

TAMIL NADU AGRICULTURAL UNIVERSITY



ANNUAL REPORT (2010 -2011)

**KRISHI VIGYAN KENDRA-TIRUR-602 025
TIRUVALLUR DISTRICT**

**TAMIL NADU AGRICULTURAL UNIVERSITY
KRISHI VIGYAN KENDRA-TIRUVALLUR**

**ANNUAL REPORT 2010-2011
(April 2010 to March 2011)**

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
Krishi Vigyan Kendra, Tirur-602 025. Tiruvallur Dt. TAMIL NADU	Office 044-27620705 / 27620233	Fax 044-27620383	kvktirur@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.	0422-6611222	0422-2431672	vc@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.G.V.Ramasubramanian, Ph.D.,	044 - 26480287	91-9444737858	gvrams1958@gmail.com

1.4. Year of sanction:2004

1.5. Staff Position (as 31st March 2011)

Sl. No.	Sanctioned post	Name of the incumbent	Designation	M/F	Discipline	Highest Qualification (for PC, SMS and Prog. Asstt.)	Pay Scale	Basic pay	Date of joining KVK	Permanent /Temporary	Category (SC/ST/OBC/ Others)
1	Programme Coordinator	Dr.G.V.Ramasubramanian	Professor and Head	M	Agricultural Entomology	Ph.D	37400-67000	59010	09.07.09	Permanent	OC
2	SMS	Dr.A.Manjula	Assoc.Professor	F	Home Science	Ph.D	37400-67000	50700	06.08.09	Permanent	MBC
3	SMS	Dr.M.Nirmala Devi	Asst. Professor	F	Agricultural Extension	Ph.D	15600-39100	29080	14.05.07	Permanent	BC
4	SMS	Dr.R.Manimaran	Asst. Professor	M	Plant Breeding and Genetics	Ph.D	15600-39100	30730	11.05.07	Permanent	BC
5	SMS	Dr.S.Muthuramalingam	Asst. Professor	M	Horticulture	Ph.D	15600-39100	25600	26.04.10	Permanent	SC
6	SMS	Dr.R.Kumaraperumal	Asst. Professor	M	Soil Science and Agrl.Chemistry	Ph.D	15600-39100	25600	30.12.09	Permanent	BC
7	SMS	Dr.J.Yogalakshmi	Asst. Professor	F	Seed Science and Technology	Ph.D	15600-39100	25600	08.11.10	Permanent	BC
8	Programme Assistant (Lab Tech.)/ T-4	C. Venkateswaran	Prog.Asst(Tech)	M	Agriculture	B.Sc	9300-34800	16480	06.06.07	Permanent	BC
9	Programme Assistant (Computer)/ T-4	Th.R.Samundeeswaran	Prog.Asst(Comp)	M	Computer Science	MCA	9300-34800	15530	04.12.08	Permanent	SC
10	Programme Assistant/ Farm Manager	Th.D.Kumar	Farm Manager	M	Agronomy	M.Sc	9300-34800	17230	06.06.07	Permanent	MBC
11	Assistant	Th.A.Ramkumar	Superintendent	M	Superintendent cum Accountant	B.Com	9300-34800	20070	01.04.04	Permanent	OC
12	Jr. Stenographer	Tmt.B.Maheswari	Typist	F	Typist	Higher Secondary	5200-20200	16580	25.11.05	Permanent	BC
13	Driver	Th.J.Somasundram	Driver	M	Driver	S.S.L.C	5200-20200	16820	26.06.06	Permanent	BC
14	Driver	Th. R. Manickam	Driver	M	Mechanic	VIIIth	5200-20200	13110	01.04.04	Permanent	SC
15	Supporting staff	Th. S. Manmathan	Watchman	M	Watchman	-	4800-10000	8670	01.04.04	Permanent	SC
16	Supporting staff	Th. A. Jayaraman	Watchman	M	Watchman	S.S.L.C	4800-10000	8410	01.04.04	Permanent	BC

1.6. Total land with KVK (in ha)**: 16 ha**

S. No.	Item	Area (ha)
1	Under Buildings	2.35
2.	Under Demonstration Units	1.50
3.	Under Crops	12.0
4.	Orchard/Agro-forestry	0.15
5.	Others	

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	31.03.2007	550	40,00,000	-	-	Constructed
2.	Farmers Hostel	ICAR	31.03.2007	300	27,79,000	-	-	Constructed
3.	Staff Quarters	ICAR	31.03.2008	160	31,59,000	-	-	Constructed
4.	Demonstration Units							
	1.Precision farming	ICAR	31.03.2008	1 ha	2,00,000	-	-	Constructed
	2. Green house							
5	Fencing	ICAR	31.03.2010	-	1,00,000	-	-	Constructed
6	Rain Water harvesting system	-	-	-	-	-	-	-
7	Threshing floor	ICAR	31.03.2007	99.22	1,00,000			Constructed
8	Farm pond	ICAR	31.03.1011	-	1,00,000	-	-	Constructed

B) Vehicles(as on 31.03.11)

Type of vehicle	Year of purchase	Cost (Rs.)	Total kms. Run	Present status
Bolero LX	2004	4,40,750	126962	Good
TAFE MF 245	2004	3,72,836	1888.1	Good
TVS Star City	2004	38,671	20179	Good
Hero Honda–Splendor +	2009	46,635	9485	Good

C) Equipments & AV aids

Name of the equipment	Year of purchase	Cost (Rs.)	Present status
Xerox machine (Toshiba-e-Studio)	2005	71,400	Good
Computer & Accessories (Hp pavilion mx 74)	2005	74,950	Good
Fax machine Panasonic Model No. MB772CX	2010	14,800	Good
Digital camera- Sony-DSR-SR-682	2011	24,838	Good
Generator	2011	99,850	Good
Power tiller	2011	1,49,428	Good
LCD Project and accessories (Sanyo 2600 Lumens XGA Resolution 2000 :1 contrast ratio)	2011	99,675	Good
EPABX System	2011	39,240	Good

1.8. Details SAC meeting conducted in 2010-11

S.No.	Date	Number of Participants	No. of absentees	Salient Recommendations	Action taken
1.	11.02.11	25	-	To analyse the market preference of CO(R)49 rice variety	Market preference of CO(R)49 rice variety will be assessed in the ensuing season
				Training on goat rearing and casuarina cultivation.	Training will be provided in July, 2011
				Promotion of cultivation of rice hybrid CORH 3	Action is being taken to increase the horizontal spread during Sornavari and Navarai seasons
				Trainings on pest and disease management in greengram and gingelly	Necessary trainings will be provided during Navarai, 2011-12
				Introduction of newly released varieties for yield maximization.	Newly released varieties have been proposed for introduction in the current year and the Action plan approval awaited.
				Conducting training programmes exclusively for extension personnel of Horticulture	Trainings have been planned and will be imparted during the seasons.

				Mealy bug management techniques in papaya for Extension personnel	Trainings will be imparted
				To promote azolla cultivation in backyards and training programmes may be strengthened to use azolla as poultry feed and feed for milch animals	Trainings will be effected.
				To promote fresh water prawn culture in village ponds, ornamental fish rearing, handling techniques of fish and value addition in fish to meet out the need of the domestic market.	A five days vocational training programme on Value addition in fish sponsored by Fisheries College and Research Institute, Thoothukudi was conducted from 14.03.11 to 18.03.11 at KVK, Tirur.
				To have a sensitization and awareness programme for Rural Bank officers on Agricultural technologies	A sensitization programme for the officials of lead bank will be organised
				To promote interaction / linkage of KVK farmers with Indian Bank farmers Club.	Training programmes will be organised for farmers of Indian Bank farmers Club
				Providing financial education to the farmers through Agricultural Officers of Indian Bank.	Will be conducted.
				Messages and programmes on Post harvest technologies and Vegetable cultivation under shade net may be popularised through AIR and Doordarshan	A programme was given in All India Radio and broadcasted on 15.04.11
				To promote drip irrigation among farmers through trainings.	Trainings will be given
				As salinity of soil is the major problem in Minjur and Gummudipoondi blocks, a suitable saline tolerant variety may be promoted	A saline tolerant variety TRY (R) 3 has been proposed in the Action plan for introduction
				Seed production of TRY 3 paddy variety and seeds may be supplied to the farmers of saline areas	Will be planned

				Collaborative trainings on animal husbandry aspects have to be organized with TANUVAS	Collaborative trainings will be organised
				The concept of 'Land to Land' to be analysed for the technologies of the farmers	Will be analysed
				Demonstrations on IFS should be promoted	Will be promoted

PART II - DETAILS OF DISTRICT

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

S. No	Farming system/enterprise
	Irrigated Rice-Rice-Rice Rice-Rice-Groundnut Pulses-Rice-Groundnut Sugarcane-Sugarcane (Ratoon) b. Rain fed Rice-Groundnut-Millet/Pulses Groundnut-Minor millets-Pulses

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

<i>S. No</i>	<i>Agro-climatic Zone</i>	<i>Characteristics</i>
1.	North Eastern Zone	The district lies between 12° 10' and 13° 15' Northern latitudes and 79° 15' and 80° 20' Eastern longitudes. The average annual precipitation is 1104.4 mm with 52 per cent benefit from North-East monsoon and 41 per cent from South-West monsoon and the remaining 7 per cent from summer showers and winter rains respectively. The mean maximum and minimum temperatures are 37.9 °C and 18.5 °C respectively. The area has semi-arid tropical climate. The hot climate prevails during the month of March-April and the slightly cold climate from December to February, the rest of years belong to humid climate. Tanks are the most important source of irrigation in this zone closely followed by wells. . Due to tank and well irrigation, wetland and gardenland cropping systems are in vogue though major area is under dryland agriculture. The underground water potential in this region is assessed to be good and this zone stands foremost in lift irrigation from wells with large number of agricultural pump-sets.
<i>S. No</i>	<i>Agro-ecological Zone</i>	<i>Characteristics</i>
	The Tiruvallur district comes under three zones viz., Hill ecosystem, Plain ecosystem and Coastal ecosystem.	
1.	Hill Ecosystem	Shallow to moderately deep (with rock phases) red soils of

		eastern ghats, loamy to clayey with gravels, hot moist semi arid to dry semi arid transition (rainfall (750-1000 mm) with LGP 150-180+ days.
2.	Plain Ecosystem	Moderately deep to deep, gravelly loam and gravelly clay red and lateritic soils of plains, moist semi arid ecosystem (rainfall 1000-1500 mm with LGP 180-210 days)
3.	Coastal Ecosystem	Deep to moderately deep, sandy soils of narrow coastal plain and gravelly clay and gravelly loam soils of inland plain, hot moist semi arid to dry subhumid transitional ecosystem (rainfall 1000-1500 mm) with LGP 210+ days.

2.3 Soil type/s

Sl. No.	Soil type	Soil series	Area (ha)	Characteristics
1.	Coastal Sandy	Mahabalipuram	8,346	Deep to very deep solum, colour varies between dark yellowish brown to dark brown. Sandy textured, single grained; excessively drained soils. pH varies between 7.3 to 7.8.
2	Coastal Alluvium	R. K. Pet	8,702	Deep, light brownish gray to dark brownish gray coloured; sandy loam to sandy clay loam textured; pH varies from 8.0 to 8.3
3	River Alluvium	Samanthipuram	3,019	Deep solum, grayish brown to yellowish brown; sand to sandy loam textured; pH varies from 6.1 to 6.3
		Suramangalam	12,801	Deep solum, yellowish brown to dark yellowish brown; sandy clay to clay textured; pH varies from 7.9 to 8.3
4	Red soil	Mangalathupatty	38,842	Moderately deep, colour varies between dark brown to dark reddish brown; loamy sand to sandy clay loam textured; pH varies from 6.6 to 7.3
		Vannapatty	13,862	Shallow solum. Colour varies between dark brown to yellowish. Gravelly sand to gravelly sandy clay loam textured. pH varies between 6.7 to 6.8
		Kadambady	59,143	Deep solum. Colour varies between dark yellowish brown to dark brown. Sandy clay loam textured. pH varies between 6.7 to 7.3
		Ammapettai	16,882	Deep solum. Colour varies between dark yellowish brown to dark brown. Sandy clay to clay textured soil. pH varies between 7.7 to 7.9.

