible consequences which are happening at the village level. The following indicators have been identified to study the micro impact

1. **Economic impact** : Percentage increase in income and BCR, digging of new fish ponds
2. **Technological Impact**: Technological impact was analysed through a well structured interview schedule
3. **Ecological impact**: Ecological impact was studied through indicators like recycling of agricultural waste, ecosystem management etc.,
4. **Sociological impact**: Relationship building, clique formation, social prestige etc,.

Results of Impact Analysis

Macro level Impact:

The Macro level impact was assessed by analyzing the district level data on three indicators namely production of composite fish culture over years, number of new fish growers added over years and number of farm ponds sanctioned by Dept of Agricultural Engineering over years. It is evident that the trend of carp fish production from 2007 to 2010 has followed an increasing trend with at least 1000 acre increase every year. Due to focused efforts of KVK, the increase from 2009 to 2010 was 2500 acres which is 2.5 times more than the preceding year. The number of farmers who took to Composite carp culture also showed a significantly increasing trend with the increase of 400- 500 farmers every year. The number of farm ponds sanctioned by Department of Agricultural Engineering also showed a very impressive increasing trend. There was a lull during 2009 and it got peaked in the next year. The data at the district level presented stood as testimony to the positive impact made by the interventions of KVK, Needamangalam. Though several factors contributed to the increase the contribution of KVK, Needamangalam in terms of motivating the farmers in the right direction has had a huge share in total contribution of other factors

Micro level Impact

The micro level impact was studied under four dimensions namely Economic, Technological, Ecological and Sociological Impact.

Economic Impact

The Economic impact was ascertained for sixty farmers in four selected villages where the KVK, Needamangalam has focused the interventions. The following table gives the details of analysis

(N =60)

Village and no of respondents	Average income from one acre of fish pond	BCR	Percentage of respondents willing to dig new ponds
Pullavarayankudikadu(n = 15)	1,25,000	1: 4.25	79.00 percent
Vaduvur (n= 15)	1,10,000	1:4.11	72.50 percent
Keelapattu(n =15)	98,880	1:3.89	81.00 percent
Devangudi(n 15)	95100	1:3.82	69.50 percent

It could be inferred from the table that the village pullavarayankudikadu excelled in average income and BCR ratio followed by Vaduvur. In all the villages more than three fourth of the respondents were willing to dig new fish ponds having realized lucrative income from the previous harvest of fish to further increase their economic well being.

Technological Impact

Fifty respondents including the beneficiaries of FLD on composite carp culture were invited for vocational trainings on composite carp culture conducted at the premises of KVK who were taken on a field visit to successful fish farm. The respondents were given with extension literature like leaflets and booklet. The interventions of KVK are

1. Frontline demonstration
2. Vocational trainings
3. Extension literature (leaflet, booklet)

Impact of the intervention was assessed through administration of a knowledge test before and after the start of interventions by KVK with the same set of questions (stimuli or items). The reliability of knowledge items were standardized through item difficulty and item discrimination index. The finalized knowledge test consisted of 15 items which included five questions on selection of site for fish pond and components of fish pond, four questions on the origin and morphology of six carp varieties, three questions on feeding habit of carp varieties and feed management, one question each on stocking density, transit and letting of fingerlings into the fish ponds. Each question was of multiple choice type and scored in such a way that correct answer was given one score and wrong answer was given zero score. The scores obtained by the respondents through pre and post intervention test were pooled together for analysis. The mean knowledge score of respondents pre and post Interventions were analysed. In order to add scientific validity, the data was put to statistical analysis to find out existence of significant difference between pre and post Intervention. The results are given below.

Results of Pre and Post knowledge test scores

Table: 1 Distribution of respondents pertaining to their knowledge on composite fish culture before and after KVK's intervention **(n 50)**

S.No	Items/Questions	Pre training Knowledge score		Post training Knowledge score	
		No	%	No	%
1.	Ratio of clay, Alluvial and sand in fish pond	14	28.00	44	88.00
2.	PH of the water in fish pond	16	32.00	38	76.00
3.	The shape of the fish pond	40	80.00	50	100.00
4.	The number of Nylon net used for Inlet canal	20	40.00	40	80.00
5.	The season for excavation of fish pond	30	60.00	50	100.00
6	The country from which Rogu got introduced to India	8	16.00	36	72.00
7.	The carp variety introduced from Japan	12	24.00	42	84.00
8.	The feeding habit of Mirgal	32	64.00	50	100.00
9.	The carp variety with fringed lower lip	26	52.00	38	76.00
10.	The carp variety with upturned mouth parts	24	48.00	44	88.00
11.	Seasoning of fingerlings during transit	10	20.00	50	100.00
12.	The acclamatisation of fingerlings with the rearing pond	40	80.00	50	100.00
13.	Stocking density	28	56.00	48	96.00
14.	The optimum time for harvest of fish	44	88.00	50	100.00
15.	Nature of feeding during rainy days	26	52.00	46	92.00

Table:2 Meanscore and 't' value for pre and post Intervention Knowledge scores

S.No	Mean knowledge Score (Pre Intervention)	Mean knowledge Score (Post Intervention)	't' value
1.	6.04	12.60	11.17**

***Significant at 1% level of probability**

It could be inferred from table 1, that the respondents were found to possess low level of knowledge on the ratio soil of fish pond (28.00 per cent), PH of the water in fish pond (32.00 per cent), and nylon net used for inlet canal of fish pond (40.00 per cent) prior to the interventions. Entry level knowledge before interventions for majority of respondents was very limited for the knowledge items viz., origin of carp varieties (16.00 per cent and 24.00 per cent respectively) and season of fingerlings before transit (20.00 per cent). Similarly, medium level of knowledge was observed among participants before interventions for the knowledge items viz., stocking density (56.00 per cent), nature of feeding during rainy days (52.00 per cent) and season for excavation of pond (60.00 per cent)

A tremendous knowledge gain was observed after the interventions. The questions for which majority of respondents wrongly answered during pre intervention assessment were correctly answered in post intervention assessment. Ratio of soil for fish pond (from 28.00 per cent to 88.00 per cent), PH of water in fish pond (from 32.00 per cent to 76.00 per cent), number of nylon net used for inlet canal (from 40.00 per cent to 80.00 per cent), nativity of carp varieties (72.00 per cent and 84.00 per cent respectively) and seasoning of fingerlings during transit (20.00 per cent to 100.00 per cent) were the items for which the knowledge gain of respondents from interventions were found to be on the very higher side.

Cent per cent of respondents answered correctly to six knowledge items namely shape of pond, season for excavation of pond, feeding habit of mirgal, seasoning of fingerlings during transit, acclamatisation in pond and optimum time of harvest which was striking impact of the interventions. The chart shown above also indicated the vast knowledge gain. This substantial gain in knowledge could be attributed to the right blend of interventions like on campus and off campus trainings, demonstrations, exposure visit which were arranged logically.

The findings from table 1 were strengthened and supplemented by table2. It could be found from table 2 that out of 15 questions asked, the mean score of 50 respondents was 6.04 before intervention which got a quantum jump to 12.06 after the intervention. Nearly 13 questions out of 15 were answered correctly by majority of respondents. Another useful finding from the table was that the't' value was 11.17, significant at 1% level of probability. The inference would be that the respondents differed significantly in terms of scoring in knowledge test which were administered twice ie., pre and post interventions. In nut shell the interventions were very effective in terms of stimulating both cognitive and affective (Knowledge and skill) domains of respondents substantially which has been evident from pre and post knowledge test scores.

Ecological Impact

Ecological impact of the interventions of KVK was studied among fifty respondents of four selected villages and the results are given below (n 50)

S.No	Statements	No	Percentage
1.	The excess rainwater received during monsoon would be drained into fish pond and effectively utilized	45	90.00
2.	Water stagnated in farm ponds facilitates recharging of aquifers	48	96.00
3.	The waste of cow and goat available in the farm could be fed to fish	35	70.00
4.	The coconut trees and banana trees and other crops grown on the bunds maintains ecological balance	44	88.00
5.	The water in the fish pond could be reused to crops which reduced the application of fertilizers to crops	18	36.00

It could be observed from the table that vast majority of the respondents endorsed the statements that farm ponds to some extent used for draining excess water (90.00 per cent), and fish ponds can recharge aquifers (96.00 per cent). Three fourth of respondents (70.00 per cent) were aware of the disposal of farm waste as feed for fish which offered scope for further training to be conducted in fish feed management. Majority of respondents (88.00 per cent) endorsed that effective utilization of space on the bunds of fish pond could maintain ecobalance. A significant finding from the table is that only 36.00 per cent of respondents were aware of reuse of water for growing crops. The scientists of KVK should try to plug this knowledge gap in future interventions

Sociological Impact

Sociological impact of Composite carp culture was analysed using following statements among fifty farmers of four selected villages (n 50)

S.No	Statements	No	Percentage
1.	I get to know many fish growers and thereby I can get to know many new technologies about fisheries	50	100.00
2.	By being a member of interventions of KVK my sociological status has been enhanced	48	96.00
3.	Like minded farmers could be formed into a clique	40	80.00
4.	I have been respected by my relatives	49	98.00

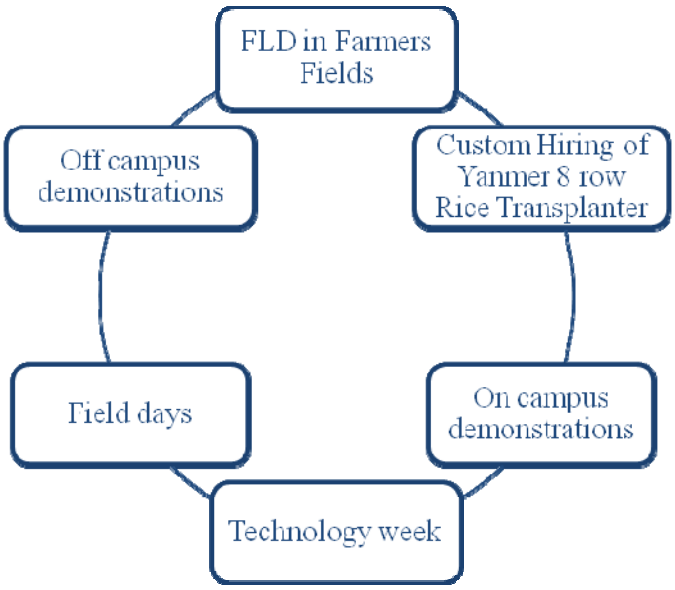
From the table it is pretty clear that the respondents by being a part of interventions of KVK could be in an advantageous position in their society. Everybody believed that they could get to know many new technologies about fisheries as they interact with co- participants. Majority also opined that their social status in the society and among their relatives elevated due to either beneficiary of FLD on Composite carp culture or participant of training. A significant finding from the table is that the respondents did possess a mindset of institutionalizing themselves into groups which would help them in supply chain management of fish.

Mechanisation of Rice cultivation in Thiruvarur District

The rice cultivation in Thiruvarur district has undergone a series of changes given the unprecedented labour shortage for important crop operations like transplanting, weeding and harvesting. The change has been fully dominated by complete mechanization of rice in the rice grainery of Tamil Nadu. In line with the changes that is happening in the rice fields of big farmers, the small and marginal farmers owning one or two acres of land are in an indispensable situation to shift to mechanization. A complex of factors comes into play while

contemplating complete mechanization. Three 'A's namely ***Availability, Accessability and Affordability*** decides the mechanization of rice in farmers field.

Krishi Vigyan Kendra, Needamangalam situated in rice bowl of Tamil Nadu, has been championing the cause of Mechanisation in rice since its inception. It has intensified its efforts for the past two years through various well thought out interventions.