		Vadamadurai	37,213	Deep solum, yellowish brown to dark yellowish brown; sandy clay loam to sandy clay textured; pH varies from 7.1 to 7.5
5	Lateritic soil	Mattavalam	8,981	Moderately deep, red coloured; sandy clay loam to clay textured; pH varies from 5.1 to 6.0
		Palli kuppam	6,067	Moderately shallow, yellowish red coloured; sandy clay loam to sandy clay textured; pH varies from 5.5 to 5.7
6	Miscellaneous land types		8,649	
7	Forest		19,736	

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

S. No	Crop	Total cropped area (ha)	Production (tonnes)	Productivity (kg/ha)
1	Paddy	83,000	2,63,940	3,180
2	Cumbu	620	980	1,582
3	Ragi	310	709	2,290
4	Redgram	425	282	662
5	Blackgram	1,315	618	470
6	Greengram	7,572	4,316	570
7	Cowpea	152	-	-
8	Chillies	882	-	1,905
9	Sugarcane	7400	7,25,200 (in terms of cane)	-
10	Banana	2,026	99,486	49,104
11	Mango	9,944	35,348	325
12	Guava	623	6,793	10,904
13	Watermelon	711	-	-
14	Brinjal	261	2,790	10,690
15	Bhendi	120	903	7,525
16	Greens	63	-	-
17	Gingelly	1,100	678	617
18	Groundnut	15,500	50,995	3,290
19	Coconut	1,387	61,41,636 nuts	4,4281 nuts/ha
20	Rose	266	-	-

21	Jasmine	1,009	-	-
22	Eucalyptus	2,994	-	-
23	Casuarina	3,977	-	-

Source: Agricultural Dept., Tiruvallur, 2009-10

2.5. Weather data

Month	Rainfall (mm)	Temperature ° C		Relative Humidity (%)
		Maximum	Minimum	
April '10	5.3	38.01	26.35	68.99
May '10	131.5	38.41	27.21	64.82
June '10	108.9	35.80	26.56	69.87
July '10	227.5	33	25.00	77.7
August '10	338	33.2	25.2	79.9
September '10	210	32.4	24.4	84.0
October '10	168	30.1	23.3	91.6
November '10	93	33.1	24.8	82.8
December '10	171	27.8	19.4	97.6
January '11	-	29.4	19.6	90.1
February '11	-	32.6	20.1	83.2
March '11	-	33.6	21.0	81.1

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

Category	Population	Production litre/day	Productivity
Cattle	2,59,503	61,905	-
Buffalo	1,15,017	36,746	-
Sheep	1,09,992	-	-
Goats	1,56,273	-	-
Poultry			
Desi	5,92,997	-	-

Category	Area	Production (tonnes)	Productivity
Fish			
Marine	25.73 sq.km	2995	-
Inland	14841 ha	4076	-

Source: District Fisheries department

2.7 District profile has been prepared and submitted - 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 (specify the years)	Major crops & enterprises	Major problem identified	Identified Thrust Areas
	Ambattur	Villivakkam	Villivakkam, Pothur Kannadapalayam Puzhal	More than 5 years	Paddy Sesamum	<ul style="list-style-type: none"> • Labour scarcity • Low yield in upland rice and sesamum • Lack of awareness on new varieties and hybrids • Pest and diseases 	<ul style="list-style-type: none"> • Farm mechanization • To popularize suitable high yielding varieties for upland rice and sesamum • IPM in rice • ICM in sesame

	Gummidipondi	Gummidipondi	Cholavaram, Arani	More than 5 years	Paddy Brinjal Bhendi Banana Jasmine Rose Amaranthus	<ul style="list-style-type: none"> • Labour scarcity • Lack of awareness on new varieties and hybrids • Incidence of shoot and fruit borers • Yield loss due to budworm in jasmine and rose • Reduced girth size in banana • Problem of saline soils 	<ul style="list-style-type: none"> • Farm mechanization • To popularize suitable high yielding varieties and hybrids • IPM in vegetables and flower crops • INM in banana • Soil reclamation and growing suitable saline tolerant varieties
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	Pallipattu	Pallipattu	R.K. Pet Keelkappattadai Pudupattu Ramachandrapuram Nediyam	More than 5 years	Rice Brinjal Chillies Groundnut Sugarcane Coconut	<ul style="list-style-type: none"> • Low yield in existing rice varieties. • Fruit borers in brinjal and chillies • Leaf miner and cut worm incidence in groundnut • Woolly aphids in sugarcane • Button shedding in coconut 	<ul style="list-style-type: none"> • To popularize suitable high yielding rice hybrids. • INM & IPM in vegetables • ICM in groundnut • Management of woolly aphids in sugarcane • INM in coconut
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	Ponneri	Minjur,	Amithanallur	More than 5 years	Rice Brinjal Bhendi Banana Jasmine Rose Amaranthus	<ul style="list-style-type: none"> • Low yield in rice • Lack of awareness on new varieties and hybrids • Incidence of shoot and fruit borers • Yield loss due to budworm in jasmine and rose • Reduced girth size in banana • Problem of saline soils 	<ul style="list-style-type: none"> • To popularize suitable high yielding varieties and hybrids. • IPM in vegetables and flower crops • INM in banana • Soil reclamation and growing suitable saline tolerant varieties
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	Poonamallae	Poonamallae	Nemam Tirumazhisai Kuthampakkam	More than 5 years From 2008	Paddy Pulses Vegetables	<ul style="list-style-type: none"> • Less or non availability of labourers during transplanting • Low yield in existing rice varieties and pulses • Alternate variety for Samba • Pest and disease in vegetables 	<ul style="list-style-type: none"> • Farm mechanization • ICM in pulses • To popularize suitable high yielding varieties and hybrids in rice • Introduction of alternate variety for paddy • IPM in vegetables • Introduction of Snake gourd
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	Tiruttani	Tirutani Thiruvankadu Arcotkuppam Kanagamachatiram	Tirutani Thiruvankadu Arcotkuppam Kanagamachatiram	More than 5 years	Paddy Sesamum Groundnut Banana Green gram Blackgram Redgram Vegetables	<ul style="list-style-type: none"> • Low yield in existing varieties. • Lack of awareness on nutrient management • Lack of awareness on pulses and groundnut production technologies • Lack of adoption of moisture conservation techniques 	<ul style="list-style-type: none"> • To popularize suitable high yielding varieties and hybrids. • INM for yield improvement. [• ICM in pulses • ICM in ground nut • Popularization of technologies in micro irrigation. • Popularization of recent technologies for yield maximization.
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				2009	Livestock	<ul style="list-style-type: none"> • No treatment for ecto and endo parasites in sheep and goat. • Performing natural service in goats. • Need for new strains of birds for backyard poultry. • Under utilization of village ponds. 	<ul style="list-style-type: none"> • Oral medication for control of ecto and endo parasites in sheep and goat • Artificial insemination in goats. • Introduction of Rhodo white chicks for backyard poultry. • Promoting composite fish culture in village ponds.
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2.8 Priority thrust areas

S. No	Thrust area
1	Introduction and popularization of new varieties and hybrids with major focus on Paddy, Pulses, Oilseeds and Vegetables.
2	Mechanization in rice cultivation
3	System of Rice Intensification
4	Hi-tech nursery techniques in commercial crops.
5	Alternate crop strategies
6	Popularization of recent Crop production and protection technologies.
7	Drought mitigation techniques in disadvantaged areas.
8	Promoting agroforestry – Casuarina
9	Promotion of animal and fisheries components for balanced food in Villages.
10	Sustainable agriculture by integrating farming system through sheep and goat rearing, poultry and silvipasture.
11	Promotion of Income generation, value addition - rural youth and SHG

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
7	7	32	32	14	14	100	100

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
-	330	-	10112	-	2289	-	10597

Seed Production (Qtl.)		Planting materials (No.)	
5		6	
Target	Achievement	Target	Achievement
-	Paddy ADT 43 (FS): 13.07 Green gram VBN (Gg)2 : 0.4 Black gram VBN (Bg) 5: 0.15	-	11,700 slips of COCN 4

Livestock, poultry strains and fingerlings (No.)		Bio-products (kg)	
7		8	
Target	Achievement	Target	Achievement
-	5 (Tellicherry Goat)	-	547 (Vermicompost)

3.B1. 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 livestock (No.)	Supply of bio products	
1.	Introduction of new rice variety	Paddy	Low yield in obsolete cultivars	Planting of New rice variety PMK (R) 4 (Anna 4) in drought prone area	-	2	-	1	Demo: 2 Field visit: 3 Leaflet:1 Advisory service: 10	-	-	-	No.	Kg
2.	Stem borer management	Paddy	Yield loss of 15 % due to stem borer infestation	Rice stem borer management	-	2	-	1	Demo: 3 Field visit: 4 Leaflet:1 Advisory service: 12 Film show:1	-	-	-	-	-
3.	Seed production	Hybrid rice CORH 3	Low yield in existing varieties	Production of hybrid rice CORH 3 in farmer participatory approach	-	3	1	1	Demo: 5 Field visit: 7 Leaflet: 1 Booklet:1 Advisory service: 17	0.06 (A line) 0.03 (R line)	-	-	-	-
4.	Yield enhancement	Black gram	Low yield Lack of adoption of foliar nutrition for pulses	Assessment of the performance of the pulse wonder in pulses	-	4	-	1	Demo: 4 Field visit: 5 Leaflet:1 Advisory service: 7 Popular article:1	-	-	-	-	-
5.	Yield enhancement	Redgram	Poor germination. Lack of optimum population.	Assessment of planting method in redgram	-	4	-	1	Demo: 4 Leaflet:1 Advisory services: 9 Field visit:6	-	-	-	-	-

6.	Disease management in desi chicken	Poultry	Wide spread of Ranikhet disease in desi chicken	Control of Ranikhet disease in desi chicken	-	4	-	1	Demo: 3 Field visit: 7 Advisory service: 7	-	-	-	-	-
7.	Animal nutrition	Dairy cows	Insufficient nutrition leading to poor milk yield.	Area specific mineral mixture for dairy cows	-	3	-	-	Demo: 4 Field visit: 6 Advisory service: 6	-	-	-	-	-
8.	Yield enhancement	Paddy	Low yield in varieties	-	Popularization of CORH 3 paddy in SRI method	2	-	1	Demo: 3 Field visit: 4 Leaflet: 1 Advisory service: 12	0.25	-	-	-	-
9.	IPM and IDM in paddy	Paddy	Severe pest and disease incidence in samba season	-	Integrated pest and Disease management in paddy	3	-	2	Demo: 5 Field visit: 1 Advisory service: 18	-	-	-	-	-
10.	Mechanization	Paddy	Labour scarcity	-	Popularization of mechanization in rice cultivation	4	-	2	Demo: 5 Field visit: 7 Leaflet: 1 Advisory service: 14	-	-	-	-	-
11.	Popularization of alternate variety	Paddy	High susceptibility to pest and disease in BPT 5204 in Samba	-	Popularization of alternate variety CO(R) 49 suitable for Samba season	2	-	1	Demo: 2 Field visit: 4 Leaflet: 1 Advisory service: 6	2.5	-	-	-	-

12.	Drought management	Pulses	Water scarcity at critical stages	-	Popularization of drought mitigation technologies	-	-	-	-	-	-	-	-	-
13.	IPM in vegetables	Bhendi	Yield loss due to pest and disease		IPM in Bhendi	2	-	1	Demo: 3 Field visit: 8 Advisory service: 10	-	-	-	-	-
14.	Popularization	Brinjal	Low yield in existing varieties	-	Popularization of COBH 2 brinjaj	2	-	1	Demo: 2 Field visit: 4 Advisory service:8	0.01	-	-	-	-
15.	Popularization	Snake gourd	Low yield in existing cultivars	-	Popularization of PLR(Sg) 2 Snake gourd	2	-	-	Demo: 2 Field visit: 3 Advisory service: 6	0.015	-	-	-	-
16.	Popularization	Fodder	Lack of awareness on fodder cultivation	-	Popularization of fodder bank at village level	4	-	1	Demo: 3 Field visit: 3 Advisory service: 7 Popular article:1	-	-	-	-	-
17.	Popularization	Carp	Under utilization of village ponds	-	Popularization of composite fish culture in village ponds	2	1	-	Demo: 3 Field visit: 5 Leaflet:1 Advisory service: 12 Popular article: 1	-	-	-	-	-

18.	Introduction of HYVs & ICM	Groundnut	Low yield in existing varieties	-	Introduction of HYV and ICM practices in groundnut	3	-	1	Demo: 6 Field visit: 8 Leaflet: 1 Advisory service: 1	-	-	-	-	-
19.	Introduction of HYVs & ICM	Sesamum	Low yield in existing varieties	-	Introduction & popularization of latest variety TMV 7 sesame and ICM practices	2	-	1	Demo: 3 Field visit: 4 Advisory service: 8	-	-	-	-	-
20.	Artificial insemination in goats	Goat	Low conception in natural service	-	Synchronization of estrous and artificial insemination in goats	-	-	-	-	-	-	-	-	-
21.	Popularization of seed production	Groundnut	Lack of adoption of quality seed production	-	Popularization of TMV 13 groundnut	3	-	1	Demo: 4 Field visit: 8 Leaflet: 1 Advisory service: 11 Leaflet: 1	-	-	-	-	-

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.	Planting of New rice variety PMK (R) 4 (Anna 4) in drought prone area	TNAU, Coimbatore	Paddy	5		3	Demo: 2 Field visit: 3 Leaflet:1 Advisory service: 10
2.	Rice stem borer management	TNAU, Coimbatore	Paddy	5		3	Demo: 3 Field visit: 4 Leaflet:1 Advisory service: 12 Film show:1
3.	Production of hybrid rice CORH 3 in farmer participatory approach	TNAU, Coimbatore	Hybrid rice CORH 3	3		5	Demo: 5 Field visit: 7 Leaflet: 1 Booklet:1 Advisory service: 17
4.	Assessment of the performance of the pulse wonder in pulses	TNAU, Coimbatore	Black gram	5		5	Demo: 4 Field visit: 5 Leaflet:1 Advisory service: 7 Popular article:1
5.	Assessment of planting method in redgram	TNAU, Coimbatore	Redgram	5		5	Demo: 4 Leaflet:1 Advisory services: 9 Field visit:6
6.	Control of Ranikhet disease in desi chicken	TANUVAS, Chennai	Poultry	100 units		5	Demo: 3 Field visit: 7 Advisory service: 7

7.	Area specific mineral mixture for dairy cows	TANUVAS, Chennai	Dairy cows	10 units		3	Demo: 4 Field visit: 6 Advisory service: 6
8.	Popularization of CORH 3 paddy in SRI method	TNAU, Coimbatore	Paddy		10	3	Demo: 3 Field visit: 4 Leaflet:1 Advisory service: 12
9.	Integrated Pest and Disease management in paddy	TNAU, Coimbatore	Paddy		10	5	Demo: 5 Field visit: Advisory service: 18
10.	Popularization of mechanization in rice cultivation	TNAU, Coimbatore	Paddy		10	6	Demo: 5 Field visit: 7 Leaflet:1 Advisory service: 14
11.	Popularization of alternate variety CO(R) 49 suitable for Samba season	TNAU, Coimbatore	Paddy		10	3	Demo: 2 Field visit: 4 Leaflet:1 Advisory service: 6
12.	Popularization of drought mitigation technologies	TNAU, Coimbatore	Pulses		10	-	-
13.	IPM in Bhendi	TNAU, Coimbatore	Bhendi		5	2	Demo: 3 Field visit: 8 Advisory service: 10
14.	Popularization of COBH 2 brinjaj	TNAU, Coimbatore	Brinjal		10	3	Demo: 2 Field visit: 4 Advisory service:8
15.	Popularization of PLR(Sg) 2 Snake gourd	TNAU, Coimbatore	Snake gourd		10	2	Demo: 2 Field visit: 3 Advisory service: 6

16.	Popularization of fodder bank at village level	TNAU, Coimbatore	Fodder		5	5	Demo: 3 Field visit: 3 Advisory service: 7 Popular article: 1
17.	Popularization of composite fish culture in village ponds	TANUVAS, Chennai	Carp		2	3	Demo: 3 Field visit: 5 Leaflet: 1 Advisory service: 12 Popular article: 1
18.	Introduction of HYV and ICM practices in groundnut	TNAU, Coimbatore	Groundnut		5	4	Demo: 6 Field visit: 8 Leaflet: 1 Advisory service: 1
19.	Introduction & popularization of latest variety TMV 7 sesame and ICM practices	TNAU, Coimbatore	Sesamum		10	3	Demo: 3 Field visit: 4 Advisory service: 8
20.	Synchronization of estrous and artificial insemination in goats	TANUVAS, Chennai	Goat		100 units	-	-
21.	Popularization of TMV 13 groundnut	TNAU, Coimbatore	Groundnut		5	4	Demo: 4 Field visit: 8 Leaflet: 1 Advisory service: 11 Leaf let: 1

3.B2 contd..

No. of farmers covered															
OFT				FLD				Training				Others (Specify)			
General		SC/ST		General		SC/ST		General		SC/ST		General		SC/ST	
M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24

3	-	2	-	-	-	-	-	69	13	10	2	-	-	-	-
4	-	1	-	-	-	-	-	62	9	13	3	-	-	-	-
3	-	-	-	-	-	-	-	102	14	34	7	-	-	-	-
4	-	1	-	-	-	-	-	113	17	17	6	-	-	-	-
3	-	1	1	-	-	-	-	106	12	25	5	-	-	-	-
-	3	-	-	-	-	-	-	23	91	17	31	-	-	-	-
3	5	-	2	-	-	-	-	14	63	9	21	-	-	-	-
-	-	-	-	6	2	2	-	89	8	22	5	-	-	-	-
-	-	-	-	8	-	2	-	127	14	21	7	-	-	-	-
-	-	-	-	7	2	1	-	118	12	39	4	-	-	-	-
-	-	-	-	6	-	4	-	87	12	19	4	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	5	-	-	-	40	8	14	5	-	-	-	-
-	-	-	-	8	2	-	-	51	10	17	6	-	-	-	-
-	-	-	-	7	2	1	-	43	7	18	3	-	-	-	-
-	-	-	-	4	-	1	-	123	26	20	7	-	-	-	-
-	-	-	-	2	-	-	-	43	19	17	4	-	-	-	-
-	-	-	-	3	-	2	-	91	22	23	5	-	-	-	-
-	-	-	-	8	-	2	-	55	18	19	5	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	3	-	2	-	83	24	11	9	-	-	-	-

PART IV - On Farm Trial

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

Thematic areas	Cereals	Oilseeds	Pulses	Commercial Crops	Vegetables	Fruits	Flower	Plantation crops	Tuber Crops	TOTAL
Integrated Nutrient Management			1							1
Varietal Evaluation	1									1
Integrated Pest Management	1									1
Integrated Crop Management			1							1
Seed / Plant production	1									1
Total	3		2							5

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

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

Thematic areas	Cattle	Poultry	Piggery	Rabbitry	Fisheries	TOTAL
Nutrition Management	1					1
Disease Management		1				1
TOTAL	1	1				2

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

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	Black gram	Assessment of performance of TNAU-pulse wonder Blackgram (VBN 5) Seed@20kg/ha Spraying Pulse Wonder 6.25 kg/ha at flowering stage NAA@40ppm on pre flowering and 15 days after 1st spray	5	5	2
Varietal Evaluation	Paddy	Planting of New rice variety PMK (R) 4 (Anna 4) in drought prone areas Seed treatment with <i>Pseudomonas</i> , <i>Phosphobacteria</i> , <i>Azospirillum</i> and foliar spray of <i>Pseudomonas</i>	5	5	3
Integrated Pest Management	Paddy	Rice stem borer management Release of <i>Trichogramma japonicum</i> @ 5 cc /ha on 30, 37, 44 DAT Installation of pheromone trap @ 12/ha Spraying of Flubendiamide @ 175g/ha	5	5	2
Integrated Crop Management	Red gram	Assessment of planting method in redgram Seedlings raised in polybags and transplanted on 25-28 DAS seed treatment (<i>Rhizobium</i> , <i>Trichoderma</i> , <i>Phosphobacteria</i>), NAA and DAP Spray, Pulse wonder and thiodicarb spray	5	5	1
Seed / Plant production	Paddy	Seed production of Hybrid rice CORH 3 adopting all recommended practices in farmer participatory approach	3	3	0.9
Total			23	23	7.9

4.B.2. Technologies Refined under various Crops -Nil

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
Nutrition management	Dairy cows	Area specific TANUVAS mineral mixture 30-50 g/day-365 days	10 units	10
Disease management	Poultry	Oral pellet Ranikhet vaccine 10 th day Oral pellet vaccine 8 th week RDVK vaccine intra muscular on 16 th week	100 units	10
Total			110 units	20

4.B.4. Technologies Refined under Livestock and other enterprises Nil

4.C1. Results of Technologies Assessed
Results of On Farm Trial

1. Planting of New rice variety PMK (R) 4 (Anna 4) in drought prone areas

Crop/enterprise	Farming situation	Problem definition	Title of OFT	No. of trials	Technology Assessed	Parameters of assessment	Data on the parameter	Results of assessment	Feedback from the farmer	Any refinement needed	Justification for refinement
1	2	3	4	5	6	7	8	9	10	11	12
Paddy	Rainfed	Low yield in obsolete cultivars	Planting of New rice variety PMK (R) 4 (Anna 4) in drought prone areas	5	Planting of New rice variety PMK (R) 4 (Anna 4) in drought prone areas Seed treatment with <i>Pseudomonas</i> @10g/kg, <i>Phosphobacteria</i> , ST+ <i>Azospirillum</i> ST @600 g/ha and foliar spray of <i>Pseudomonas</i> @ 0.5 %	<ul style="list-style-type: none"> No. of productive tillers Plant height (cm) 	7.8 62.1	2203 kg/ha	Profit obtained was less	-	-

Contd..

Technology Assessed	Source of Technology	Production	Please give the unit (kg/ha, t/ha, lit/animal, nuts/palm, nuts/palm/year)	Net Return (Profit) in Rs. / unit	BC Ratio
13	14	15	16	17	18
Technology option 1 (Farmer's practice) ADT 39	TNAU	2959	kg/ha	8475	1:1.65
Technology option 2. Seed -TKM (R) 12 Seed treatment with <i>Pseudomonas</i> , <i>Phosphobacteria</i> , <i>Azospirillum</i> and foliar spray of <i>Pseudomonas</i>	TNAU	2327	kg/ha	4087	1:1.32
Technology option 3 Planting of New rice variety PMK (R) 4 (Anna 4) in	TNAU	2203	kg/ha	4041	1:1.31

drought prone areas. Seed treatment with <i>Pseudomonas</i> , <i>Phosphobacteria</i> , <i>Azospirillum</i> and foliar spray of <i>Pseudomonas</i>					
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2. Rice stem borer management

Crop/ enterprise	Farming situation	Problem definition	Title of OFT	No. of trials	Technology Assessed	Parameters of assessment	Data on the parameter	Results of assessment	Feedback from the farmer	Any refinement needed	Justification for refinement
1	2	3	4	5	6	7	8	9	10	11	12
Paddy	Irrigated	Existing management practices are not effective to reduce the yield loss due to stem borer	Rice stem borer management	5	Release of <i>Trichogramma japonicum</i> @ 5 cc /ha on 30, 37, 44 DAT Installation of pheromone trap @ 12/ha Spraying of Flubendiamide @ 175g/ha	% damage Yield BCR	Dead heart: 7.9 % White ear : 0.9 % 3707 kg/ha 3707 kg/ha 1:1.54	3707 kg/ha	Stem borer damage reduced.	-	-

Contd..

Technology Assessed	Source of Technology	Production	Please give the unit (kg/ha, t/ha, lit/animal, nuts/palm, nuts/palm/year)	Net Return (Profit) in Rs. / ha	BC Ratio
13	14	15	16	17	18
Technology option 1 (Farmer's practice) Application of chemical insecticides	TNAU	2926	kg/ha	5155	1:1.23
Technology option 2 Release of <i>Trichogramma japonicum</i> Spraying of Profenophos @ 1000 ml/ha	TNAU	3189	kg/ha	7328	1:1.33

Technology option 3 Release of <i>Trichogramma japonicum</i> @ 5 cc /ha on 30, 37, 44 DAT Installation of pheromone trap @ 12/ha Spraying of Flubendiamide @ 175g/ha	TNAU	3707	kg/ha	12094	1:1.54
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3. Production of hybrid rice CORH 3 in farmer participatory approach

Crop/enterprise	Farming situation	Problem definition	Title of OFT	No. of trials	Technology Assessed	Parameters of assessment	Data on the parameter	Results of assessment	Feedback from the farmer	Any refinement needed	Justification for refinement
1	2	3	4	5	6	7	8	9	10	11	12
Paddy	Irrigated	Low yield in existing varieties	Production of hybrid rice CORH 3 in farmer participatory approach	3	Seed production of hybrid rice CORH 3	Yield BCR	604 kg/ha 1:1.81	604 kg/ha	Seed set is only medium Less yield obtained	-	-

Contd..