Frontline demonstrations of mechanization in rice has been in operation for the past two years in villages spread all over the district. Fifteen farmers who got benefitted out of this has served as ambassadors for KVK in disseminating the concept of Mechanisation in rice. During technology week various machines have been demonstrated from which around 500 farmers got benefitted. On campus demonstration on rice transplanter, hydraulic land leveler were organized. Three field days were conducted in FLD farmer's field.

Impact Analysis

Macro level Impact

The impact of interventions of KVK at district level has been analysed and presented below.

Number of Machineries sold at Thiruvarur through Line Departments

Year	Name of the Machinery	Number
2007-08	Yanchi Sakthi Transplanter	2
2008-09	Riding type 8 row Yanchisakthi Rice Transplanter Walk behind 4 row Korean rice transplanter TNAU Power weeder	4 2 11
2009-10	Walk behind 4 row Korean rice transplanter TNAU Power weeder Riding type 6 row Korean Kukje Rice Transplanter Paddy Combine Harvester	4 1 1 3
2010-11	Walk behind 4 row Korean rice transplanter TNAU Power Weeder Paddy Combine Harvester	41 38 9

The data given above is the provisional data taken from Office of Dept of Agricultural Engineering, Thiruvarur district. From the table it is evident that the recent two years has seen remarkable increase in the supply of machinaries for rice cultivation. The main focus of KVK is to popularize three machines namely Rice transplanter, Power weeder and Combine Harvester. It has been advising farmers to make use of subsidies of Dept of Agrl.Engineering and other schemes of Dept of Agriculture. The efforts of kindling interest among farmers to own machineries resulted in more number of farmers submitting applications at Office of Department of Agricultural Engineering, Thiruvarur. As a result the provision of transplanter and power weeder and transplater has increased from 4, 1 and 3 (2009-10) to 41, 38 and 9 (2010-11) respectively

Micro Level Impact

The impact at the operating villages of KVK namely Chickapattu, Pilavadi, Chithadi, Melapoovanur and Perembur has been immense which has been discussed elsewhere in this report. The detailed microlevel impact has been analysed using four indicators namely Economic impact, Technological Impact, Ecological Impact and Sociological impact.

Economic Impact

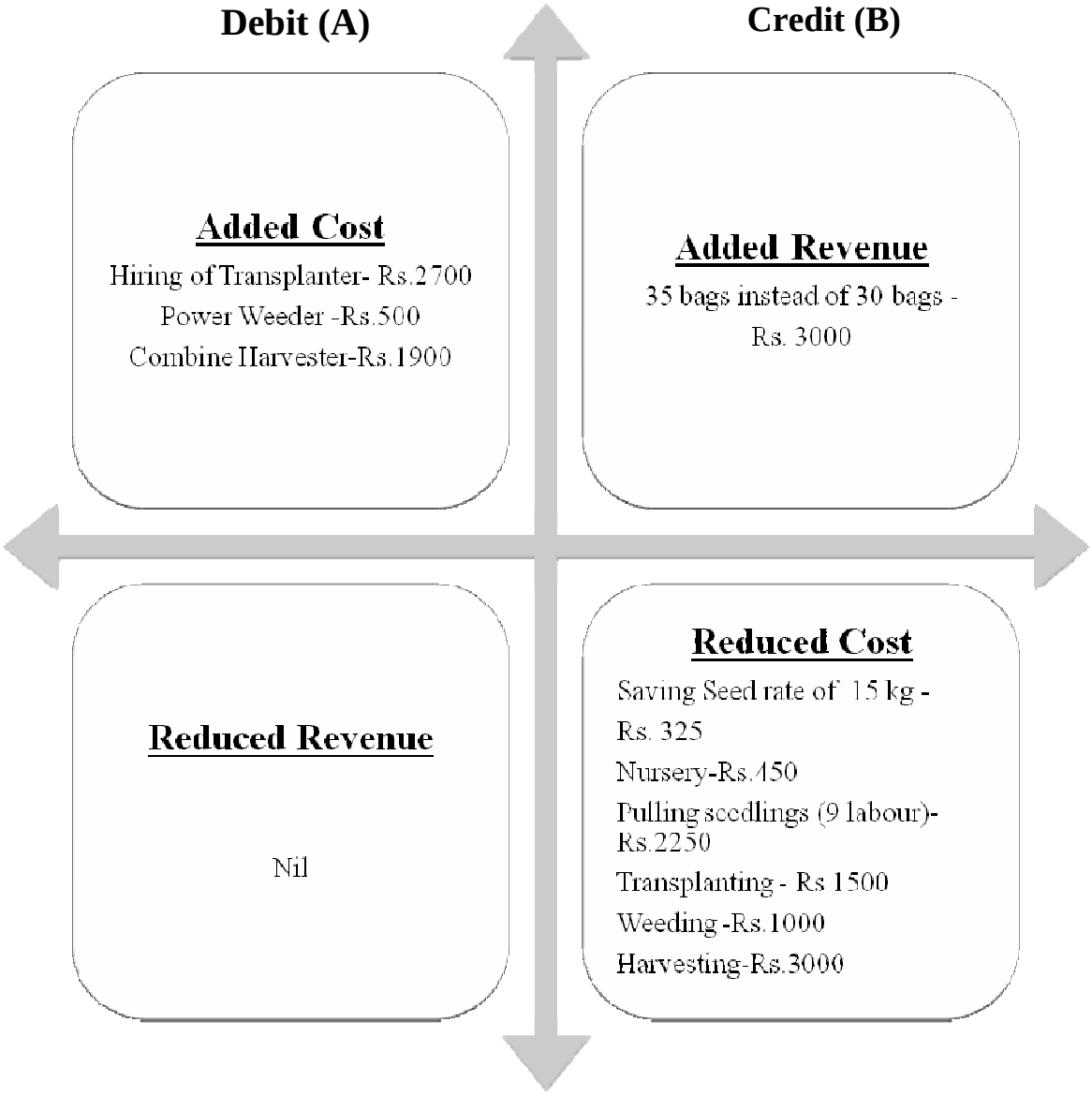
The average income and Benefit cost ratio of switching to mechanization in rice cultivation in five selected village is given below

Name of the operating villages	Average income from one ha of rice	BCR
Chickapattu	52500	1: 3.75
Pilavadi	50100	1:3.25
Chithadi	49180	1:2.99
Melapoovanur	51450	1:3.33
Perembur	49550	1:3.01

The table has clearly indicated that in all the villages farmers could get atleast Rs.20,000 from one acre of rice cultivation by employing transplanter, power weeder and harvester. Among the villages Chickapattu topped the list with Rs.52,500 from one ha of mechanized rice cultivation with BCR 1:3.75. This was followed by Melapoovanur and Pilavadi where average income of 51450 and 50100 has been recorded.

The general feeling among farmers is to own their own power weeder so that they can anytime use it for weeding purpose. The economic well being of farmers has been enhanced substantially as they could earn at least Rs.5000- 6000 more by switching over to mechanized cultivation of rice from conventional cultivation. To understand the economic gain in specific terms partial budgeting has been resorted to. The debit and credit of Mr.Rajendran a farmer in Pilavadi has been collected. The added cost, Added return, reduced cost and reduced revenue were separately worked out to calculate net change in income

Partial Budgeting for Mechanised Rice Cultivation replacing Conventional rice cultivation



Net change in income (B)- (A) = Rs. 6425.00

It is evident from figure given above a total of Rs.6425 could be saved by farmers from one acre of land if they resort to mechanized rice cultivation. This may even increase if farmers organize themselves into group and can lobby for reduction in rent for transplanter and harvester

Technological Impact

The technological impact of interventions of KVK was analysed among fifty farmers randomly selected from five villages where Front line demonstration is organized. This includes FLD beneficiaries and farmers who have attended field days pertaining to mechanization in rice. The technological impact has been

assessed through analyzing the Awareness, Knowledge and Adoption of Agricultural Mechinaries pertaining to rice. The results are given below

S.No	Agrl.Machineries used in rice cultivation	Awareness		Knowledge		Adoption	
		No	%	No	%	No	%
1	Hydraulic land leveler	45	90.00	30	60.00	-	-
2.	Power tiller	50	100.00	50	100.00	27	54.00
3.	Transplanter	50	100.00	22	44.00	22	44.00
4.	Power weeder	38	76.00	38	76.00	18	36.00
5.	Combine Harvester	50	100.00	50	100.00	50	100.00

Cent per cent of rice growers taken for the study were well aware of power tiller, transplanter and combine harvester. About one fourth (34.00 per cent) of respondents were not aware of hydraulic land leveler. As for as knowledge is concerned cent per cent rice growers taken for the study did possess knowledge on power tiller and combine harvester. A significant percent of respondents (56.00 per cent) did not possess knowledge of operation of transplanter, the tray preparation and preparation of land for transplanter. 40.00 percent of rice growers did not possess knowledge and none of the respondents had used hydraulic land leveler. Similarly though the adoption percentage has been impressive for transplanter and Power weeder, it is not substantial. From the findings, the KVK scientists come to know that further strengthening of the efforts to popularization of machineries of rice cultivation is required to be done.

Sociological Impact

The sociological impact do have a bearing on the sustainability of any technology in a given society. As for as mechanization is concerned it's been opposed by people of Cauvery delta for some time in the near past. But the trend has been changed and there is no other option for farmers other than mechanization. So KVK scientists while analyzing the impact of their interventions pertaining to mechanization intended to study the sociological impact also. The same fifty respondents who were considered for studying the technological impact were taken as respondents. The results are given below. (n=50)

S.No	Statements	Number	Percent
1.	There is no quarrel among rice farmers to compete for securing labour for crop operations	48	96.00
2.	The social divide of rich and poor is overlooked as there is no difference in timing of operation between them	37	74.00
3.	As the transplanting is done in time in extensive area the pest and disease complex build up could be avoided	45	90.00
4.	Rice cultivation has become remunerative and the farmers can keep their head high in the society	50	100.00
5.	As the money flow among rice farmers got increased the farmers can spend for social functions as they wish.	32	64.00

It is evident from the above table that mechanization in rice has had a huge sociological impact as majority (96.00 percent) of respondents felt that the quarrel among themselves to call the labour for operation

got reduced. Cent percent of them felt that they could keep their head high as rice cultivation become remunerative due to mechanization

11.C. Details of Impact Analysis of KVK on IPDM in rice

Pest and Diseases in rice, one of the predominant crops of Thiruvarur district have caused huge economic damage. Realising this menace, KVK, Needamangalam has identified Integrated Pest and Disease Management as one of the important thrust area of its operation. The IPDM strategies which are being promoted by KVK, Needamangalam has made serious inroads into the pest management behavior of farmers. The farmers realized the ill effects of indiscriminate spray of pesticides besides the economic gains of following IPDM strategies.