Technology Assessed	Source of Technology	Production	Please give the unit (kg/ha, t/ha, lit/animal, nuts/palm, nuts/palm/year)	Net Return (Profit) in Rs. / ha	BC Ratio
13	14	15	16	17	18
Technology option 1 (Farmer's practice) No practice of seed production	TNAU	4483	kg/ha	15356	1: 1.64
Technology option 2 Seed production of variety (ADT 43)	TNAU	3256	kg/ha	21156	1:1.76
Seed Production of hybrid rice CORH 3 in farmer participatory approach	TNAU	604	kg/ha	33880	1:1.81

4. Assessment of the performance of the pulse wonder in pulses

Crop/enterprise	Farming situation	Problem definition	Title of OFT	No. of trials	Technology Assessed	Parameters of assessment	Data on the parameter	Results of assessment	Feedback from the farmer	Any refinement needed	Justification for refinement
1	2	3	4	5	6	7	8	9	10	11	12
Black gram	Irrigated	Low yield Lack of adoption of foliar nutrition for pulses	Assessment of the performance of the TNAU pulse wonder in pulses	5	Spraying TNAU Pulse Wonder 5 kg/ha at flowering stage	No.of pods/plants Yield BCR	6.31 529 kg /ha 1:1.44	 529 kg /ha	Pod set and filling was good . Single application was sufficient. Easy for adoption	-	-

Contd..

Technology Assessed	Source of Technology	Production	Please give the unit (kg/ha, t/ha, lit/animal, nuts/palm, nuts/palm/year)	Net Return (Profit) in Rs. / ha	BC Ratio
13	14	15	16	17	18
Technology option 1 (Farmer's practice) Basal application of fertilizer 18 kg of N and 40 kg of P ₂ O ₅	TNAU	403	kg/ha	2515	1: 1.14
Technology option 2 Spraying of 2% DAP at flowering stage	TNAU	452	kg/ha	4785	1:1.26
Technology option 3 Spraying TNAU Pulse Wonder 5 kg/ha at flowering stage	TNAU	529	kg/ha	8135	1:1.44

5. Assessment of Planting method in redgram

Crop/ enterprise	Farming situation	Problem definition	Title of OFT	No. of trials	Technology Assessed	Parameters of assessment	Data on the parameter	Results of assessment	Feedback from the farmer	Any refinement needed	Justification for refinement
1	2	3	4	5	6	7	8	9	10	11	12
Redgram	Irrigated	Poor germination lack of optimum plant population.	Assessment of Planting method in redgram	5	Seedlings raised in poly bags and transplanted on 25- 28 DAS	No.of plants /sq.m No. of pods /plant Yield/ha	5.5 29.3 563 kg/ha	Yield: 563 kg/ha	Expensive due to cost of poly bags and intensive Labour requirement.	-	-

Contd..

Technology Assessed	Source of Technology	Production	Please give the unit (kg/ha, t/ha, lit/animal, nuts/palm, nuts/palm/year)	Net Return (Profit) in Rs. / ha	BC Ratio
13	14	15	16	17	18
Technology option 1 (Farmer's practice) Direct sowing	TNAU	390	kg/ha	19500	1:1.09
Technology option 2 Line sowing	TNAU	428	kg/ha	21400	1:1.17
Technology option 3 Seedlings raised in poly bags and transplanted on 25- 28 DAS	TNAU	563	kg/ha	28150	1:3.6

6. Control of Ranikhet disease in desi chicken

Crop/enterprise	Farming situation	Problem definition	Title of OFT	No. of trials	Technology Assessed	Parameters of assessment	Data on the parameter	Results of assessment	Feedback from the farmer	Any refinement needed	Justification for refinement
1	2	3	4	5	6	7	8	9	10	11	12
Poultry	Backyard poultry	Wide spread occurrence of Ranikhet disease in desi chicken	Control of Ranikhet disease in desi chicken	100 units	Oral pellet Ranikhet vaccine 10 th day Oral pellet vaccine 8 th week RDVK vaccine intramuscular on 16 th week	Mortality % Disease incidence	Serum samples of the birds (T2 & T3)were collected and sent to Namakkal KVK for assessment of antibodies formation in chicks against ranikhet disease	-	-	--	-

Contd..

Technology Assessed	Source of Technology	Production	Please give the unit (kg/ha, t/ha, lit/animal, nuts/palm, nuts/palm/year)	Net Return (Profit) in Rs. / unit	BC Ratio
13	14	15	16	17	18
Technology option 1 (Farmer's practice) No vaccination	-				
Technology option 2 Lasota vaccine-eye drops 7 th day R2B vaccine subcutaneously on 8 th week RDVK vaccine intramuscular 16 th week	TANUVAS	Serum samples of the birds (T2 & T3)were collected and sent to Namakkal KVK for assessment of antibodies formation in chicks against ranikhet disease. OFT is under progress.			
Technology option 3	TANUVAS				

Oral pellet Ranikhet vaccine 10 th day Oral pellet vaccine 8 th week RDVK vaccine intra muscular on 16 th week					
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7. Area specific mineral mixture for dairy cows

Crop/enterprise	Farming situation	Problem definition	Title of OFT	No. of trials	Technology Assessed	Parameters of assessment	Data on the parameter	Results of assessment	Feedback from the farmer	Any refinement needed	Justification for refinement
1	2	3	4	5	6	7	8	9	10	11	12
Dairy cows	Livestock	Insufficient nutrition leading to poor milk yield.	Area specific mineral mixture for dairy cows	10 units	Area specific TANUVAS mineral mixture 30-50 g/day-365 days	Milk yield	5.6 lit/cow/day	5 litre/cow/day	Milk yield was increased by Area specific TANUVAS mineral mixture feed after five months of feeding	-	-

Contd..

Technology Assessed	Source of Technology	Production	Please give the unit (kg/ha, t/ha, lit/animal, nuts/palm, nuts/palm/year)	Net Return (Profit) in Rs. / unit	BC Ratio
13	14	15	16	17	18
Technology option 1 (Farmer's practice) No mineral mixture supplementation	-	3.4	lit/animal/day	The observation was recorded on 5 th month. Trial is under progress.	
Technology option 2 TANUVAS mineral mixture 30-50 g/day-365 days	TANUVAS	4.2	lit/animal/day		
Technology option 3 Area specific TANUVAS mineral mixture 30-50 g/day-365 days	TANUVAS	5.6	lit/animal/day		

4.C2. Details of each On Farm Trial for assessment to be furnished in the following format separately as per the following details

1. Planting of New rice variety PMK (R) 4 (Anna 4) in drought prone areas

Title of Technology Assessed	Planting of New rice variety PMK (R) 4 (Anna 4) in drought prone areas
Problem Definition	Low yield in obsolete cultivars
Details of technologies selected for assessment	Planting of New rice variety PMK (R) 4 (Anna 4) in drought prone areas Seed treatment with <i>Pseudomonas</i> @10g/kg, <i>Phosphobacteria,ST</i> + <i>Azospirillum ST</i> @600 g/ha and foliar spray of <i>Pseudomonas</i> @ 0.5 %
Source of technology	TNAU
Production system and thematic area	Rainfed
Performance of the Technology with performance indicators	<ul style="list-style-type: none"> No. of productive tillers:7.8 Plant height (cm): 62.1 Yield:2203 kg/ha
Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques	<ul style="list-style-type: none"> Though grain type is good yield obtained is low. Less remunerative
Final recommendation for micro level situation	Inspite of early, semi dwarf ,non lodging, fine grain and white rice yield obtained is low. Has to be tested for further recommendation.
Constraints identified and feedback for research	<ul style="list-style-type: none"> Obtained only moderate yield Not highly remunerative
Process of farmers participation and their reaction	Training and demonstration

2. Rice Stem borer management

Title of Technology Assessed	Rice Stem borer management
Problem Definition	Existing management practices are not effective to reduce the yield loss due o stem borer
Details of technologies selected for assessment	<i>Trichogramma japonicum</i> @ 5 cc /ha on 30, 37, 44 DAT Installation of pheromone trap @ 12/ha Spraying of Flubendiamide @ 175g/ha
Source of technology	TNAU, Coimbatore
Production system and thematic area	Irrigated

Performance of the Technology with performance indicators	Yield: 3707 kg/ha <ul style="list-style-type: none"> • Stem borer incidence (%) • Dead heart: 7.9 • White ear: 0.9
Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques	<ul style="list-style-type: none"> • Yield obtained is higher • Dead heart and white ear incidence was less • Cost effective
Final recommendation for micro level situation	IPM strategies are highly advantageous
Constraints identified and feedback for research	<ul style="list-style-type: none"> • In the stem borer damage observed dead heart was 7.9 % and white ear was 0.9 % • Yield increase was 26.6 % than farmers practice. • Proper time interval may be maintained for parasitoid release and insecticide application.
Process of farmers participation and their reaction	Training and demonstration

3. Production of hybrid rice CORH 3 in farmer participatory approach

Title of Technology Assessed	Seed production of hybrid rice CORH 3
Problem Definition	Low yield in existing varieties
Details of technologies selected for assessment	Seed Production of hybrid rice CORH 3 in farmer participatory approach
Source of technology	TNAU
Production system and thematic area	Irrigated. Seed production of hybrid rice
Performance of the Technology with performance indicators	<ul style="list-style-type: none"> • Yield: 604 kg/ha • BCR: 1: 1.81
Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques	<ul style="list-style-type: none"> • Hybridization procedure is easy to adopt • Labour intensive • Yield is not highly remunerative
Final recommendation for micro level situation	Hybrid rice seed production with farmer participatory approach is economical
Constraints identified and feedback for research	<ul style="list-style-type: none"> • Seed set is only medium • Less yield obtained
Process of farmers participation and	Training and demonstration

their reaction	
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4. Assessment of the performance of the pulse wonder in pulses

Title of Technology Assessed	Spraying Pulse Wonder 6.25 kg/ha at flowering stage NAA@40ppm on pre flowering and 15 days after 1st spray
Problem Definition	<ul style="list-style-type: none"> • Low yield • Lack of adoption of foliar nutrition for pulses
Details of technologies selected for assessment	Spraying Pulse Wonder 6.25 kg/ha at flowering stage NAA@40ppm on pre flowering and 15 days after 1st spray
Source of technology	TNAU
Production system and thematic area	Irrigated. Foliar nutrition for pulses
Performance of the Technology with performance indicators	<ul style="list-style-type: none"> • No.of pods/plants : 6.31 • Yield : 529 kg/ha • BCR: 1:1.44
Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques	<ul style="list-style-type: none"> • Pod set and filling was good . • Single application was sufficient. • Easy for adoption
Final recommendation for micro level situation	Spraying Pulse Wonder @6.25 kg with 100 ml planifix/ha at flowering stage .
Constraints identified and feedback for research	Pulse wonder is available only at TNAU . Easy availability to farmers may be insured.
Process of farmers participation and their reaction	Training and demonstration

5. Assessment of planting method in Redgram

Title of Technology Assessed	Assessment of planting method in Redgram
Problem Definition	Poor germination lack of optimum plant population.
Details of technologies selected for assessment	Seedlings raised in poly bags and transplanted on 25- 28 DAS
Source of technology	TNAU, Coimbatore
Production system and thematic area	Irrigated

Performance of the Technology with performance indicators	<ul style="list-style-type: none"> No.of plants/sq.m: 5.5 No.of pods/plant: Yield: 563kg/ha
Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques	<ul style="list-style-type: none"> Expensive due to cost of poly bags Labour intensive
Final recommendation for micro level situation	<ul style="list-style-type: none"> Assured plant population Increased returns
Constraints identified and feedback for research	<ul style="list-style-type: none"> Expensive due to cost of poly bags Labour intensive
Process of farmers participation and their reaction	Training and demonstration

6. Control of Ranikhet disease in desi chicken

Title of Technology Assessed	Oral pellet Ranikhet vaccine 10 th day Oral pellet vaccine 8 th week RDVK vaccine intra muscular on 16 th week
Problem Definition	Wide spread of Ranikhet disease in desi chicken
Details of technologies selected for assessment	Oral pellet Ranikhet vaccine 10 th day Oral pellet vaccine 8 th week RDVK vaccine intra muscular on 16 th week
Source of technology	TANUVAS
Production system and thematic area	Backyard poultry
Performance of the Technology with performance indicators	Serum samples of the birds (T2 & T3)were collected and sent to Nammakkal KVK for assessment of antibodies formation in chicks against ranikhet disease
Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques	Trial is under progress
Final recommendation for micro level situation	
Constraints identified and feedback for research	

Process of farmers participation and their reaction	Training and demonstration
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7. Area specific mineral mixture for dairy cows

Title of Technology Assessed	Area specific mineral mixture for dairy cows
Problem Definition	Insufficient nutrition leading to poor milk yield.
Details of technologies selected for assessment	Area specific TANUVAS mineral mixture 30-50 g/day-365 days
Source of technology	TANUVAS
Production system and thematic area	Livestock
Performance of the Technology with performance indicators	Milk yield is improved by 2.2 lit/cow/day
Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques	Milk yield was increased by Area specific TANUVAS mineral mixture feed
Final recommendation for micro level situation	Trail is under progress
Constraints identified and feedback for research	
Process of farmers participation and their reaction	Training and demonstration

4.D1. Results of Technologies Refined - Nil

4.D.2. Details of each On Farm Trial for refinement to be furnished in the following format separately as per the proforma below- Nil

PART V - FRONTLINE DEMONSTRATIONS

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

Sl. No.	Category	Farming Situation	Season and Year	Crop	Variety/ breed	Hybrid	Thematic area	Technology Demonstrated	Area (ha)		No. of farmers/ demonstration			Reasons for shortfall in achievement
									Proposed	Actual	SC/ST	Others	Total	
1.	Oilseeds	Irrigated	Navarai 2010-11	Groundnut	TMV(Gn) 13		ICM in groundnut	ICM in groundnut	1	1	2	3	5	-
2.		Irrigated	Navarai 2010-11	Groundnut	TMV(Gn)13		Seed production in groundnut	Seed production in groundnut	1	1	1	4	5	-
3.		Irrigated	Navarai 2011	Sesame	TMV(Sv)7		ICM in sesame	ICM in sesame	4	4	3	7	10	-
4.	Pulses	Irrigated	Navarai 2010-11	Green gram	VBN (Gg)2		Drought mitigation	Drought mitigation in green gram	-	-	-	-	-	To be continued in 2011-12
5.	Cereals	Irrigated	Navarai 2010-11	Paddy		CORH 3	Popularization of CORH 3 paddy in SRI method	Popularization of CORH 3 paddy in SRI method	4	4	2	8	10	-
6.		Irrigated	Samba 2010	Paddy	BPT 5204		IPM and IDM in paddy	IPM and IDM in paddy	4	4	3	7	10	-
7.		Irrigated	Navarai 2010-11	Paddy	ADT 43		Popularization of mechanization in rice cultivation	Popularization of mechanization in rice cultivation	2	2	2	8	10	-
8.		Irrigated	Samba 2010	Paddy	CO(R) 49		Popularization of alternate variety	Popularization of alternate variety-CO(R)49	4	4	2	8	10	-
9.	Vegetables	Irrigated	December 2010	Bhendi		NOKH 1002	IPM in Bhendi	IPM in Bhendi	2	2	1	4	5	-
10.		Irrigated	December 2010	Brinjal		COBH2	Popularization of COBH 2 brinjal	Popularization of COBH 2 brinjal	2	2	2	8	10	-
11.		Irrigated	January 2011	Snake gourd	PLR (Sg)2		Popularization of PLR(Sg)2	Popularization of PLR(Sg)2	1	1	3	7	10	-
12.	Fodder	Irrigated	September 2010	Fodder		COCN 4	Popularization of fodder bank at village level	Popularization of fodder bank at village level	1	1	1	4	5	-
					Guinea grass									-
					Desmanthus									-
					Subhabul									-
13.	Sheep and goat	Livestock			Local		Artificial insemination	Synchronization of estrous and	100					-

								artificial insemination in goats						
14.	Common carps	Carp farming	September 2010	Carp	Catla Rohu Grass carp Common carp Botla		Popularization of composite fish culture in village ponds	Popularization of composite fish culture in village ponds	1	3	7	10	-	

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	Status of soil			Previous crop grown
									N	P	K	
1.	Oilseeds	Irrigated	Navarai 2010-11	Groundnut	TMV(Gn) 13	-	ICM in groundnut	ICM in groundnut	M	M	H	Rice
2.		Irrigated	Navarai 2010-11	Groundnut	TMV(Gn)13	-	Seed production	Seed production in groundnut	M	M	H	Rice
3.		Irrigated	Navarai 2011	Sesame	-	-	ICM in sesame	ICM in sesame	M	M	H	Rice
4.	Pulses	Irrigated	Navarai 2010-11	Green gram	VBN (Gg)2	-	Drought mitigation	Drought mitigation in green gram	L	L	H	Rice
5.	Cereals	Irrigated	Navarai 2010-11	Paddy	-	CORH 3	Popularization of CORH 3 paddy in SRI method	Popularization of CORH 3 paddy in SRI method	M	L	H	Rice
6.		Irrigated	Samba 2010	Paddy	BPT 5204	-	IPM and IDM in paddy	IPM and IDM in paddy	M	M	H	Rice
7.		Irrigated	Navarai 2010-11	Paddy	ADT 43	-	Popularization of mechanization in rice cultivation	Popularization of mechanization in rice cultivation	M	L	H	Rice
8.		Irrigated	Samba 2010	Paddy	CO(R) 49	-	Popularization of alternate variety	Popularization of alternate variety- CO(R)49	M	M	H	Rice
9.	Vegetables	Irrigated	December 2010	Bhendi	-	NOKH 1002	IPM in Bhendi	IPM in Bhendi	L	M	M	Rice
10.		Irrigated	December 2010	Brinjal	-	COBH2	Popularization of COBH 2 brinjal	Popularization of COBH 2 brinjal	L	M	M	Rice
11.		Irrigated	January 2011	Snake gourd	PLR (Sg)2		Popularization of PLR(Sg)2	Popularization of PLR(Sg)2	L	M	M	Fallow
12.	Fodder	Irrigated	September 2010	Fodder	Guinea grass Desmanthus Subhabul	COCN 4	Popularization of fodder bank at village level	Popularization of fodder bank at village level	L	M	M	Rice
13.	Sheep and goat	Livestock	-	-	Local	-	Artificial insemination	Synchronization of estrous and artificial insemination in goats	-	-	-	-
14.	Common carps	Carp farming	September 2010	Carp	Catla Rohu Grass carp Common carp Botla		Popularization of composite fish culture in village ponds	Popularization of composite fish culture in village ponds	-	-	-	-

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	ICM in groundnut	TMV(Gn)13	-	Irrigated	5	1	27.25	26.57	26.91	24.37	10.42	29780	67275	37495	1:2.26	28930	60925	31995	1:2.11
Groundnut	Popularization of seed production in TMV 13	TMV(Gn 13)	-	Irrigated	5	1	27.28	26.37	26.84	24.67	8.8	28985	67100	38115	1:2.31	28820	61675	32855	1:2.14
Sesamum	ICM in sesamum	TMV (Sv)7	-	Irrigated	10	4	8.73	7.92	8.32	5.28	57.58	9780	28288	18508	1:2.89	8230	17952	9722	1:2.18
Pulses																			
Green gram	Drought mitigation	VBN 3		Irrigated															
Cereals																			
Paddy	Popularization of alternate variety	CO (R)49	-	Irrigated	10	5	48.85	46.70	48.04	38.12	26.1	22400	42035	19635	1:1.88	23720	35261	11541	1:1.49
Paddy	IPM and IDM in paddy	BPT 5204	-	Irrigated	10	4	42.32	38.52	40.67	32.73	24.2	23525	37619	14094	1:1.6	22617	30275	7658	1:1.34
Paddy	Popularization of CORH 3 paddy in SRI method	-	CORH 3	Irrigated	10	4	71.67	65.92	69.76	49.76	40.10	24370	56645	32275	1:2.32	23280	43540	20260	1:1.87
Vegetables																			
Bhendi	IPM in Bhendi	-	NOKH1002	Irrigated	5	2	126.50	116.31	121.18	102.03	18.76	40600	72708	32108	1:1.79	38734	61218	22484	1:1.58
Brinjal	Popularization of COBH 2 brinjal	-	COBH 2	Irrigated	10	2	433	324	387.6	332.8	16.46	75130	201552	126422	1:2.68	72260	167856	95596	1:2.32
Snake gourd	Popularization of PLR (Sg) 2	PLR (Sg) 2	-	Irrigated	10	1	262.4	187.4	227.43	183.68	23.81	42862	90972	48110	1:2.12	41735	73472	31737	1:1.73

Fodder																			
			COCN 4	Irrigated			97.51	88.63	92.81	-	-								
	Fodder bank at village level	Guinea grass		Irrigated	5	1	91.14	84.46	88.32	-	-	100842	222062	121220	1:2.2	-	-	-	-
		Desmanthus		Irrigated			30.31	25.19	27.50	-	-								
		Subhabul		Irrigated			26.41	19.38	22.61	-	-								

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

Data on other parameters in relation to technology demonstrated		
Parameter with unit	Demo	Check
ICM in groundnut		
Pest and disease incidence (%)	3.2	7.6
Micro nutrient disorder (%)	1.2	5.3
ICM in sesamum		
Seed Replacement Ratio (SRR)	1.65	-
Popularization of alternate variety – CO(R)49		
No. of productive tillers / sq.m	386.1	346.5
Plant height (cm)	72.1	11.7
IPM and IDM in paddy		
Incidence of yellow stem borer %	7.3	12.1
Incidence of leaf folder %	6.5	9.3
Incidence of bacterial leaf blight %	9.8	23.2
Popularization of CORH 3 paddy in SRI method		
Plant height (cm)	85.8	73.2
No of productive tillers /sq.m	315.2	309.6

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
Transplanter	Hire charges: Rs. 6250/ha	Popularization of mechanization in rice cultivation	10	2	18	66	257	350	22530	47560	19658	1:2.11	22760	43066	20306	1:1.89

Data on other parameters in relation to technology demonstrated		
Parameter with unit	Demo	Local
Productive tillers/sq.m	388.8	328.9
Pest and disease incidence	0.42 %	0.51
Yield (q/ha)	54.92	49.73
BCR	1:2.11	1:1.89

5.B.6. Cotton- Nil

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	ICM in groundnut	Yield increase by 10.42 % Pest incidence was reduced to 4.85%
2.	Groundnut	Popularization of seed production in TMV 13	Yield increase by 8.8 %
3.	Sesamum	ICM in sesamum	Yield increased by 57.5 % Capsule borer incidence was < 3 % . Performance of the variety was good
4.	Greengram	Drought mitigation	-
5.	Paddy	Popularization of new variety -CO(R)49	CO(R)49 has recorded 26.1 % yield increase over check. (BPT 5204) Pest and disease resistance was comparatively better than the check Possess medium slender grain type Field performance was generally good
6.	Paddy	IPM and IDM in paddy	In the demo the incidence of yellow stem borer, leaf folder and bacterial leaf blight were 7.3, 6.5 and 9.8 % respectively whereas it was 12.1, 9.3 and 23.2 in the check
7.	Paddy	Popularization of mechanization in rice cultivation	Reduction in transplanting drudgery Saving in terms of seed and labour requirement Easy and quick coverage Field operation made easy due to line sowing
8.	Paddy	Popularization of CORH 3 paddy in SRI method	CORH 3 has recorded 40.1 % increased yield over check No. of productive tillers was relatively high due to SRI planting
9.	Bhendi	IPM in Bhendi	Fruit borer damage was reduced to 11.7 % No. of pesticide spray reduced
10.	Brinjal	Popularization of COBH 2 brinjal	Yield increase was 16.4 % over check
11.	Snakegourd	Popularization of PLR (Sg) 2	Short fruit enables easy handling and transportation Fruits are plumpy, fleshy with attractive white colour Yield increase by 23.81 % keeping

			quality and self life are highly advantages.
12.	Fodder	Fodder bank at village level	New concept to popularise and easy to adopt More no. of ratoon harvest Good foliage Income generation is high
13.	Livestock	Synchronization of estrous and artificial insemination	Trail is under progress
14.	Fisheries	Composite fish culture in village ponds	Trial is under progress
15.	Paddy	Planting of New rice variety PMK (R) 4 (Anna 4) in drought prone areas	Obtained only moderate yield Not highly remunerative
16.	Paddy	Management of stem borer in paddy Release of <i>Trichogramma japonicum</i> @ 5 cc /ha on 30, 37, 44 DAT Installation of pheromone trap @ 12/ha Spraying of Flubendiamide @ 175g/ha	In the stem borer damage observed dead heart was 7.9 % and white ear was 0.9 % Yield increase was 26.6 % than farmers practice
17.	Paddy	Seed production of Hybrid rice CORH 3 adopting all recommended practices in farmer participatory approach	Seed set is only medium Less yield obtained
18.	Blackgram	Spraying Pulse Wonder 5 kg/ha at flowering stage	Yield increase was 31.26 % Easy for adoption One spray is sufficient
19.	Redgram	Seedlings raised in polybags and transplanted on 25-28 DAS seed treatment	Cost of poly bags and nursery raising in poly bags are laborious.
20.	Livestock	Area specific TANUVAS mineral mixture 30-50 g/day-365 days	Trail is under progress. Milk yield is increased
21.	Poultry	Oral pellet Ranikhet vaccine 10 th day Oral pellet vaccine 8 th week RDVK vaccine intra muscular on 16 th week	Trail is under progress. Serum samples of the birds (T2 & T3) were collected and sent to Namakkal KVK for assessment of antibodies formation in chicks against ranikhet disease.