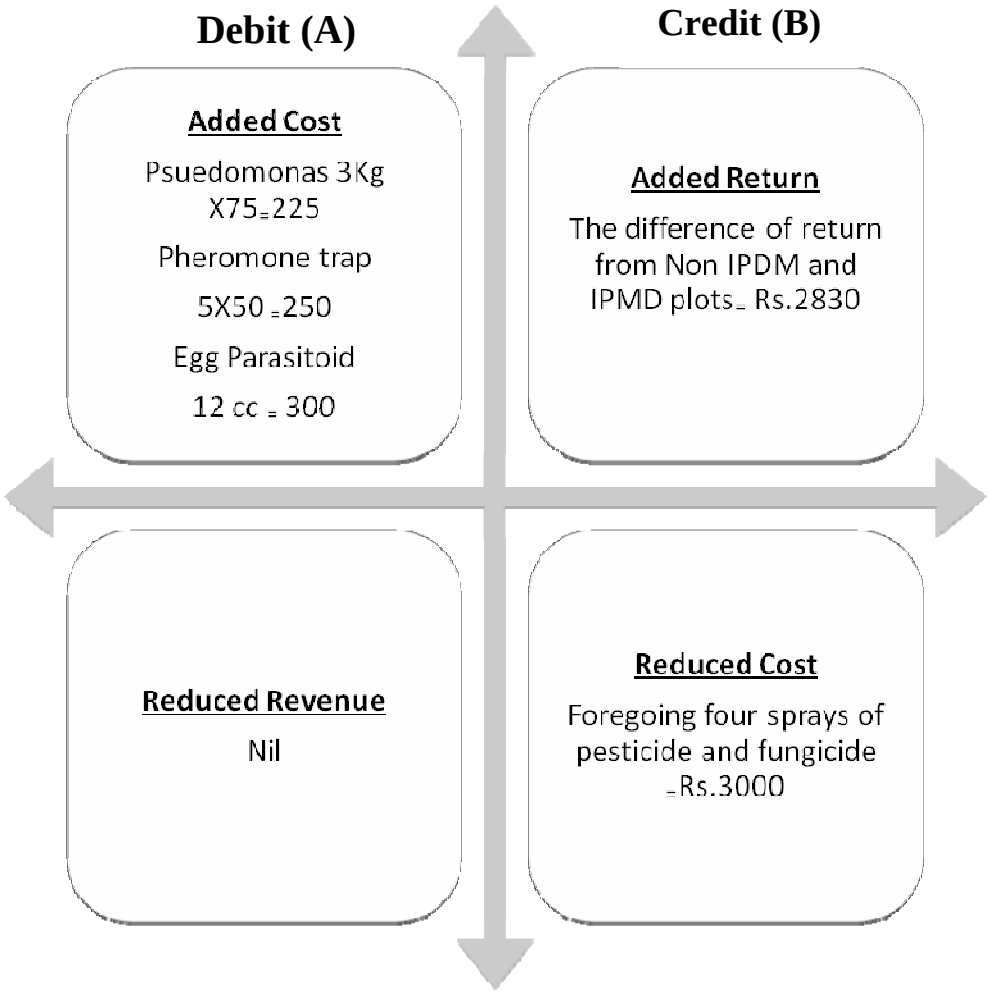
Interventions are framed to reach the farmers effectively. Since its inception it has been organizing Frontline demonstration, On and Off campus trainings, demonstrations, Exhibitions, field visits, field days to convey the technologies to farmers. The Farmers Field School on IPM in rice which was conducted during 2009- 2010 has been a great success and transformed the way the farmers pursue their pest and disease management. In 2010-11 also, the KVK has continued its endeavour to bring into fold still more number of farmers of Thiruvarur district under IPDM category. In 2010-11 an FLD on IPDM was organized in ten farmers field. Two off campus trainings were conducted on 13th August and 12th November at Puliancherry and Devangudi. Three demonstrations were conducted on Pseudomonas application, Egg parasitoid release and fixing pheromone trap. A field day has been organized to showcase the success of IPDM to participants who were in turn motivated to follow IPDM. The demo unit established at KVK premises also reinforced the ideas related to IPDM in the minds of farmers.

The Impact of IPDM in rice

Due to the sustained efforts of KVK, Needamangalam more than 50 per cent of farmers of the cluster villages where the IPDM has been demonstrated adopted one or other principle of IPDM. In Puliancherry alone 55% of farmers did switch over to IPDM strategies. This impact has been observed from the enthusiasm of the farmers of Puliancherry to start a farmers club in their village so that they will get conselling of the KVK scientists on a sustainable basis through the club.

The micro level impact was analysed using the indicators namely economic impact, technological impact, ecological impact and sociological impact. The economic impact was assessed by partial budgeting of Mr. Sethuraman of Puliancherry village.

Partial Budgeting for IPDM replacing Conventional Pest and Disease Management in Rice



Net change in income (B)- (A) = Rs. 5055

It is evident from the partial budgeting, that an amount of ***Rs. 5055*** could be additional income if a farmer shifts to IPDM which is phenomenal given the escalating cost of cultivation of rice in recent past. Further, many of the farmers of puliancherry village observed that the savings from foregoing pesticide and fungicide spray is to the tune of Rs. ***2500- 3500*** depending upon the nature of pest, percentage of infestation and nature of chemical required.

Technological impact

The technological impact of IPDM among rice growers was assessed through interviewing fifty farmers of Puliancherry, where FLD was organized. The respondents were the participants of field day pertaining to FLD and the FLD beneficiaries themselves. The results of the analysis are given below

(n=50)

S.No	Items of Integrated Pest and Disease Management	Knowledge		Adoption	
		No	Percent	No	Percent
1.	Pseudomonas application	47	94.00	37	74.00
2.	Pheromone traps	38	76.00	15	30.00
3.	Bird Perches	45	90.00	27	54.00
4.	Egg Parasitoid	37	74.00	14	28.00
5.	LCC based N application	40	80.00	40	80.00
6.	ETL based spray of Chemicals	46	92.00	46	92.00

It could be observed from the table that the knowledge about the IPDM technologies are substantial due to the sustained efforts of KVK, Needamangalam. A vast majority of respondents selected for the study did possess knowledge on Pseudomonas application (94.00 per cent), ETL based spray of chemicals (92.00 per cent), LCC based N application (80 per cent), and Bird Perches (90.00 per cent). During the on and off campus trainings pseudomonas application, the importance of LCC based N application and ETL based spray of chemicals to control pest infestation has been given much focus which were exhibited in the knowledge level of respondents. Three fourth of respondents did possess knowledge on Pheromone trap (76.00 per cent) and Egg Parasitoid (74.00 per cent) which offered scope for further interventions by KVK, Needamangalam.

A significant finding from the impact study is that there exists gap between knowledge and adoption of technologies pertaining to IPDM. The adoption level for Pseudomonas (74.00 per cent) could still be improved. The adoption level was low for the Egg parasitoid (28.00 per cent) and Pheromone trap (30.00 per cent). The inference could be that the farmers other than FLD beneficiaries are to be further enlightened about IPDM components through extension programmes of KVK.

Ecological Impact

The basic principle of IPDM is conserving the environment and sustaining the yield potential of land through careful selection and adoption of pest and disease management strategies. The ecological impact has been assessed among the farmers of Puliancherry village and it was found that many of the farmers endorsed that they could observe beneficial insects like spiders, myrids, carabids, coccinellids in their field due to the adoption of IPDM strategies. Many observed that natural equilibrium and food chain could be maintained through IPDM. Fifty per cent of respondents felt that due to less use of pesticides the ground water and aquifers were not affected. Ultimately the farmers of Puliancherry could be evaded from Resistance, Resurgence and Residue problems.

Sociological Impact

The prime sociological impact of the IPDM adoption in puliancherry village is that institutionalization of farmers happened which culminated in the formation of a NABARD farmers club called Bharathiar Farmers Club. During off campus trainings and demonstrations all the members of this club used to participate. The purchase of inputs were jointly carried out for the entire club members which drastically reduced cost. Another important sociological impact is that the realization of farmers that only collective action can rid them off pest and disease problem since pesticide applied in one field would send the pest to the other field and the process goes on.

PART XII - LINKAGES

12.A. Functional linkage with different organizations

Name of organization				Nature of linkage	
i) TNAU					
a) NADP Precision farming				Two days training programme (6 Nos) were conducted for the beneficiaries of Department of Agriculture and Horticulture for 180 farmers at KVK, Needamangalam.	
b) ART & MLT trials					
S. No	**Crop**	**ART/MLT**	**Season**	**Cultures and Checks**	**Remarks**
1.	Rice	ART 3	Kuruvai	AS 06 034	Completed
				CB 06 732	
				CB 06 535	
				TP 08 010	
				ADT 43	
				ASD 16	
2.		ART 16	Kuruvai	TNRH 180	Completed.
				CORH 3	
				ADT (R)45	
3.		ART 6	Samba	AD 02 235	Completed & results were sent.
				CR 1009	
				BPT 5204	
4.		ART 17	Samba	TNRH 174	Completed.
				Co (R) 49	
5.		ART 5	Thaladi	CB 05 022	Completed.
				ADT (R) 46	
				Co (R) 50	
6.		ART 15	Thaladi	CB 06 651	Completed
				BPT 5204	
				Co (R) 49	
7.		MLT (Saline – Alkaline)	Samba	MLT 09 /01	Completed
				MLT 09 /02	
				MLT 09 /03	
				MLT 09 /04	
				MLT 09 /05	

8.		Flood tolerant varieties	Samba	CR 1009	Completed
				CR 1009 Sub - 1	
				BPT 5204	
				BPT 5204 Sub -1	
				Swarna	
				Swarna Sub - 1	

ii) Line Departments	
National Centre for Organic farming, Ghaziabad	Establishing model organic farm and demonstration at farmers field.
Directorate of organic certification	Organic certification and promotion of organic seed production.
Department of Agriculture Department of Horticulture Department of Agrl. Engineering Department of Animal Husbandry	Field survey, diagnostic visits, joint implementation, participation in meetings and conduct of trainings on crop production and protection technologies of mandatory crops of this district.
Project Officer, Vazhnthukattuvom, Thiruvarur	Training for Self help Groups and rural women.
Irrigation Management Training Institute, Trichy.	Collaborative training programmes on water saving technologies and demonstrations
Thiru AArooran Sugars, Kumbakonam	Sugar cane related field visits and demonstration on sugarcane harvester, shredder, detrasher, SSI technology.

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.)
Improving the Socio Economic Status of the Women SHG in Coimbatore District by using Bio preservation techniques in processed fruit products	01.02.2010	UGC	8,05,000
Capacity Building for Adoption of Technologies **(CAT)** trainings	2010-11	NABARD	2,17,943

12. C. Details of linkage with ATMA

a) Is ATMA implemented in your district : **Yes**

Nature of KVK activity

a) ATMA Governing Board (GB) b) AIMA Managing Committee	Member Member
Strategic Research Extension Plan	Coordination with line departments for preparation
Annual Action Plan	
Extension programmes like awareness campaign, exposure visit, training and demonstration	Coordination with line departments for execution of the extension programmes.
Monitoring of filed activities	Coordination with line departments for reviewing of progress.

Researchable Issues	Some important issues which will give immediate results are attended.
Laying out of demonstrations	Lying out of scientific oriented demonstrations.

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	Meetings	Dt. Governing body Dt. Monitoring committee	12 12	- -	- -
02	Research projects	-	-	-	-
03	Training programmes	Seed production	2	-	-
04	Demonstrations	-	-	-	
05	Extension Programmes				
	Kisan Mela				
	Technology Week				
	Exposure visit				
	Exhibition				
	Soil health camps				
	Animal Health Campaigns				
	Others (Pl. specify)				
06	**Publications**				
	Video Films				
	Books				
	Extension Literature				
	Pamphlets				
	Others (Pl. specify)				
07	**Other Activities** (Pl. specify)				
	Watershed approach				
	Integrated Farm Development				
	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 : Not yet started.