5.B.6.7 Farmers' reactions on specific technologies

S. No	Crop / Enterprise	Name of the technology demonstrated	Feed Back
1.	Groundnut	ICM in groundnut	More yield obtained by following ICM practices. Since, the variety TMV (Gn) 13 has red kernals and bold market preference is more

2.	Groundnut	Popularization of seed production in TMV 13	More yield obtained. Since, the variety TMV (Gn) 13 has red kernels and bold market preference is more Seed production techniques are easy to follow
3.	Sesame	ICM in sesamum	More yield obtained by following ICM practices The variety performed well
4.	Greengram	Drought mitigation	-
5.	Paddy	Popularization of new variety – CO(R)49	Farmers were satisfied with the performance of the variety but the grain quality is not fine compared to BPT 5204
6.	Paddy	IPM and IDM in paddy	The incidence of yellow stem borer, leaf folder and bacterial leaf blight were reduced in the demo plot. More income obtained IPM and IDM practices are easy to follow
7.	Paddy	Popularization of mechanization in rice cultivation	Reduction in transplanting drudgery Saving in terms of seed and labour requirement Easy and quick coverage Field operation made easy due to line sowing
8.	Paddy	Popularization of CORH 3 paddy in SRI method	No. of productive tillers was relatively high More income obtained Availability of skilled labour is a constraint
9.	Bhendi	IPM in Bhendi	Fruit borer damage was reduced No. of pesticide spray reduced
10.	Brinjal	Popularization of COBH 2 brinjal	Yield increased. Market preferable
11.	Snakegourd	Popularization of PLR (Sg) 2	Short fruit enables easy handling and transportation Fruits are plumpy, fleshy with attractive white colour Fetches more income
12.	Fodder	Fodder bank at village level	Availability of fodder throughout the year Palatability by the animals More foliage More no. of ratoon harvest

13.	Livestock	Synchronization of estrous and artificial insemination	Trail is under progress
14.	Fisheries	Composite fish culture in village ponds	More income from unit area Farmers are more interested in fish culture Meeting out local market needs
15.	Paddy	Planting of New rice variety PMK (R) 4 (Anna 4) in drought prone areas	Though grain type is good yield obtained is low Less remunerative
16.	Paddy	Management of stem borer in paddy Release of <i>Trichogramma japonicum</i> @ 5 cc /ha on 30, 37, 44 DAT Installation of pheromone trap @ 12/ha Spraying of Flubendiamide @ 175g/ha	Yield obtained is higher Dead heart and white ear incidence was less Cost effective
17.	Paddy	Seed production of Hybrid rice CORH 3 adopting all recommended practices in farmer participatory approach	Hybridization procedure is easy to adopt Labour intensive Yield is not highly remunerative
18.	Blackgram	Spraying Pulse Wonder 5 kg/ha at flowering stage	Easy for adoption One spray is sufficient Yield increased Not readily available in the local markets
19.	Redgram	Seedlings raised in polybags and transplanted on 25-28 DAS seed treatment	Nursery preparation is labour intensive.
20.	Livestock	Area specific TANUVAS mineral mixture 30-50 g/day-365 days	Trail is under progress.
21.	Poultry	Oral pellet Ranikhet vaccine 10 th day Oral pellet vaccine 8 th week RDVK vaccine intra muscular on 16 th week	Trail is under progress

5.B.6.8 Extension and Training activities under FLD

Sl.No.	Activity	No. of activities organised	Number of participants	Remarks
1	Field days	12	507	
2	Farmers Training	43	1434	Training programmes wer facilitatedwith demonstrations and films
3	Media coverage	4	Mass	Information on latest varieties and technologies were popularized through AIR, Television and newspapers
4	Training for extension functionaries	4	102	Training programmes were imparted to the extension officials of Tiruvallur district for the purpose of promoting TOT activities

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	3	42	18	60	10	4	14	52	22	74
Resource Conservation Technologies	4	104	48	152	17	6	23	121	54	175
Micro Irrigation/Irrigation	2	47	-	47	9	-	9	56	-	56
Seed production	10	217	69	286	32	9	41	249	78	327
Nursery management	1	17	-	17	3	-	3	20	-	20
Integrated Crop Management	14	243	80	323	28	7	35	271	87	358
Integrated Nutrient Management	1	34	-	34	6	-	6	40	-	40
Others Production techniques	5	155	33	188	21	5	26	176	38	214
Horticulture										
a) Vegetable Crops										
Nursery raising	3	64	8	72	12	2	14	76	10	86
b) Fruits										
Plant propagation techniques	2	42	2	44	8	-	8	50	2	52
Others Production techniques	1	22	-	22	-	-	-	22	-	22
c) Ornamental Plants										
Nursery Management	1	25	-	25	3	-	3	28	-	28
Propagation techniques of Ornamental Plants	2	37	12	49	5	-	5	42	12	54
d) Plantation crops										
e) Tuber crops										
f) Spices										
g) Medicinal and Aromatic Plants										
Production and management technology	5	122	19	141	11	4	15	133	23	156
Soil Health and Fertility Management										
Integrated nutrient management	4	98	9	107	14	7	21	112	16	128
Management of Problematic soils	2	44	4	48	7	-	7	51	4	55
Micro nutrient deficiency in crops	1	26	3	29	-	-	-	26	3	29
Balanced use of fertilizers	1	21	5	26	4	1	5	25	6	31
Soil and water testing	2	48	-	48	6	-	6	54	-	54

Livestock Production and Management										
Poultry Management	2	9	39	48	3	7	10	12	46	58
Animal Nutrition Management	3	29	38	67	8	19	27	37	57	94
Feed and Fodder technology	4	83	19	102	8	13	21	91	32	123
Others (pl.specify)Goat rearing	3	23	24	47	9	12	21	32	36	68
Home Science/Women empowerment										
Household food security by kitchen gardening and nutrition gardening	11	79	111	190	11	26	37	90	137	227
Gender mainstreaming through SHGs	1	12	6	18	-	-	-	12	6	18
Value addition	11	239	195	434	22	17	39	261	212	473
Women and child care	2	-	34	34	-	17	17	34	17	51
Agril. Engineering										
Farm machinery and its maintenance	3	46	9	55	9	4	13	55	13	68
Plant Protection										
Integrated Pest Management	4	86	13	99	16	4	20	102	17	119
Integrated Disease Management	3	57	19	76	17	13	30	74	32	106
Bio-control of pests and diseases	3	56	7	63	7	4	11	63	11	74
Fisheries										
Composite fish culture	3	17	34	51	5	18	23	22	52	74
Production of Inputs at site										
Seed Production	2	76	11	87	11	2	13	87	13	100
Bio-fertilizer production	6	102	39	141	19	7	26	121	46	167
Vermi-compost production	12	206	84	290	37	14	51	243	98	341
Production of livestock feed and fodder	8	63	108	171	13	28	41	76	136	212
Agro-forestry	1	17	-	17	6	-	6	23	-	23
TOTAL	146	2608	1100	3708	397	250	647	3039	1316	4355

empowerment										
Processing and cooking	6	106	24	130	37	8	45	143	32	175
Value addition	5	63	41	104	26	35	61	89	76	165
Agril. Engineering										
Farm machinery and its maintenance	3	79	11	90	23	4	27	102	15	117
Plant Protection										
Integrated Pest Management	3	34	24	58	12	7	19	46	31	77
Integrated Disease Management	2	21	15	36	4	8	12	25	23	48
Fisheries										
Composite fish culture	2	20	18	38	7	8	15	27	26	53
Production of Inputs at site										
Seed Production	9	138	54	192	51	19	70	189	73	262
Vermi-compost production	3	55	13	68	8	5	13	63	18	81
Production of livestock feed and fodder	2	14	21	35	4	3	7	18	24	42
TOTAL	114	1950	791	2741	574	265	839	2524	1056	3580

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	2	37	15	52	14	2	16	51	17	68
Training and pruning of orchards	1	19	-	19	5	-	5	24	-	24
Protected cultivation of vegetable crops	2	37	6	43	11	2	13	48	8	56
Integrated farming	1	17	11	28	3	1	4	20	12	32
Seed production	2	87	-	87	13	-	13	100	0	100
Production of organic inputs	1	17	5	22	2	3	5	19	8	27
Vermi-culture	8	99	28	127	28	9	37	127	37	164
Value addition	2	-	39	39	-	18	18	-	57	57
Poultry production	2	5	27	32	7	24	31	12	51	63
Goat rearing	1	17	8	25	11	6	17	28	14	42
Composite fish culture	2	27	17	44	18	6	23	45	23	68
Any other (pl.specify) Fodder cultivation	2	16	23	39	-	-	-	16	23	39
TOTAL	26	378	179	557	112	71	183	490	250	740

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	1	15	4	19	7	1	8	22	5	27
Commercial fruit production	1	22	-	22	12	-	12	34	-	34
Seed production	2	32	14	46	3	-	3	35	14	49
Vermi-culture	1	12	2	14	6	-	6	18	2	20
Value addition	4	93	25	118	29	17	46	122	42	164
Small scale processing	4	82	23	105	7	-	7	89	23	112
Post Harvest Technology	3	76	13	89	36	11	47	112	24	136
Poultry production	1	-	12	12	-	13	13	-	25	25
Composite fish culture	1	5	23	28	1	-	1	6	23	29
Any other (pl.specify) Fodder cultivation	1	12	5	17	4	7	11	16	12	28
TOTAL	19	349	121	470	105	49	154	454	206	624

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	3	58	16	74	8	-	8	66	16	82
Protected cultivation technology	1	12	2	14	2	-	2	14	2	16
Gender mainstreaming through SHGs	1	12	6	18	-	-	-	12	6	18
Capacity building for ICT application	1	28	6	34	4	2	6	32	8	40
Livestock feed and fodder production	1	12	6	18	2	1	3	14	7	21

Others Coconut tree climber	1	29	8	37	5	-	5	34	8	42
Total	8	151	44	195	21	3	24	172	47	219

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	2	54	5	59	9	3	12	63	8	71
Integrated Pest Management	1	22	5	27	5	2	7	27	7	34
Integrated Nutrient management	2	48	9	57	6	3	9	54	12	66
Total	5	124	19	143	20	8	28	144	27	171

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	27	6	33	12	7	19	39	13	52
7	Post harvest technology and value addition										
7.a.	Processing and value addition	1	-	27	27	-	5	5	-	32	32
8	Farm machinery										
8.a.	Farm machinery, tools and implements	1	17	-	17	3	-	3	20	-	20
9.	Livestock and fisheries	1	-	24	24	-	6	6	-	30	30
	Total	4	44	101	74	15	18	33	59	75	134

Details of sponsoring agencies involved

1. ATMA
2. Dept. of Post harvest technology, AEC & RI, Coimbatore

3. Fisheries College & Research Institute, Thoothukudi

4.VST tractors/ Coopeartive society

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.c.	Commercial vegetable production	1	36	-	36	4	-	4	40	-	40
	Others Hybrid rice seed production	1	32	-	32	8	-	8	40	-	40
2	Post harvest technology and value addition										
2. a.	Value addition	2	-	24	24	-	41	41	-	65	65
3.	Livestock and fisheries										
3.b.	Composite fish culture	1	-	24	24	-	16	16	-	40	40
4.	Income generation activities										
4.a.	Vermi-composting	1	33	-	33	7	-	7	40	-	40
4.d.	Rural Crafts (Ornamental Jewellery making)	1	-	-	-	-	24	24	-	24	24
5.b.	Others (pl.specify) Commercial fodder cultivation	1	21	8	29	7	4	11	28	12	40
	Grand Total	8	122	56	178	26	85	111	148	141	289

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	336	104	440	41	17	58	7	2	9
Exhibition	4	1515	719	2234	237	83	320	27	4	31
Film Show	27	385	112	497	67	19	86	87	11	98
Method Demonstrations	26	576	234	810	59	36	95	93	25	118
Farmers Seminar	3	551	52	603	54	21	75	67	29	96
Workshop	1	26	7	33	3	1	4	3	1	4
Group meetings	18	432	149	581	39	16	55	28	7	35
Lectures delivered as resource persons	6	90	108	198	24	11	35	103	18	121
Newspaper coverage	8	Mass								
Radio talks	9	Mass								
TV talks	10	Mass								
Popular articles	6	Mass								
Extension Literature	22	Mass								
Advisory Services	672	545	49	594	71	7	78	55	14	69
Scientific visit to farmers field	92	371	64	435	68	27	95	14	9	23
Farmers visit to KVK	1243	972	175	1147	87	9	96	103	18	121
Diagnostic visits	87	236	102	338	28	13	41	27	6	33
Exposure visits	23	127	-	127	23	-	23	5	2	7
Animal Health Camp	2	62	24	86	19	16	35	2	-	2
Soil test campaigns	10	201	52	253	33	24	57	8	-	8
Any Other (Specify) Monthly zonal workshop	8	-	-	-	-	-	-	251	42	293
Total	2289	6425	1951	8376	853	300	1153	880	188	1068