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)

S. No.	Demo Unit	Year of establishment	Area (ha)	Details of production			Amount (Rs.)		Remarks
				Variety	Produce	Qty.	Cost of inputs	Gross income	
1.	Mushroom	2006	0.004		Mushroom	7.75 kg	210	525	
2.	Vermicompost	2010	0.004		Vermicompost	1032kg	2500	5160	
3.	Compost	2009	0.002		Biocompost	3400kg	2200	8300	
4.	Inland fish culture	2009	0.40		Fish	100kg	3000	6000	
5.	Sugarcane precision farming	2007	20.80	COC 86032	Cane	148.12t	45500	209504	
6.	Vegetables in precision farming	2009	0.20	-	vegetables	303 kg	1400	3369	
7.	Backyard poultry	2009	0.01	Nandanam broiler II, Turkey, Giunea	Chicks	102	5800	17195	
8.	Slatted house goat rearing	2009	0.02	Boer cross and Tellicery	Bucks	3	13500	18270	
9.	Model organic farm	2008	1.60	White ponni	Seed&grain	5410kg	25000	65237	
10.	Paddy MN unit	2010	0.004	-	MN mixture	3237kg	65000	79200	
11.	Azolla	2009	0.004	-	Azolla	635kg	120	3175	

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.	Cost of inputs	Gross income	
Cereals									
Rice	24.2.10 1.9.10	2.6.10 (Sum) 24.9.10 (Kur)	2.40 3.00	ADT 43 ADT 43	Seed Seed	7100kg 10550kg	245000	364711	-

	10.10.10 12.11.10 15.11.10 1825.10.09	12.2.11 16.2.11 15.3.11 23.4.10	1.96 2.24 1.60 2.20	CR 1009 CO50 White ponni BPT 5204	Seed Grain Seed &Grain Seed & grain	5000kg 4200kg 1200kg 4500kg			
Pulses									
Oilseeds									
Fibers cotton	6.1.10	19.7.10	0.1	Bollgaurd II	kapas	101kg	2015	3665	-
Spices & Plantation crops									
Floriculture									
Fruits									
Vegetables									
Others (specify)									
Kapok	-	-	10trees	-	pods	1000	-	500	-
Teak	15.3.10	-	1000	-	seedlings	583	590	2915	-
Coconut	-	-	34trees	tall	nuts	2540	1500	8304	-

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

S. No.	Name of the Product	Qty	Amount (Rs.)		Remarks
			Cost of inputs	Gross income	
1.	Vermicompost	1032	2500	5160	
2.	Azolla	635kg	120	3175	
3.	Vermicompost	1032kg	2500	5160	
4.	Biocompost	3400kg	2200	8300	

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

S. No	Name of the animal / bird / aquatics	Details of production			Amount (Rs.)		Remarks
		Breed	Type of Produce	Qty.	Cost of inputs	Gross income	
1.	Turkey	local	chicks	10	5800	17525	
2.	Guinea	local	chicks	21			
3.	Country bird	local	chicks	71			
4.	Turkey,guinea	-	eggs	67			

13. E. Utilization of hostel facilities

Accommodation available (No. of beds) : 25

Months	No. of trainees stayed	Trainee days (days stayed)	Reason for short fall (if any)
April-10	25	2	-
September-10	5	4	-
October-10	1	4	-
December-10	21	2	-
January -11	173	17	-
February -11	100	12	-
March -11	25	3	-
TOTAL	**350**	**44**	**-**

13. F. Database management

S. No	Database target	Database created
1	Thiruvarur district data base	Thiruvarur district data base

13. G. Details on Rain Water harvesting structure and micro-irrigation system

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

Nil

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	-	-	-	-	-	-	
With KVK	-	-	-	-	-	-	
1. ICAR Main	State Bank of India	Needamangalam	11070	Professor and Head	30489962661	-	-
2. Revolving Fund	State Bank of India	Needamangalam	11070	Professor and Head	30489964578	-	-

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

S. No	Items / Head	Opening balance if any	Remittance by ZPD VIII Bangalore	Actual expenditure dubitable 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.)

S. No.	Particulars	Sanctioned	Released	Expenditure (Yet to be finalised)
A. Recurring Contingencies				
1	**Pay & Allowances**	45,00,000		71,09,834
	Pay and Allowances(6th CPC arrears from 1.1.2006 to 31.03.2011)	51,11,000		

2	**Traveling allowances**	1,15,000		1,14, 996
3	**Contingencies`**	13,00,000		
A	Stationery, telephone, postage and other expenditure on office running, publication of Newsletter and library maintenance (Purchase of News Paper & Magazines)	1,90,000		2,55,221
B	POL, repair of vehicles, tractor and equipments	1,50,000	**Rs.1,10,22,782**	1,53,588
C	Meals/refreshment for trainees (ceiling upto Rs.40/day/trainee be maintained)	90,000		86,495
D	Training material (posters, charts, demonstration material including chemicals etc. required for conducting the training)	65,000		57,533
E	Frontline demonstration except oilseeds and pulses (minimum of 30 demonstration in a year)	1,91,000		1,52,524
F	FLD on special pulse programme	54,000		53,500
G	OFT	70,000		84,389
H	Training of Extension	10,000		9,745
I	Maintenance of building	25,000		10,481
J	Extension activities	25,000		24,900
K	Farmers field school	25,000		23,642
L	Chemicals and	2,50,000		2,20,118
M	Petty items	1,00,000		80,029
N	Soil and plant sample	50,000		-
O	Library	5,000		4,954
	Total	**1,10,26,000**		**84,41,949**

B. Non Recurring items

S. No.	Particulars	Sanctioned	Released	Expenditure (Yet to be finalized)
1.	**Equipments and Furnitures**			
a.	Land Leveller	10,000		10,000
b.	SWTL	10,00,000		6,06,240
c.	Power tiller	1,50,000		1,35,870
d.	Digital Camera	25,000	**Rs. 26,75,000**	25,000
e.	Generator	1,00,000		1,35,870
f.	Plant Health Diagnostic facility	10,00,000		-
g.	PAS	30,000		20,820
h.	Furniture and furnishing	2,00,000		1,99,820
i.	LCD projector with accessories	1,00,000		94,250
j.	EPABX system	50,000		43,310
2.	Works	-		-
3.	Library (Purchase of Assets like book, journals back volume)	10,000		9,742
4.	Vehicle	-		-
	Total	**26,75,000**		**12,80,922**
	Grand Total		**Rs.1,36,97,782**	

Rs.1,36,97,782 (Rs.24,46,782/-, Rs.4,85,000/-, Rs.19,00,000/-, Rs.14,75,000/-, Rs.22,80,000/- , 51,11,000/-)

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

Year	Opening balance as on 1st April	Income during the year	Expenditure during the year	Net balance in hand as on 1st April of each year
April 2008 to March 2009	35,611	2,35,147	58,915	2,11,843
April 2009 to March 2010	2,11,843	3,15,387	4,48,148	79,082
April 2010 to March 2011	79,082	10,73,626	5,70,924	5,81,784

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
Dr. P.Geetha	Asst. Professor	Gender Perspective in Agricultural Research and Extension	TANUVAS, Chennai	24.01.2011 to 25.01.2011
		Recent trends in crop processing technology	Indian Institute of Crop Processing Technology, Thanjavur	23.03.2011 to 25.03.2011
Dr. M. Senthilkumar	Subject Matter Specialist	Mass production of papaya mealy bug parasitoids	TNAU, Coimbatore	13.10.2010
		Strategy for development and conservation of the parasitoids of papaya mealy bug	NBAII, Bangalore	30.10.2010
		Alternate poultry farming as a livelihood option for farming community	TANUVAS, Namakkal	24.11.2010
Dr. G. Sudhagar	Subject Matter Specialist	Protection of plant varieties and farmers right	TRRI, Aduthurai Directorte of PPV & FR, New Delhi	15.03.2011
Dr. K. Kumanan	Subject Matter Specialist	Training on partnering of KVK's, SAU, ICAR institutes with NABARD initiatives for rural prosperity	-	28th June to 1st July2010
Dr. S. Anandhakrishnaveni	Subject Matter Specialist	Training on demonstration for harnessing pulse productivity	MPKV, Rahuri, Maharashtra	01.06.2010 to 08.06.2010
		Training on IFS for sustainable farming	TANUVAS, Chennai	09.11.2010 to 12.11.2010

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

1. Farm Field School on Direct Sown Wet Seeded Rice[2010-2011]

A Farm Field School (FFS) on direct sown drum seeded rice was organized at Manaparavai Village in Kudavasal block of Thiruvarur District. In this block, rice is cultivated in three season's viz., *Kuruvai* followed by *Thaladi* (in double crop wetlands) and Samba (in single crop wetlands). *Kuruva*i rice is solely depends on the Cauvery river water from Mettur dam, whereas *Thaladi* and *Samba* rice utilized heavy monsoon rains at the beginning of the season besides supplemental irrigation by canal water. Hence, time of release of water from Mettur dam for irrigation decides the rice production in this block. When the water is released beyond the schedule date, the harvest of Kuruvai and planting of Thaladi/Samba crops overlaps, leads to labour shortage. This necessitates the farmers to switch over to direct seeding practice, since this practice has certain advantage like elimination of nursery preparation and maintenance, pulling of seedlings, transportation and planting, in addition to shorter crop cycle because the absence of transplanting shock. Keeping this in view, the farm field school on direct sown wet seeded rice was started at Manaparavai Village with 25 elite farmers who are interested to adopt the direct sown wet seeded rice technology by using TNAU drum seeder. During this course of time, the farmers were trained with good quality seed collection, seed treatment with *Pseudomonas*, direct application of *Pseudomonas*, sowing by drum seeder, integrated weed management, integrated nutrient management, integrated pest and disease management , drought management techniques, irrigation management techniques, flood management techniques and post harvest practices through 15 classes followed by demonstrations. The farmers were supplied with drum seeder [TNAU Mahrishi drum seeder], important critical input like weedicide (Londex), *and Pseudomonas* and hand book on "Direct Sown Rice Technologies". The crops were harvested and the field day was conducted.

Crop	Thematic area	Technology demonstrated	Season	Area	No. of farmers			Reasons for short fall in achievements
					SC/ST	Others	Total	
Rice	Direct sown rice	FFS on direct sown wet seeded rice	Kuruvai, 2010	10ha	4	21	25	-

Details of Farming Situation

Crop	Season	Farming situation	Soil type	Status of soil			Previous crop	Sowing date	Harvest date	Seasonal rainfall	Rainy days
				Low	Medium	High					
Rice	Kuruvai, 2010	Irrigated	Clay loam				fallow	8.09.10 to 17.09.10	21.12.10 To 28.12.10	1214 mm	58

Performance of FFS

Crop	Technology demonstrated	variety	No. of farmers	Area (ha)	Demo yield (q/ha)			Local check (q/ha)	% of increase
					H	L	A		
Rice	• Good quality seed collection, • Seed treatment with *Pseudomonas*. • Direct application of *Pseudomonas*, • Sowing by drum seeder, • Application of weedicide. (Spray Volume calculation), • Flood management techniques	ADT 43	25	10 ha	42	38	40	36	14.70

Economic Impact

Average cost of cultivation (Rs./ha)		Average gross return(Rs./ha)		Average net return(Rs./ha)		Benefit Cost ratio	
Demo	Check	Demo	Check	Demo	Check	Demo	Check
15500	16750	43500	38100	28000	21350	2.31	2.27

Analytical review of component demonstration

Crop	Season	Component	Farming situation	Average yield(q/ha)	Local check(q/ha)	% of increase
Rice	Kuruvai, 2010	• Good quality seed collection, • Seed treatment with *Pseudomonas*. • Direct application of *Pseudomonas*, • Sowing by drum seeder, • Application of weedicide. (Spray Volume calculation)	Irrigated	40	36	14.70

Extension and Training activities

Sl.No.	Activity	No. of activities	date	No. of Participated	Remarks
1	Farmers training	10	-	280	The participants were fully aware of the potential of direct sowing and enthusiastically participated in all classes. A participant namely Mr.R.T.Elangovan has fabricated a modified drum seeder which is a standing evidence of the interest of farmers on direct sown rice (A report of innovation is enclosed elsewhere in this report)
2	Demonstration	4	19.08.2010 8.09.2010 17.09.2010 7.10.2010	29 23 27 18	
3	Field day	1	-	-	
4	Media coverage	1	-	-	

Technical feedback on the demonstrated technologies

Sl.No.	Farmers reaction
1	Sowing by drum seeder improves plant population as compared to broadcasting
2	Seed treatment with Pseudomonas and Azospirillium increase the growth and reduced disease incidence in younger seedling

Technical feedback on Specific Technology

Sl.No.	Feed back
1	Seed treatment with Pseudomonas and Azospirillium reduced blast and BLB in younger seedling and increased the growth
2	Drum seeder sowing reduced the labour cost and seed cost as compared to conventional method of broadcasting

2. NABARD CAT Trainings

Five training programmes were organized during 2010-11 with financial support of NABARD under CAT programme. Totally 150 participants from different districts of Tamil Nadu have participated in five training programmes. During the training programmes technologies were demonstrated, exposure visits were organized and lectures on different aspects were also delivered. The details of the training along with the budget is given below

S.No	Title of the training	Budget (Rs)
1.	Vermicompost and Vermiwash production	40681
2.	Vegetable Cultivation under Precision Farming	40681

3.	Inland Fisheries for Remunerative Alternate Farming in Cauvery Delta Region	40681
4.	Sustainable sugarcane Initiative (SSI)for enhancing sugarcane productivity (2 trainings)	95900
	Total	217943

3. Awareness Programme on GM Crops

A one day Awareness Campaign on Genetically Modified (GM) crops for Extension Personnel and Scientists was conducted at KVK, Thiruvarur on 23.08.2010. The awareness campaign was conducted under the aegis of Centre for Plant Molecular Biology (CPMB), TNAU which was supported by Agribiotech Support Programme (ABSP), USA. The programme was attended by Thirty Extension personnel from Dept of Agriculture, other line departments and ten scientists from KVKs of three districts namely Thiruvarur, Nagapattinam and Thanjavur. The prime aim of the campaign is to communicate to the extension workers and scientists who are doing transfer of technology work that GM Crops have great future, and to unravel the myths and realities about GM Crops.

4. Mass Production and Release of *Acerophagus papayae*

Papaya Mealy bug (***Paracoccus marginatus***) has emerged as a devastating pest in a couple of years time as it has got several alternate hosts to feed on. The presence of this pest in Cauvery delta recently warranted the action of KVK scientists. As a major activity of Tamil Nadu Agricultural University, the exotic parasitoid *Acerophagus papayae* is mass multiplied and released in farmers field on free of cost. So far 2150 parasitoids have been released in 14 mealy bug infested fields of tapioca, mulberry, guava and home gardens of Thiruvarur District.

SUMMARY FOR 2010-11

I. TECHNOLOGY ASSESSMENT

Summary of technologies assessed under various crops

Thematic areas	Crop	Name of the technology assessed	No. of trials
Integrated Nutrient Management			
Varietal Evaluation	Sugarcane	Evaluation of sugarcane varieties	5
Integrated Pest Management	Rice	Management of False Smut disease in Samba paddy	5
	Brinjal	Management of Fusarium Wilt in Brinjal	5
Integrated Crop Management	Rice	Production of Hybrid rice CORH3 in farmer's participatory approach.	4
Integrated Disease Management			
Small Scale Income Generation Enterprises			
Weed Management	Rice	Integrated weed management for direct sown wet seeded rice	5
Resource Conservation Technology			
Farm Machineries	Rice	Assessing different weeders in SRI	5
Integrated Farming System			
Seed / Plant production			
Value addition			
Drudgery Reduction			
Storage Technique			
Others (Pl. specify)			
Total			**29**

Summary of technologies assessed under livestock

Thematic areas	Name of the livestock enterprise	Name of the technology assessed	No. of trials
Disease Management			
Evaluation of Breeds			
Feed and Fodder management			
Nutrition Management	Dairy cows	Area specific mineral mixture for dairy cows	10 (3 cows each)
Production and Management	Fishery	Polyculture in Inland Fisheries in Delta Region using Stunted Fingerlings	5
Others (Pl. specify)			
Total			**15**

Summary of technologies assessed under various enterprises

Thematic areas	Enterprise	Name of the technology assessed	No. of trials

Summary of technologies assessed under home science

Thematic areas	Enterprise	Name of the technology assessed	No. of trials

II. TECHNOLOGY REFINEMENT

Summary of technologies refined under various crops

Thematic areas	Crop	Name of the technology refined	No. of trials
Integrated Nutrient Management			
Varietal Evaluation			
Integrated Pest Management			
Integrated Crop Management			
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			
Others (Pl. specify)			
Total			

Summary of technologies assessed under refinement of various livestock

Thematic areas	Name of the livestock enterprise	Name of the technology refined	No. of trials
Disease Management			
Evaluation of Breeds			
Feed and Fodder management			
Nutrition Management			
Production and Management			
Others (Pl. specify)			
Total			

Summary of technologies refined under various enterprises

Thematic areas	Enterprise	Name of the technology assessed	No. of trials

Summary of technologies refined under home science

Thematic areas	Enterprise	Name of the technology assessed	No. of trials

III. FRONTLINE DEMONSTRATION

Cotton

Frontline demonstration on cotton

Crop	Thematic Area	Name of the technology demonstrated	No. of KVKs	No. of Farmers	Area (ha)	Yield (q/ha)		% Increase	*Economics of demonstration (Rs./ha)				*Economics of check (Rs./ha)			
						Demonstration	Check		Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR
Total																

Other crops

Crop	Thematic area	Name of the technology demonstrated	No. of KVKs	No. of Farmer	Area (ha)	Yield (q/ha)		% change in yield	Other parameters			*Economics of demonstration (Rs./ha)				*Economics of check (Rs./ha)			
						Demonstration	Check		Parameters	Demonstration	Check	Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR
Rice	Farm Mechanization	Mechanization in rice		10	5	56.50	40.17	28.83	Capacity Output (ha/hr)	0.2-0.6	0.05-0.1	14000	52500	38500	3.75	21125	46500	24375	2.11
									Cost/ha	12750	19375								
Rice	Integrated crop management	Integrated algal management in rice eco system		10	5	38.75	32.60	18.9	No. Productive tillers	11.0	9.0	16,750	38,750	22,000	2.31	15,500	32,500	19,000	2.09
									Grain yield (Kg/ha)	3,875	3,250								
Rice	Saving of inputs and increasing	Popularization of CORH3 under SRI.		10	5	51.86	46.48	11.6	No. Productive tillers	21.0	11.0	17,500	51,860	34,360	1.96	18,750	40,200	21,450	1.14

	the returns through SRI								Grain yield (Kg/ha)	5,186	4,020								
Rice	Eco friendly management of pests and diseases through Integrated Pest Management	Integrated pest and disease management in samba paddy		10	5	42.5	41.8	1.64	% white ear	0.75	4.05	16166	42500	26334	2.63	18366	41870	23504	2.2
									Leaf folder % leaf infestation at vegetative stage	1.99	10.22								
Millets																			
Oilseeds (Groundnut)	Integrated crop management	Farmers' participatory seed production in groundnut		4	2	19.88	18.00	10.44	No. of pods/plant	25	20	8,201	22,400	4,199	2.73	9,035	22,400	13,365	2.47
									Shelling percentage	72	65								
Pulses Blackgram	Increasing the productivity of rice and rice fallow crops	ICM in rice fallow black gram		15	6	3.7	2.1	43.2	No. of pods /plant	23	17	8,950	18,500	9,550	2.07	7,400	10,500	3,100	1.42

	Increasing the productivity of rice and rice fallow crops	ICM in rice fallow green gram		12	4.8	4.5	2.6	42.2	No. of pods /plant	27	19	9,250	18,000	8,750	1.95	7,700	10,400	2,700	1.35
Vegetables																			
Flowers																			
Ornamental																			
Fruit	Promoting horticultural crops for enhancing the returns	ICM in banana		**10**	**5**	39.20	32.12	22.05	No. hands/bunch	9	7	90,000	2,35,200	1,45,200	1.61	84,500	,92,744	1,08,244	2.61
Spices and condiments																			
Commercial																			
Medicinal and aromatic																			

Fodder	Enhancing the farm revenue through alternate farming / cropping	Popularization of high yielding fodder cumbu napier grass Co4		**10**	1	3920	-	-	No. of tillers / Hill	28 – 30	-	39,000	4,85,000	4,46,000	1:12	-	-	-	-
									Leaf : Stem ratio	0.68										
Fodder	Enhancing the farm revenue through alternate farming / cropping	Popularization of fodder bank at village level		**5**	1				**On going**											
Plantation	Inter cropping	Popularization of cocoa as intercrop in coconut plantation		**10**	4				**ongoing**											
Fibre																				
Others (pl.specify)	Popularization of mobile sprinklers for pulses as water saving techniques	Popularization of mobile sprinkler in rice fallow pulses and oil seeds		**10**	**4**				**On going**											
		Total		**111**	**44.8**	**4212.1**	**215.87**													

Livestock

Category	Thematic area	Name of the technology demonstrated	No. of KVKs	No. of Farmer	No.of units	Major parameters		% change in major parameter	Other parameter			*Economics of demonstration (Rs.)				*Economics of check (Rs.)			
						Demonstration	Check		Parameters	Demonstration	Check	Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR
Dairy																			
Poultry	Enhancing the farm revenue through alternate farming / cropping	Introduction of Nandanam Broiler II in Thiruvarur District of Tamil Nadu		50	50	3.25	1.5	53.8	Feed conversion ratio	1:2.1	1:3.6	31000	102375	72375	3.41	21000	36750	15750	1.75
									4^{th} week body weight	350 grams	120 grams								
Poultry	Enhancing the farm revenue through alternate farming / cropping	Popularization of low cost poultry egg incubator		5	1			On going											
Rabbitry																			
Pigerry																			
Sheep and goat	Enhancing the farm revenue through alternate	Popularization of crossing boer cross bucks with local non		**50**		25	13	48	Birth weight (Kg)	0.65	0.31	1800	4500	2700	2.5	1440	2340	900	1.63

	farming / cropping	descript goats							Weight of the ram after six months (Kg)	25	13									
Duckery																				
Others (pl.specify)																				
		Total		**105**	**51**	**28.25**	**14.5**													

Fisheries

Category	**Thematic area**	**Name of the technology demonstrated**	**No. of KVKs**	**No. of Farmer**	**No.of units**	**Major parameters**		**% change in major parameter**	**Other parameter**			***Economics of demonstration (Rs.)**				***Economics of check (Rs.)**			
						Demonstration	**Check**		**Parameter**	**Demo**	**Check**	**Gross Cost**	**Gross Return**	**Net Return**	**** BCR**	**Gross Cost**	**Gross Return**	**Net Return**	**** BCR**
Common carps	Alternate fish farming	Popularization of Scientific Composite Culture in Inland Fisheries		4	8000	41.49	33.21	24.93	Weight gain in four months/fish	524.17	437.21	59000	248940	189940	4.22	54500	199260	144760	3.6
									Feed conversion ratio	1:1.5	1:1.74								
Mussels																			
Ornamental fishes																			
Others (pl.specify)																			

	Total		**4**	**8000**	**41.49**	**33.21**														

Other enterprises

Category	**Name of the technology demonstrated**	**No. of KVKs**	**No. of Farmer**	**No.of units**	**Major parameters**		**% change in major parameter**	**Other parameter**		***Economics of demonstration (Rs.) or Rs./unit**				***Economics of check (Rs.) or Rs./unit**			
					Demonstration	**Check**		**Demonstration**	**Check**	**Gross Cost**	**Gross Return**	**Net Return**	**** BCR**	**Gross Cost**	**Gross Return**	**Net Return**	**** BCR**
Oyster mushroom																	
Button mushroom																	
Vermicompost																	
Sericulture																	
Apiculture																	
Others (pl.specify)																	
Total																	