PART IX – PRODUCTION OF SEED, PLANT AND LIVESTOCK MATERIALS**9.A. Production of seeds by the KVKs**

Crop category	Name of the crop	Variety	Hybrid	Quantity of seed (qtl)	Value (Rs)	Number of farmers to whom provided
Cereals (crop wise)	Paddy	ADT 43(FS)	-	13.07	27,447	52
Pulses	Green gram	VBN(Gg)2	-	0.4	2,800	5
	Black gram	VBN(Bg)5	-	0.15	1050	-
Total						

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
Fodder crop saplings	Cumbu Napier		CO(CN) 4	11,700	4680	3
Total						

9.C. Production of Bio-Products

Bio Products	Name of the bio-product	Quantity Kg	Value (Rs.)	Number of farmers to whom provided
Vermicompost	-	547	2753	21
Total		547	2753	21

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				
Goat	Tellicherry	5	17,700	5
Total		5	17,700	5

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

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

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

Date of start	Periodicity	No.of copies distributed
July, 2007	Quarterly	2400

(B) Literature developed/published

Item	Title	Authors name	Number
Research papers	Evaluation of drought tolerant rice varieties for Samba season	Dr.R.Manimaran Dr.S.Banumathi Dr.M.Nirmala Devi Dr.S.Sheeba Th.D.Kumar Dr.G.V.Ramasubramanian	1
	Genetic diversity analysis of rice germplasm lines for yield attributing traits	Dr.S.Banumathi Dr.R.Manimaran Dr.A.Sheeba Th.D.Kumar Dr.G.V.Ramasubramanian	1
	Identifying secondary and putative traits for drought environment	Dr.A.Sheeba Dr.S. Banumathy Dr.G.V.Ramasubramanian	1
	Deficit irrigation effects on groundnut (<i>Arachis hypogiae. L.</i>)with micro sprinklers	Dr. R.Kumaraperumal	1
	Irrigation planning in command areas using crop coefficient model	Dr. R.Kumaraperumal	1
	Response of yield and yield attributes of groundnut to moisture stress- A review	Dr. R.Kumaraperumal	1
	Innovation decision process existing in a selected social system	Dr.M.Nirmala Devi Dr.R.Manimekalai Dr.R.Agila Dr.G.V.Ramasubramanian	1
	System of rice intensification in Cavery delta Zone- An analysis	Dr.R.Manimekalai Dr.R.Agila Dr.M.Nirmala Devi Dr.G.V.Ramasubramanian	1
	Causative reasons for function of SHGs	Dr.R.Agila Dr.R.Manimekalai	1

		Dr.M.Nirmala Devi	
	Crop water balance model suggesting suitable crops on major soil of Cavery delta of Tiruvarur district	Dr.R.Kumaraperumal	1
	Soil resource information and alternative crop planning for Cavery delta region of Tamil Nadu	Dr.R.Kumaraperumal	1
Technical reports	Report on Special Pulses Programme	-	1
News letters	KVK, News letter	Dr. P.Kalaiselvan Dr. G.V. Ramasubramanian Dr.M.Nirmala Devi Dr.A.Manjula Dr.R.Manimaran Dr.S.Muthuramalingam Dr.R.Kumaraperumal	1
Technical bulletins	gaWtifg;gaph;fspy; xU';fpize;j gaph; nkyhz;ik	Kidth;.k.eph;kyh njtp Kidth;.mu.kzpkhwd; Kidth;.nfh.tp.,uhkRg;gpukzpad; Kidth;.F.Kj;Juhkyp';fk; Kidth;.,uh.Fkug;bgUkhs; Kidth;.b\$.nahfyl;Rkp	1
Popular articles	rk;gh kw;Wk; jhso gUtj;jpw;nfw;w g[jp[a bey; ,uf';fs;	Kidth;.rp.ghDkjp Kidth;.mu.kzpkhwd; Kidth;.M.#Pgh Kidth;.b\$.nahfyl;Rkp jpU.o.Fkhh; Kidth;.nfh.tp.,uhkRg;gpukzpad;	1
	ntshz;ik mwptpay; epiyak;/ jp+h; cHtUf;fhd cjt[k; fuk;	Kidth;.k.eph;kyh njtp Kidth;.nfh.tp.,uhkRg;gpukzpad;	1
	MLfspy; mf kw;Wk; g[w xl;Lz;zpf; fl;Lg;ghL	Kidth;.k.eph;kyh njtp Kidth;.nfh.tp.,uhkRg;gpukzpad;	1
	Tl;Lf;bfz;ilk Pd; tsh;g;g[Kidth;.k.eph;kyh njtp Kidth;.nfh.tp.,uhkRg;gpukzpad	1
Extension literature	FHpj;jl;L Kiwapy; fha;fwp ehw;w';fhy;	Kidth;.F.u.tp\$ayjh Kidth;.F.Kj;Juhkyp';fk; Kidth;.nfh.tp.,uhkRg;gpukzpad;	500
	jukhd bey; tpij cw;gj;jpj; bjhHpy; El;g';fs;	Kidth;.M.#Pgh Kidth;.rp.ghDkjp	500

		Kidth;.b\$.nahfbyl;Rkp Kidth;.mu.kzpkhwd; Kidth;.nfh.tp.,uhkRg;gpukzpad;	
	epyf;fliy jukhd tpij cw;gj;jp	Kidth;.b\$.nahfbyl;Rkp Kidth;.rp.ghDkjp Kidth;.M.#Pgh Kidth;.mu.kzpkhwd; Kidth;.nfh.tp.,uhkRg;gpukzpad;	500
	TNAU bjd;id lhdpf; \yk; bjd;idapy; Cl;lr;rj;J nkyhz;ik	Kidth;.k.eph;kyh njtp Kidth;.M.#Pgh Kidth;.nfh.tp.,uhkRg;gpukzpad;	500
	gaW rhFgoapy; mjpf kfNy;bgw ,iytHp Ez;q\l;lk;	Kidth;.fp.Kuspjud; Kidth;.uh.Fkug;bgUkhs; Kidth;.nfh.tp.,uhkRg;gpukzpad;	500
	nfhvr;(vk;) 5 tPhpa xl;L kf;fhr;nrhsk;	Kidth;.uh.Fkug;bgUkhs; Kidth;.nfh.tp.,uhkRg;gpukzpad;	500
	Tl;Lf; bfz;ilk Pd; tsh;g;g[Kidth;.k.eph;kyh njtp Kidth;.uh.kzpnkiy Kidth;.nfh.tp.,uhkRg;gpukzpad;	500
	bey; nfh (Mh;) 49	Kidth;.rp.ghDkjp Kidth;.mu.kzpkhwd; Kidth;.M.#Pgh Kidth;.b\$.nahfyl;Rkp Kidth;.nfh.tp.,uhkRg;gpukzpad;	500
	Jy;ypa gz;izaj; jpl;lk;	Kidth;.F.Kj;Juhkyp';fk; Kidth;.F.u.tp\$ayjh Kidth;.nfh.tp.,uhkRg;gpukzpad;	500
	kz;g[G cuk; jahhpj;jy;	Kidth;.fp.Kuspjud; Kidth;.uh.Fkug;bgUkhs; Kidth;.nfh.tp.,uhkRg;gpukzpad;	500
	bey; ehw;W elt[,ae;jpuk; (Rice Transplanter)	Kidth;. b\$.nahfyl;Rkp Kidth;.nfh.tp.,uhkRg;gpukzpad;	500
	tPhpa xl;L bey; nfhMh;vr; 3	Kidth;.mu.kzpkhwd; Kidth;.rp.ghDkjp Kidth;.M.#Pgh Kidth;.b\$.nahfyl;Rkp Kidth;.nfh.tp.,uhkRg;gpukzpad;	1000
	ehw;w';fhy; Kiwapy; Jtiu rhFgo	Kidth;.uh.Fkug;bgUkhs; Kidth;.nfh.tp.,uhkRg;gpukzpad;	200

	mnrhyh cw;gj;jpg; bgUf;f Kiwfs;	Kidth;.b\$.nahfyl;Rkp jpU.o.Fkhh; Kidth;.nfh.tp.,uhkRg;gpukzpad;	200
	gr;irg;gW kw;Wk; cSe;J rhFgoj; bjhHpy;El;g';fs;	Kidth;.mu.kzpkhwd; Kidth;.k.eph;kyh njtp Kidth;.,uh.Fkug;bgUkhs; Kidth;.b\$.nahfyl;Rkp jpU.o.Fkhh; Kidth;.nfh.tp.,uhkRg;gpukzpad;	500

10.B. Details of Electronic Media Produced

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

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

1. SUCCESS STORY ON POPULARIZATION OF CO (R) 49

Title	POPULARIZATION OF CO (R) 49
Background	In Tamil Nadu paddy is grown in 2.25 m ha with a production of 7.2 m tones. In the North Eastern Zone of Tamil Nadu, Tiruvallur District contributes a total of 83000 ha of paddy cultivation in the three seasons viz., Sornavari, Samba and Navarai. During samba season BPT 5204 is grown around 10,000 ha. Though, BPT 5204 is a fine slender variety susceptibility to pest and disease is very high in the recent years. To cater the needs of the farmers for an alternate variety, KVK,-Tirur introduced a new variety CO(R) 49 released by TNAU during the year 2008 with a duration of 135 days. The variety possess semi dwarf, fine slender, white rice preferable looking qualities with resistance to stem borer, green leaf hopper, blast and Rice tungro virus.

<p>Interventions</p> <p>Process</p> <p>Technology</p>	<p>The variety was introduced by laying Front Line demonstrations (10 demos) per year at various locations in Tiruvallur District during Samba 2009 and 2010. On campus and Off campus trainings were given to farmers as well as extension personnel on various crop production and protection technologies. Necessary farm advisory services were given by the Subject Matter Specialist of KVK with varied specialization. The farmers were also facilitated with technical pamphlets. Several demonstrations were conducted in the farmers field from nursery to harvest.</p> <p>Results of the demonstrations:</p> <table border="1" data-bbox="683 800 1360 1115"> <thead> <tr> <th>Year</th> <th>Entries</th> <th>Plant height (cm)</th> <th>No. of productive tillers</th> <th>Grain yield kg/ha</th> <th>BC Ratio</th> </tr> </thead> <tbody> <tr> <td rowspan="2">2009</td> <td>CO(R)49</td> <td>73.3</td> <td>15</td> <td>5873</td> <td>1:2.48</td> </tr> <tr> <td>BPT 5204</td> <td>80.5</td> <td>12</td> <td>4216</td> <td>1:2.18</td> </tr> <tr> <td rowspan="2">2010</td> <td>CO(R)49</td> <td>72.1</td> <td>11.7</td> <td>4804</td> <td>1:1.88</td> </tr> <tr> <td>BPT 5204</td> <td>70.9</td> <td>10.5</td> <td>3812</td> <td>1:1.49</td> </tr> </tbody> </table> <p>During Samba, 2009 the highest grain yield of 6072 kg/ha was obtained by Thiru.D.Dhanajayan followed by Thiru. D.Mani of Ikkadu village. During samba 2010 Thiru.A.E.Govindasamy of Kalyanakuppam village recorded 4885 kg/ha followed by Thiru.M.Srinivasan of Thannerkulam with 4871 kg/ha. During samba 2010 inspite of severe incidence of BPH, leaf folder and bacterial leaf blight in BPT 5204 the variety CO(R) 49 was able to withstand the pest and disease incidence and the yield obtained was comparatively higher. Convinced by the performance of the variety 73 farmers in Tiruvallur District also raised CO(R)49 during Samba 2010 and obtained an average yield of 4803 kg/ha.</p> <p>During Samba, 2009 the Director , Centre for Plant Breeding and Genetics, TNAU, Coimbatore visited the</p>	Year	Entries	Plant height (cm)	No. of productive tillers	Grain yield kg/ha	BC Ratio	2009	CO(R)49	73.3	15	5873	1:2.48	BPT 5204	80.5	12	4216	1:2.18	2010	CO(R)49	72.1	11.7	4804	1:1.88	BPT 5204	70.9	10.5	3812	1:1.49
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	FLD on Popularization of CO(R)49 raised at Thirumazhisai and Poorivakkam villages and interacted with farmers. During Samba, 2010, Director of Extension Education, TNAU, Coimbatore visited the FLD on CO(R)49 and assessed the performance.
Impact	On observing the performance of the variety in Samba, 2009, 73 farmers in Tiruvallur district raised CO(R) 49 during Samba, 2010.
Horizontal spread	The variety was raised in 29 ha during Samba, 2010 and in the ensuing season it is expected that the area of CO(R) 49 will be around 115 ha.
Economic gains	The net income obtained in CO (R) 49 was Rs. 31,638 and Rs. 26,530 for BPT 5204 during Samba, 2009. In Samba, 2010 the net return for CO(R) 49 and BPT 5204 were Rs. 19,635 and 11541 respectively since the yield obtained in paddy crop is generally low because of unusual rainfall during Samba, 2010.
Employment generation	-

2. SUCCESS STORY ON POPULARIZATION OF TRANSPLANTER IN RICE CULTIVATION

Title	Popularization of transplanter in rice cultivation
Background	Paddy, one among the major crops of Tamil Nadu is being cultivated in 83000 ha in Tiruvallur District during Soranavari, Samba and Navarai seasons. Since the district is adjacent to Chennai and due to urbanization and other employment opportunities labour scarcity is the major problem faced by the farming community during transplanting, weeding and harvesting. Due to non availability of sufficient labourers in time the framers are facing difficulties like severe pest and disease incidence, water availability, harvesting at the same time. Based on the field survey and interactions with the farmers the KVK has initiated the popularization of paddy transplanter.