Women empowerment

Category	**Name of technology**	**No. of KVKs**	**No. of demonstrations**	**Name of observations**	**Demonstration**	**Check**
Women						
Pregnant women						
Adolescent Girl						
Other women						
Children						
Neonats						
Infants						
Children						

Farm implements and machinery

Name of the implement	Crop	Name of the technology demonstrated	No. of KVKs	No. of Farmer	Area (ha)	Filed observation (output/man hour)		% change in major parameter	Labor reduction (man days)		Cost reduction (Rs./ha or Rs./Unit ect.)	
						Demonstration	Check		Demonstration	Check	Demonstration	Check
	Rice	Mechanization in rice	1	5	2							
Transplanter						0.35	0.05	-	10	300	6750	9375
Power Weeder						0.2	0.07	-	5	100	1250	2500
Combine Harvester						0.6	0.1	-	2	300	4750	7500

Other enterprises

Demonstration details on crop hybrids

Crop	Name of the Hybrid	No. of farmers	Area (ha)	Yield (kg/ha) / major parameter			Economics (Rs./ha)			
				Demonst-ration	Local check	% change	Gross Cost	Gross Return	Net Return	BCR
Cereals (Rice)	CORH3	10	5	51.86	46.48	11.6	17,500	51,860	34,360	1.96
Bajra										
Maize										
Rice										
Sorghum										
Wheat										
Others (pl.specify)										
Total										
Oilseeds										
Castor										
Mustard										
Safflower										

Sesame										
Sunflower										
Groundnut										
Soybean										
Others (pl.specify)										
Total										
Pulses										
Greengram										
Blackgram										
Bengalgram										
Redgram										
Others (pl.specify)										
Total										
Vegetable crops										
Bottle gourd										
Capsicum										
Others (pl.specify)										
Total										
Cucumber										
Tomato										
Brinjal										
Okra										
Onion										
Potato										
Field bean										
Others (pl.specify)										
Total										
Commercial crops										
Sugarcane										
Coconut										

Others (pl.specify)										
Total										
Fodder crops										
Maize (Fodder)										
Sorghum (Fodder)										
Others (pl.specify)										
Total			**5**	**51.86**	**46.48**	**11.6**	**7,500**	**51,860**	**34,360**	**.96**

IV. Training Programme

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
Crop Production	-	-	-	-	-	-	-	-	-	-
Weed Management	-	-	-	-	-	-	-	-	-	-
Resource Conservation Technologies	3	51	-	51	15	-	15	67	-	67
Cropping Systems	-	-	-	-	-	-	-	-	-	-
Crop Diversification	-	-	-	-	-	-	-	-	-	-
Integrated Farming	2	52	-	52	3	-	3	55	-	55
Micro Irrigation/Irrigation	-	-	-	-	-	-	-	-	-	-
Seed production	-	-	-	-	-	-	-	-	-	-
Nursery management	-	-	-	-	-	-	-	-	-	-
Integrated Crop Management	3	97	6	103	-	-	-	97	6	103
Soil and Water Conservation	-	-	-	-	-	-	-	-	-	-
Integrated Nutrient Management	-	-	-	-	-	-	-	-	-	-
Production of organic inputs	-	-	-	-	-	-	-	-	-	-
Others (pl.specify)	-	-	-	-	-	-	-	-	-	-
Horticulture	-	-	-	-	-	-	-	-	-	-
a) Vegetable Crops	-	-	-	-	-	-	-	-	-	-
Production of low value and high volume crop	-	-	-	-	-	-	-	-	-	-
Off-season vegetables	-	-	-	-	-	-	-	-	-	-
Nursery raising	2	45	7	52	3	9	12	48	16	64
Exotic vegetables	-	-	-	-	-	-	-	-	-	-
Export potential vegetables	-	-	-	-	-	-	-	-	-	-
Grading and standardization	-	-	-	-	-	-	-	-	-	-
Protective cultivation	-	-	-	-	-	-	-	-	-	-
Others (pl.specify)	-	-	-	-	-	-	-	-	-	-

b) Fruits	-	-	-	-	-	-	-	-	-	-
Training and Pruning	-	-	-	-	-	-	-	-	-	-
Layout and Management of Orchards	-	-	-	-	-	-	-	-	-	-
Cultivation of Fruit	-	-	-	-	-	-	-	-	-	-
Management of young plants/orchards	-	-	-	-	-	-	-	-	-	-
Rejuvenation of old orchards	-	-	-	-	-	-	-	-	-	-
Export potential fruits	-	-	-	-	-	-	-	-	-	-
Micro irrigation systems of orchards	-	-	-	-	-	-	-	-	-	-
Plant propagation techniques	-	-	-	-	-	-	-	-	-	-
Others (pl.specify)	-	-	-	-	-	-	-	-	-	-
c) Ornamental Plants	-	-	-	-	-	-	-	-	-	-
Nursery Management	-	-	-	-	-	-	-	-	-	-
Management of potted plants	-	-	-	-	-	-	-	-	-	-
Export potential of ornamental plants	-	-	-	-	-	-	-	-	-	-
Propagation techniques of Ornamental Plants	-	-	-	-	-	-	-	-	-	-
Others (pl.specify)	-	-	-	-	-	-	-	-	-	-
d) Plantation crops	-	-	-	-	-	-	-	-	-	-
Production and Management technology	-	-	-	-	-	-	-	-	-	-
Processing and value addition	-	-	-	-	-	-	-	-	-	-
Others (pl.specify)	-	-	-	-	-	-	-	-	-	-
e) Tuber crops	-	-	-	-	-	-	-	-	-	-
Production and Management technology	-	-	-	-	-	-	-	-	-	-
Processing and value addition	-	-	-	-	-	-	-	-	-	-
Others (pl.specify)	-	-	-	-	-	-	-	-	-	-
f) Spices	-	-	-	-	-	-	-	-	-	-
Production and Management technology	-	-	-	-	-	-	-	-	-	-
Processing and value addition	-	-	-	-	-	-	-	-	-	-
Others (pl.specify)	-	-	-	-	-	-	-	-	-	-
g) Medicinal and Aromatic Plants	-	-	-	-	-	-	-	-	-	-

Nursery management	-	-	-	-	-	-	-	-	-	-
Production and management technology	-	-	-	-	-	-	-	-	-	-
Post harvest technology and value addition	-	-	-	-	-	-	-	-	-	-
Others (pl.specify)	-	-	-	-	-	-	-	-	-	-
Soil Health and Fertility Management	-	-	-	-	-	-	-	-	-	-
Soil fertility management	-	-	-	-	-	-	-	-	-	-
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)	-	-	-	-	-	-	-	-	-	-
Livestock Production and Management	-	-	-	-	-	-	-	-	-	-
Dairy Management	-	-	-	-	-	-	-	-	-	-
Poultry Management	1	11	8	19	-	-	-	11	8	19
Piggery Management	-	-	-	-	-	-	-	-	-	-
Rabbit Management	-	-	-	-	-	-	-	-	-	-
Animal Nutrition Management	-	-	-	-	-	-	-	-	-	-
Animal Disease Management	-	-	-	-	-	-	-	-	-	-
Feed and Fodder technology	-	-	-	-	-	-	-	-	-	-
Production of quality animal products	-	-	-	-	-	-	-	-	-	-
Others (pl.specify)	2	67	10	77	4	-	4	71	10	81
Home Science/Women empowerment	-	-	-	-	-	-	-	-	-	-
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	3	6	30	36	2	10	12	8	40	48
Women empowerment	-	-	-	-	-	-	-	-	-	-
Location specific drudgery production	-	-	-	-	-	-	-	-	-	-
Rural Crafts	-	-	-	-	-	-	-	-	-	-
Women and child care	-	-	-	-	-	-	-	-	-	-
Others (pl.specify)	-	-	-	-	-	-	-	-	-	-
Agril. Engineering	-	-	-	-	-	-	-	-	-	-
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)	-	-	-	-	-	-	-	-	-	-
Plant Protection	-	-	-	-	-	-	-	-	-	-
Integrated Pest Management	-	-	-	-	-	-	-	-	-	-
Integrated Disease Management	-	-	-	-	-	-	-	-	-	-
Bio-control of pests and diseases	-	-	-	-	-	-	-	-	-	-
Production of bio control agents and bio pesticides	-	-	-	-	-	-	-	-	-	-
Others (pl.specify)	-	-	-	-	-	-	-	-	-	-
Fisheries	-	-	-	-	-	-	-	-	-	-
Integrated fish farming	-	-	-	-	-	-	-	-	-	-

Carp breeding and hatchery management	-	-	-	-	-	-	-	-	-	-
Carp fry and fingerling rearing	-	-	-	-	-	-	-	-	-	-
Composite fish culture	-	-	-	-	-	-	-	-	-	-
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)	-	-	-	-	-	-	-	-	-	-
Production of Inputs at site	-	-	-	-	-	-	-	-	-	-
Seed Production	-	-	-	-	-	-	-	-	-	-
Planting material production	-	-	-	-	-	-	-	-	-	-
Bio-agents production	-	-	-	-	-	-	-	-	-	-
Bio-pesticides production	-	-	-	-	-	-	-	-	-	-
Bio-fertilizer production	-	-	-	-	-	-	-	-	-	-
Vermi-compost production	2	41	16	57	1	2	3	42	18	60
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	3	36	38	74	12	17	29	48	55	103
Apiculture	-	-	-	-	-	-	-	-	-	-
Others (pl.specify)	-	-	-	-	-	-	-	-	-	-
CapacityBuilding and Group Dynamics	-	-	-	-	-	-	-	-	-	-

Leadership development	-	-	-	-	-	-	-	-	-	-
Group dynamics	-	-	-	-	-	-	-	-	-	-
Formation and Management of SHGs	-	-	-	-	-	-	-	-	-	-
Mobilization of social capital	-	-	-	-	-	-	-	-	-	-
Entrepreneurial development of farmers/youths	-	-	-	-	-	-	-	-	-	-
Others (pl.specify)	2	44	-	44	2	-	2	46	-	46
Agro-forestry	-	-	-	-	-	-	-	-	-	-
Production technologies	-	-	-	-	-	-	-	-	-	-
Nursery management	-	-	-	-	-	-	-	-	-	-
Integrated Farming Systems	-	-	-	-	-	-	-	-	-	-
Others (Pl. specify)	-	-	-	-	-	-	-	-	-	-
TOTAL	**25**	**493**	**125**	**618**	**43**	**41**	**84**	**536**	**166**	**702**

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
Crop Production	2	26	10	36	2	3	5	28	13	41
Weed Management	3	45	8	53	13	6	19	58	14	72
Resource Conservation Technologies	-	-	-	-	-	-	-	-	-	-
Cropping Systems	-	-	-	-	-	-	-	-	-	-
Crop Diversification	-	-	-	-	-	-	-	-	-	-
Integrated Farming	-	-	-	-	-	-	-	-	-	-
Micro Irrigation/Irrigation	-	-	-	-	-	-	-	-	-	-
Seed production	-	-	-	-	-	-	-	-	-	-
Nursery management	8	159	14	173	39	17	56	198	31	229
Integrated Crop Management	-	-	-	-	-	-	-	-	-	-
Soil and Water Conservation	1	12	-	12	1	-	1	13	-	13
Integrated Nutrient Management	-	-	-	-	-	-	-	-	-	-
Production of organic inputs	-	-	-	-	-	-	-	-	-	-
Others (pl.specify)	-	-	-	-	-	-	-	-	-	-
Horticulture	-	-	-	-	-	-	-	-	-	-
a) Vegetable Crops	-	-	-	-	-	-	-	-	-	-
Production of low value and high volume crop	-	-	-	-	-	-	-	-	-	-
Off-season vegetables	-	-	-	-	-	-	-	-	-	-
Nursery raising	-	-	-	-	-	-	-	-	-	-
Exotic vegetables	-	-	-	-	-	-	-	-	-	-
Export potential vegetables	-	-	-	-	-	-	-	-	-	-
Grading and standardization	-	-	-	-	-	-	-	-	-	-
Protective cultivation	-	-	-	-	-	-	-	-	-	-
Others (pl.specify)	-	-	-	-	-	-	-	-	-	-

b) Fruits	-	-	-	-	-	-	-	-	-	-
Training and Pruning	-	-	-	-	-	-	-	-	-	-
Layout and Management of Orchards	-	-	-	-	-	-	-	-	-	-
Cultivation of Fruit	-	-	-	-	-	-	-	-	-	-
Management of young plants/orchards	-	-	-	-	-	-	-	-	-	-
Rejuvenation of old orchards	-	-	-	-	-	-	-	-	-	-
Export potential fruits	-	-	-	-	-	-	-	-	-	-
Micro irrigation systems of orchards	-	-	-	-	-	-	-	-	-	-
Plant propagation techniques	-	-	-	-	-	-	-	-	-	-
Others (pl.specify)	-	-	-	-	-	-	-	-	-	-
c) Ornamental Plants	-	-	-	-	-	-	-	-	-	-
Nursery Management	-	-	-	-	-	-	-	-	-	-
Management of potted plants	-	-	-	-	-	-	-	-	-	-
Export potential of ornamental plants	-	-	-	-	-	-	-	-	-	-
Propagation techniques of Ornamental Plants	-	-	-	-	-	-	-	-	-	-
Others (pl.specify)	-	-	-	-	-	-	-	-	-	-
d) Plantation crops	-	-	-	-	-	-	-	-	-	-
Production and Management technology	-	-	-	-	-	-	-	-	-	-
Processing and value addition	-	-	-	-	-	-	-	-	-	-
Others (pl.specify)	-	-	-	-	-	-	-	-	-	-
e) Tuber crops	-	-	-	-	-	-	-	-	-	-
Production and Management technology	-	-	-	-	-	-	-	-	-	-
Processing and value addition	-	-	-	-	-	-	-	-	-	-
Others (pl.specify)	-	-	-	-	-	-	-	-	-	-
f) Spices	-	-	-	-	-	-	-	-	-	-
Production and Management technology	-	-	-	-	-	-	-	-	-	-
Processing and value addition	-	-	-	-	-	-	-	-	-	-
Others (pl.specify)	-	-	-	-	-	-	-	-	-	-
g) Medicinal and Aromatic Plants	-	-	-	-	-	-	-	-	-	-

Nursery management	-	-	-	-	-	-	-	-	-	-
Production and management technology	-	-	-	-	-	-	-	-	-	-
Post harvest technology and value addition	-	-	-	-	-	-	-	-	-	-
Others (pl.specify)	-	-	-	-	-	-	-	-	-	-
Soil Health and Fertility Management	-	-	-	-	-	-	-	-	-	-
Soil fertility management	-	-	-	-	-	-	-	-	-	-
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)	-	-	-	-	-	-	-	-	-	-
Livestock Production and Management	1	10	9	19	-	2	2	10	11	21
Dairy Management	-	-	-	-	-	-	-	-	-	-
Poultry Management	-	-	-	-	-	-	-	-	-	-
Piggery Management	-	-	-	-	-	-	-	-	-	-
Rabbit Management	-	-	-	-	-	-	-	-	-	-
Animal Nutrition Management	-	-	-	-	-	-	-	-	-	-
Animal Disease Management	-	-	-	-	-	-	-	-	-	-
Feed and Fodder technology	-	-	-	-	-	-	-	-	-	-
Production of quality animal products	-	-	-	-	-	-	-	-	-	-
Others (pl.specify)	-	-	-	-	-	-	-	-	-	-
Home Science/Women empowerment	-	-	-	-	-	-	-	-	-	-
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	1	-	27	27	-	-	-	-	27	27
Processing and cooking	-	-	-	-	-	-	-	-	-	-
Gender mainstreaming through SHGs	-	-	-	-	-	-	-	-	-	-
Storage loss minimization techniques	2	-	45	45	-	3	3	-	48	48
Value addition	-	-	-	-	-	-	-	-	-	-
Women empowerment	-	-	-	-	-	-	-	-	-	-
Location specific drudgery production	-	-	-	-	-	-	-	-	-	-
Rural Crafts	-	-	-	-	-	-	-	-	-	-
Women and child care	-	-	-	-	-	-	-	-	-	-
Others (pl.specify)	-	-	-	-	-	-	-	-	-	-
Agril. Engineering	-	-	-	-	-	-	-	-	-	-
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)	-	-	-	-	-	-	-	-	-	-
Plant Protection	2	32	-	32	2	-	2	34	-	34
Integrated Pest Management	1	17	-	17	3	-	3	20	-	20
Integrated Disease Management	2	25	1	26	2	-	2	27	1	28
Bio-control of pests and diseases	-	-	-	-	-	-	-	-	-	-
Production of bio control agents and bio pesticides	-	-	-	-	-	-	-	-	-	-
Others (pl.specify)	-	-	-	-	-	-	-	-	-	-
Fisheries	-	-	-	-	-	-	-	-	-	-
Integrated fish farming	-	-	-	-	-	-	-	-	-	-

Carp breeding and hatchery management	-	-	-	-	-	-	-	-	-	-
Carp fry and fingerling rearing	-	-	-	-	-	-	-	-	-	-
Composite fish culture	-	-	-	-	-	-	-	-	-	-
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)	-	-	-	-	-	-	-	-	-	-
Production of Inputs at site	-	-	-	-	-	-	-	-	-	-
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)	-	-	-	-	-	-	-	-	-	-

CapacityBuilding and Group Dynamics	-	-	-	-	-	-	-	-	-	-
Leadership development	-	-	-	-	-	-	-	-	-	-
Group dynamics	-	-	-	-	-	-	-	-	-	-
Formation and Management of SHGs	-	-	-	-	-	-	-	-	-	-
Mobilization of social capital	-	-	-	-	-	-	-	-	-	-
Entrepreneurial development of farmers/youths	-	-	-	-	-	-	-	-	-	-
Others (pl.specify)	-	-	-	-	-	-	-	-	-	-
Agro-forestry	-	-	-	-	-	-	-	-	-	-
Production technologies	-	-	-	-	-	-	-	-	-	-
Nursery management	-	-	-	-	-	-	-	-	-	-
Integrated Farming Systems	-	-	-	-	-	-	-	-	-	-
Others (Pl. specify)	-	-	-	-	-	-	-	-	-	-
TOTAL	**23**	**326**	**144**	**440**	**62**	**31**	**93**	**388**	**145**	**533**

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	1	21	3	24	9	6	15	30	9	39
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	1	26	3	29	4	1	5	30	4	34
Any other (pl.specify)	-	-	-	-	-	-	-	-	-	-
TOTAL	**2**	**47**	**6**	**53**	**13**	**7**	**20**	**60**	**13**	**73**

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	-	-	-	-	-	-	-	-	-	-
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)	-	-	-	-	-	-	-	-	-	-
TOTAL	-	-	-	-	-	-	-	-	-	-

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	5	195	14	209	11	1	12	206	15	221
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)	-	-	-	-	-	-	-	-	-	-
Total	**5**	**195**	**14**	**209**	**11**	**1**	**12**	**206**	**15**	**221**

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)	-	-	-	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-	-	-	-

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
1	Crop production and management	-	-	-	-	-	-	-	-	-	-
1.a.	Increasing production and productivity of crops	-	-	-	-	-	-	-	-	-	-
1.b.	Commercial production of vegetables	8	289	38	327	27	13	40	316	51	367
2	Production and value addition	-	-	-	-	-	-	-	-	-	-
2.a.	Fruit Plants	-	-	-	-	-	-	-	-	-	-
2.b.	Ornamental plants	-	-	-	-	-	-	-	-	-	-
2.c.	Spices crops	-	-	-	-	-	-	-	-	-	-
3.	Soil health and fertility management	-	-	-	-	-	-	-	-	-	-
4	Production of Inputs at site	2	18	62	80	2	-	2	20	62	82
5	Methods of protective cultivation	-	-	-	-	-	-	-	-	-	-
6	Others (pl.specify)	-	-	-	-	-	-	-	-	-	-
7	Post harvest technology and value addition	-	-	-	-	-	-	-	-	-	-
7.a.	Processing and value addition	-	-	-	-	-	-	-	-	-	-
7.b.	Others (pl.specify)	-	-	-	-	-	-	-	-	-	-
8	Farm machinery	-	-	-	-	-	-	-	-	-	-
8.a.	Farm machinery, tools and implements	-	-	-	-	-	-	-	-	-	-
8.b.	Others (pl.specify)	-	-	-	-	-	-	-	-	-	-
9.	Livestock and fisheries	-	-	-	-	-	-	-	-	-	-
10	Livestock production and management	-	-	-	-	-	-	-	-	-	-
10.a.	Animal Nutrition Management	4	125	17	142	9	5	14	134	2	156
10.b.	Animal Disease Management	-	-	-	-	-	-	-	-	-	-
10.c	Fisheries Nutrition	-	-	-	-	-	-	-	-	-	-
10.d	Fisheries Management	1	13	4	17	8	-	8	21	4	25
10.e.	Others (pl.specify)	-	-	-	-	-	-	-	-	-	-
11.	Home Science	-	-	-	-	-	-	-	-	-	-
11.a.	Household nutritional security	-	-	-	-	-	-	-	-	-	-
11.b.	Economic empowerment of women	-	-	-	-	-	-	-	-	-	-
11.c.	Drudgery reduction of women	-	-	-	-	-	-	-	-	-	-
11.d.	Others (pl.specify)	-	-	-	-	-	-	-	-	-	-
12	Agricultural Extension	-	-	-	-	-	-	-	-	-	-
12.a.	Capacity Building and Group Dynamics	1	34	3	37	4	2	6	38	5	43
12.b.	Others (pl.specify)	-	-	-	-	-	-	-	-	-	-
	Total	**16**	**479**	**124**	**603**	**50**	**20**	**70**	**529**	**144**	**673**

Details of vocational training programmes carried out 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
1	**Crop production and management**	-	-	-	-	-	-	-	-	-	-
1.a.	Commercial floriculture	-	-	-	-	-	-	-	-	-	-
1.b.	Commercial fruit production	-	-	-	-	-	-	-	-	-	-
1.c.	Commercial vegetable production	1	52	-	52	8	-	8	60	-	60
1.d.	Integrated crop management	1	50	-	50	-	-	-	50	-	50
1.e.	Organic farming	-	-	-	-	-	-	-	-	-	-
1.f.	Others (pl.specify)	-	-	-	-	-	-	-	-	-	-
2	**Post harvest technology and value addition**	-	-	-	-	-	-	-	-	-	-
2.a.	Value addition	1	-	13	13	-	2	2	-	15	15
2.b.	Others (pl.specify)	-	-	-	-	-	-	-	-	-	-
3.	**Livestock and fisheries**	-	-	-	-	-	-	-	-	-	-
3.a.	Dairy farming	-	-	-	-	-	-	-	-	-	-
3.b.	Composite fish culture	1	33	-	33	3	-	3	36	-	36
3.c.	Sheep and goat rearing	-	-	-	-	-	-	-	-	-	-
3.d.	Piggery	-	-	-	-	-	-	-	-	-	-
3.e.	Poultry farming	-	-	-	-	-	-	-	-	-	-
3.f.	Others (pl.specify)	-	-	-	-	-	-	-	-	-	-
4.	**Income generation activities**	-	-	-	-	-	-	-	-	-	-
4.a.	Vermi-composting	-	-	-	-	-	-	-	-	-	-
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	-	-	-	-	-	-	-	-	-	-
4.f.	Sericulture	-	-	-	-	-	-	-	-	-	-
4.g.	Mushroom cultivation	1	13	14	27	3	-	3	16	14	30
4.h.	Nursery, grafting etc.	-	-	-	-	-	-	-	-	-	-
4.i.	Tailoring, stitching, embroidery, dying etc.	-	-	-	-	-	-	-	-	-	-
4.j.	Agril. para-workers, para-vet training	-	-	-	-	-	-	-	-	-	-
4.k.	Others (pl.specify)	-	-	-	-	-	-	-	-	-	-
5	**Agricultural Extension**	-	-	-	-	-	-	-	-	-	-
5.a.	Capacity building and group dynamics	-	-	-	-	-	-	-	-	-	-
5.b.	Others (pl.specify)	-	-	-	-	-	-	-	-	-	-
	Grand Total	**5**	**148**	**27**	**175**	**14**	**2**	**16**	**162**	**29**	**191**

V. Extension Programmes

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	106	42	148	23	11	34	12	2	14
Kisan Mela	-	-	-	-	-	-	-	-	-	-
Kisan Ghosthi	-	-	-	-	-	-	-	-	-	-
Exhibition	5	5935	1467	7402	-	-	-	65	7	72
Film Show	73	403	65	468	43	16	59	85	3	88
Method Demonstrations	32	424	82	506	104	22	126	8	2	10
Farmers Seminar	-	-	-	-	-	-	-	-	-	-
Workshop	12	-	-	-	-	-	-	576	37	613
Group meetings		-	-	-	-	-	-	-	-	-
Lectures delivered as resource persons	68	-	-	-	-	-	-	-	-	-
Newspaper coverage	62	-	-	-	-	-	-	-	-	-
Radio talks	6	-	-	-	-	-	-	-	-	-
TV talks	-	-	-	-	-	-	-	-	-	-
Popular articles	18	-	-	-	-	-	-	-	-	-
Extension Literature	10	-	-	-	-	-	-	-	-	-
Advisory Services	240	196	32	228	7	5	12	-	-	-
Scientific visit to farmers field	96	80	6	86	-	-	-	10	-	10
Farmers visit to KVK	183	140	21	161	15	6	21	-	-	-
Diagnostic visits	92	240	32	272	13	11	24	-	-	-
Exposure visits	6	160	11	171	4	-	4	-	-	-
Ex-trainees Sammelan	-	-	-	-	-	-	-	-	-	-
Soil health Camp	-	-	-	-	-	-	-	-	-	-
Animal Health Camp	-	-	-	-	-	-	-	-	-	-
Agri mobile clinic	-	-	-	-	-	-	-	-	-	-
Soil test campaigns	-	-	-	-	-	-	-	-	-	-
Farm Science Club Conveners meet	1	40	-	40	-	-	-	-	-	-
Self Help Group Conveners meetings	-	-	-	-	-	-	-	-	-	-
Mahila Mandals Conveners meetings	-	-	-	-	-	-	-	-	-	-
Celebration of important days (specify)	-	-	-	-	-	-	-	-	-	-
Any Other (Specify)	-	-	-	-	-	-	-	-	-	-
Total	**916**	**7724**	**1758**	**9482**	**209**	**71**	**280**	**756**	**51**	**807**

Details of other extension programmes

Literature developed/published

Item	Title	Authors name	Number
Research papers	-	-	-
Technical reports	-	-	-
News letters	-	-	-
Extension literatures	Karavai modukalukkana uttachathu kalavai	P. Geetha and T. Senguttuvan	350
	Vanaigareethiyil urukai thayarithal.	P. Geetha, D. reka and T. Senguttuvan	300
	Cumbu Napier Hybrid grass Co 4 cultivation.	S. Anandhakrishnaveni and T. Senguttuvan	500
	Weedicides in rice	G. Sudhagar, K. Kumanan and T. Senguttuvan	500
	Fertilizer management in rice	G. Sudhagar, K. Kumanan and T. Senguttuvan	300
	Cocoa as intercrop in coconut garden	G. Sudhagar, K. Kumanan and T. Senguttuvan	500
	Herbicides in rice	G. Sudhagar, K. Kumanan and T. Senguttuvan	100
	Inorganic fertilizer for rice	G. Sudhagar, K. Kumanan and T. Senguttuvan	100
Popular articles	Integrated weed management in rice	Sudhakar, G., K. Kumanan and T. Senguttuvan	Valarum velanmai 2(6) :41-43
	Enemies for earthworm	Sudhakar, G., K. Kumanan and T. Senguttuvan	Valarum velanmai 2(6) :41-43.
	Seed production in oilseed crops	Sudhakar, G., K. Kumanan and T. Senguttuvan	Nilavalamm, 43(12):20-27
	Integrated farming system in Cauvery delta zone	Sudhakar, G., K. Kumanan and T. Senguttuvan	Naveena Velanmai, 8: 50-53
	Cocoa as intercrop in Coconut Garden	Kumanan.K, Sudhakar, G., and T. Senguttuvan	Thinamalar dt. 09.02.2011 P.no 9.
	Integrated Pest and Disease Management in Cocoa’	Kumanan.K, Sudhakar, G., and T. Senguttuvan	Nilavalam Dec 2010 p10-13.
	Man valam kakkum manpulu uram	Anandhakrishnaveni.S and T.Senguttuvan	Nilavalam, jan’2011
	Theevanamae, Theevanamae	Anandhakrishnaveni.S and T.Senguttuvan	Valarum velanmai ,Jan’2011.
	Kudal punnai kunamakkidum keeraigal	D. Reka and T. Senguttuvan	Nam Uzhavar ,August 2010
	Indhiyavil Unavu Padhapathuthalum Uttachauviyalum	Geetha.P.	Valarum Velanmai 2(3):49
	LCC based Nitrogen management in Rice	Anandhakrishnaveni.S and T.Senguttuvan	Namm Uzhavar, October 2010 p. 47.

	Thennayil Mathiputtapatta Unavu Porutkal	Geetha.P. and T. Senguttuvan	Nam Uzhavar, 8-2, p.23-25.
	Production techniques on Co 4 cumbu napeir hybrid grass	Anandhakrishnaveni.S and T.Senguttuvan	Naam Uzhavar, December 2010,p.56
	Integrated pest and disease management in Cocoa	Senthil Kumar .M and T.Senguttuvan	Nila Valam, December 2010,p:10-13.
Technical bulletins	-	-	-
Others (Pl. specify)			
Booklets	Participatory Approaches for Grass Root Extension Work	Ramasubramaniam, M and T. Senguttuvan	40
	Thulliya Pannaiyam	Kumanan.K, Sudhakar.G and T. Senguttuvan	40
	Semmai Karumbu Sagupadi Tholil nutpangal	Anandhakrishnaveni.S and T. Senguttuvan	40
Books	Cultivation of vegetables under precision farming	Dr.K.Kumanan, Dr.E.Vadivel, Dr.T.Senguttuvan	40
TOTAL	**26**		**2824**

VI. PRODUCTION OF SEED/PLANTING MATERIAL

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)	Rice	ADT 43 CR 1009 BPT 5204 Co(R) 50 CO 49 CO 43 CO 48 White Ponni	-	90.12 57.75 20.38 1.25 3.40 4.30 1.90 0.60	1,80,240 1,03,950 40,760 2,500 6,800 7,740 3,800 1,200	225 128 49 7 8 5 2 2
	Total	-	-	**179.70**	**3,46,990**	**426**
Oilseeds	-	-	-	-	-	-
Pulses	-	-	-	-	-	-
Commercial crops	-	-	-	-	-	-
Vegetables	-	-	-	-	-	-
Flower crops	-	-	-	-	-	-
Spices	-	-	-	-	-	-
Fodder crop seeds	Daincha	-	-	0.40	1600	4
Fiber crops		-	-	-	-	-
Forest Species		-	-	-	-	-
Others (specify)	Kitchen seed pockets	-	-	95 pockets	1900	95
Total				**180.1 95 pockets**	**3,48,590 1900**	**430 90**

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	-	-	-	-	-	-
Fruits	-	-	-	-	-	-

Ornamental plants	-	-	-	-	-	-
Medicinal and Aromatic	-	-	-	-	-	-
Plantation	-	-	-	-	-	-
Spices	-	-	-	-	-	-
Tuber	-	-	-	-	-	-
Fodder crop saplings	-	-	-	-	-	-
Forest Species	Teak	-	-	583	2915	140
Others(specify)	Rice nursery	ADT 43	-	10 cent	2000	2
Total				**584**	**4915**	**142**

Production of Bio-Products

Bio Products	Name of the bio-product	Quantity Kg	Value (Rs.)	Number of farmers to whom provided
Bio Fertilizers	Azolla	635	3175	38
Bio-pesticide	-	-	-	-
Bio-fungicide	-	-	-	-
Bio Agents	-	-	-	-
Others (specify)	Vermicompost	1,077	5,385	14
	Biocompost	3,400	8,300	4
	Paddy MN mixture	3,237	79,200	380
Total		**8,349**	**96,060**	**436**

Production of livestock and related enterprise materials

Particulars of Live stock	Name of the breed	Number	Value (Rs.)	Number of farmers to whom provided
Dairy animals	-	-	-	-
Cows	-	-	-	-
Buffaloes	-	-	-	-
Calves	-	-	-	-
Others (Pl. specify)	Boer bucks	3	18,270	3
Poultry	-	-	-	-
Broilers	Nandhanam II	38	4,035	30
Layers	Coloured layer	33	4,965	12
Duals (broiler and layer)	-	-	-	-

Japanese Quail	-	-	-	-
Turkey	Local	10	4,410	5
Emu	-	-	-	-
Ducks	-	-	-	-
Others (Pl. specify)	Guinea	21	3,785	11
	Tturkey and guinea eggs	67	330	24
Piggery	-	-	-	-
Piglet	-	-	-	-
Others (Pl.specify)	-	-	-	-
Fisheries	-	-	-	-
Fingerlings	-	-	-	-
Others (Pl. specify)	-	-	-	-
Total		**172**	**35,795**	**85**

VII. DETAILS OF SOIL, WATER AND PLANT ANALYSIS 2010-11

Yet to start

Samples	No. of Samples	No. of Farmers	No. of Villages	Amount realized (Rs.)
Soil				
Water				
Plant				
Manure				
Others (pl.specify)				
Total				

VIII. SCIENTIFIC ADVISORY COMMITTEE

Number of SACs conducted
NIL

IX. NEWSLETTER

Name	:	**Nerkalangiyam**
Data of start	:	September 2006
Periodicity	:	Quarterly
No. of copies distributed every quarter	:	100

X. RESEARCH PAPER PUBLISHED

Number of research paper published
NIL

XI. DETAILS ON RAIN WATER HARVESTING STRUCTURE AND MICRO-IRRIGATION SYSTEM

Activities conducted				
No. of Training programmes	**No. of Demonstration s**	**No. of plant materials produced**	**Visit by farmers (No.)**	**Visit by officials (No.)**
NIL				

----------XXXXXXX----------