<p>Interventions</p> <p>Process</p> <p>Technology</p>	<p>To start with, five On farm trails were laid in different villages of Tiruvallur district during Samba, 2009. Transplanting was done using paddy transplanter. Trainings on raising nursery, transplanting and various crop production technologies were given with technical pamphlets. The demonstration plots were periodically visited, advisory services given and observations recorded. The method of using transplanter out yielded 5460 kg/ha of grain followed by line planting (5250 kg/ha). On observing the efficiency and less labour requirement the demo was proposed for Front Line Demonstration and ten demonstrations were laid during Navarai, 2010 in Ayalur and Keelampakkam kandigai villages and necessary follow up was done.</p> <p>Results of the demonstrations:</p> <table border="1" data-bbox="683 953 1360 1255"> <thead> <tr> <th>Year</th> <th>Method of planting</th> <th>No. of productive tillers/sq.m</th> <th>Grain yield kg/ha</th> <th>BC Ratio</th> </tr> </thead> <tbody> <tr> <td rowspan="2">2009</td> <td>Transplanter</td> <td>394.1</td> <td>5460</td> <td>1:2.73</td> </tr> <tr> <td>Line planting</td> <td>341.7</td> <td>5250</td> <td>1:2.23</td> </tr> <tr> <td rowspan="2">2010</td> <td>Transplanter</td> <td>388.8</td> <td>5492</td> <td>1:2.11</td> </tr> <tr> <td>Line planting</td> <td>328.9</td> <td>4973</td> <td>1:1.89</td> </tr> </tbody> </table>	Year	Method of planting	No. of productive tillers/sq.m	Grain yield kg/ha	BC Ratio	2009	Transplanter	394.1	5460	1:2.73	Line planting	341.7	5250	1:2.23	2010	Transplanter	388.8	5492	1:2.11	Line planting	328.9	4973	1:1.89
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<p>Impact</p>	<p>The performance of paddy transplanter is found satisfactory since the method is efficient, economical and labour requirement is very less. Five days Training on paddy transplanter comprising of skills of nursery raising, transplanting and maintenance of the machine was given to 20 farmers of Cooperative societies at KVK, Tirur. Those farmers will be provided with transplanter at subsidized cost through cooperative societies and inturn the farmers will promote machine transplanting on commercial basis. Due to these efforts around 610 ha is expected to be raised with transplanter during Sornavari, 2011.</p>																							

Horizontal spread	During Sornavari, 2011 an area of 610 ha is expected to be raised with transplanter.
Economic gains	The net income obtained during Samba, 2009 was Rs.31275 and Rs.26188 for transplanter and line planting respectively. In Navarai, 2010 the net income obtained for transplanter was (Rs.25030) comparatively higher than line planting (Rs.20306).
Employment generation	-

3. CASE STUDY ON CARP FARMING IN VILLAGE PONDS

Title	Carp farming in village ponds
Background	<p>Fish is one of the important food consumed by a large sector of people of our country. Really it is a challenging task to meet out the food demand in the upcoming years as the country becomes highly populous. Researches showed that an individual consumes 40 gm of fish per day against the recommendation of 100 gm per day. The sources of fish catch are mainly from sea, rivers, lakes and ponds. But still there is a gap between the catch and the demand. Fish farming is an age old traditional practice in the world. People did fishing for sustenance. But now the scene has changed. There is a large scope for fish catch as it is one of the major food of the people of the country. In Tamil Nadu the total inland fisheries sector has about 3.71 lakh ha which are amenable for both capture and culture fisheries. The fish production from the inland sector during 2008-09 was 1.6 lakhs tones. Still there is a gap between the catch and the demand. This could be overlook by utilizing the available water resources where we dwelve. Currently in modernization of carp farming there is an enormous scope for rearing fish to meet out the demand by utilizing all the available water resources and get sustained in fish production.</p>

<p>Interventions</p> <p>Process</p> <p>Technology</p>	<p>The Krishi Vigyan Kendra, Tiruvallur has taken up a Front Line Demonstration (FLD) on Carp farming in village ponds. The main motive of the FLD is to utilize the under utilized water resources available locally and facilitate the farmers and rural youth to fetch more income from the readily available resources. The most suitable fish farming in village ponds is Composite carp Culture. There are various types of carps available. Among them Catla, Rohu, Common carp, Silver carp, and Grass carp are highly suitable. They feed on food material available at various levels of pond which would facilitate to utilize the whole pond efficiently. If these carps are reared in correct ratio in ponds then it would increase the productivity and returns.</p> <p>Feeding habit of fish reared in ponds</p> <table border="1"> <thead> <tr> <th>S.No</th> <th>Carp</th> <th>Feeding habit</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Catla</td> <td>Zoo plankton</td> </tr> <tr> <td>2.</td> <td>Rohu</td> <td>Phytoplankton and Zoo plankton</td> </tr> <tr> <td>3.</td> <td>Common carp</td> <td>Water plants, insects, crustaceans and benthic worms</td> </tr> <tr> <td>4.</td> <td>Grass carp</td> <td>Aquatic vegetation</td> </tr> <tr> <td>5.</td> <td>Silver carp</td> <td>Phytoplankton</td> </tr> </tbody> </table> <p>Front Line Demonstration (FLD) on “Carp farming in village ponds” at Krishi Vigyan Kendra, Tiruvallur</p> <p>The Krishi Vigyan Kendra, Tiruvallur has taken up a FLD on Carp farming in Vathatoor village of Tiruvallur District in an area of 5 acres. The ponds were taken for lease in agreement with the village Panchayat by the unemployed rural youth of that village. In the selected ponds 10,000 numbers of fish fingerlings were stocked in the month of October, 2009.</p> <p>The details are:</p> <table border="1"> <thead> <tr> <th>S.No</th> <th>Type of carp fingerlings</th> <th>Numbers released</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Catla (<i>Catla catla</i>)</td> <td>2,750</td> </tr> <tr> <td>2.</td> <td>Rohu (<i>Labeo rohita</i>)</td> <td>2,000</td> </tr> <tr> <td>3.</td> <td>Common carp (<i>Cyprinus carpio</i>)</td> <td>2,250</td> </tr> <tr> <td>4.</td> <td>Grass carp (<i>Ctenopharyngodon idella</i>)</td> <td>3,000</td> </tr> </tbody> </table>	S.No	Carp	Feeding habit	1.	Catla	Zoo plankton	2.	Rohu	Phytoplankton and Zoo plankton	3.	Common carp	Water plants, insects, crustaceans and benthic worms	4.	Grass carp	Aquatic vegetation	5.	Silver carp	Phytoplankton	S.No	Type of carp fingerlings	Numbers released	1.	Catla (<i>Catla catla</i>)	2,750	2.	Rohu (<i>Labeo rohita</i>)	2,000	3.	Common carp (<i>Cyprinus carpio</i>)	2,250	4.	Grass carp (<i>Ctenopharyngodon idella</i>)	3,000
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	<p>Trainings on Composite fish culture were given by the scientists of Krishi Vigyan Kendra, and Department of fisheries, Tiruvallur at various stages of the demonstration. Selection of ponds, stocking of fingerlings, maintenance of ponds, feeding of fish and disease management techniques were imparted to the beneficiaries at the appropriate stage. The details of the yield and economic return were tabulated hereunder.</p> <p>Table: 1. Yield and economic returns</p> <table border="1" data-bbox="578 575 1349 869"> <thead> <tr> <th>S.No</th> <th>Carp</th> <th>Number</th> <th colspan="4">Economics</th> </tr> <tr> <td>1.</td> <td>Catla</td> <td>2,750</td> <th>Gross cost</th> <th>Gross income</th> <th>Net return</th> <th>BC ratio</th> </tr> </thead> <tbody> <tr> <td>2.</td> <td>Rohu</td> <td>2,000</td> <td rowspan="3">1,05,000</td> <td rowspan="3">4,00,000</td> <td rowspan="3">2,95,000</td> <td rowspan="3">1: 3.81</td> </tr> <tr> <td>3.</td> <td>Common carp</td> <td>2,250</td> </tr> <tr> <td>4.</td> <td>Grass carp</td> <td>3,000</td> </tr> </tbody> </table>	S.No	Carp	Number	Economics				1.	Catla	2,750	Gross cost	Gross income	Net return	BC ratio	2.	Rohu	2,000	1,05,000	4,00,000	2,95,000	1: 3.81	3.	Common carp	2,250	4.	Grass carp	3,000
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Impact	<p>The Front Line Demonstration on Carp farming showed that composite fish culture is a wonderful avenue for increasing the fish production in Tiruvallur district. The income generated was multifold compared to the expenditure. The demonstration showed that the locally available water bodies in villages and small hamlets can be made utilized efficiently. The field day conducted on the day of harvest motivated the other farmers and rural youth of the near by villages to tap the untapped potential of water resources of their habitat. In a nut shell, Composite fish culture is a source for additional income generation by utilizing the unutilized and underutilized aquatic resources. The farmers can also have Integrated Farming System in which fish culture is one of the components in a small area of their holdings. They can rear fish in field channels and paddy fields which would facilitate them to get additional income from diversified sources.</p> <p>During the current year, the FLD was laid out at Kalyanakuppam village and trail is under progress</p>																											
Horizontal spread	-																											
Economic gains	It was observed that after a period of nine months ie, by July, 2010, the fish have attained a weight of 1.5 kg to 2.5 kg. The																											

	beneficiaries have started harvesting the fish. The price ranged from Rs. 80 to Rs.100 per kg. From an area of 5 acres they have harvested 5 tonnes of fish resulted in a gross income of Rs. 2, 95, 000. The cost benefit ratio is 1:3.81.
Employment generation	-

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

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.	Coconut	Drawing of snakes diagram using paint at the bottom of the coconut tree	To avoid rats and palm civet
2.	Paddy	Dipping of Cotton pieces in jaggery solution and placing on field bunds	The rats eating this cotton piece will die due to the block in their respiratory system
3.	Sugarcane	Dipping of Cotton pieces in jaggery solution and placing on field bunds	The wild boar eating this cotton piece will die due to the block in their respiratory system

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

- Identification of courses for farmers/farm women - Survey and PRA
- Rural Youth-PRA
- Inservice personnel – Group discussion and meetings

10.G. Field activities

- i. Number of villages adopted - Nil
- ii. No. of farm families selected - Nil
- iii. No. of survey/PRA conducted : Survey: 12, PRA : 1

10.H. Activities of Soil and Water Testing Laboratory

Status of establishment of Lab : Under establishment

1. Year of establishment : 2011

2. List of equipments purchased with amount :

Sl. No	Name of the Equipment	Qty.	Cost
1.	Physical balance	1	6760
2.	Chemical balance	1	20592
3.	Spectro photo meter	1	39104
4.	PH meter	1	5970
5.	Flame photo meter	1	45240
6.	Digital conductivity meter	1	11326
7.	Glass single distillation t	1	36400
8.	Shaker	1	20800
9.	Hot air oven	1	17680
10	Hot plate	1	7956
11	Willy mill	1	32760
12	Water bath	1	7249
13	Kijeldahl digestion and distillatio unit	1	233170
14	Laboratory table	1	78000
15	HCL desktop computer system	1	28500
16	Hp laser jet printer	1	9100
17	Rack, almyrah, angle and iron rac etc	1	70000
18	Wash basin, exhaust fan and ga burners, etc	1	70000
19	Soil and plant storage cabin	1	100000
20	Fume wood chamber	1	20000
21	Suction apparatus	1	10000
22	Refrigerator	1	20000
23	Survorelay stabilizer 2 KVA	1	8200
24	Portable soil and water analysis kit	1	55500
25	GPS	1	20000
26	IQ board		70000
27	Chemical and glass wares		250000
28	Petty items		100000
29	Tender Advertising charges		5632
Total			13,99,939

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

10.I. Technology Week celebration- Nil

10. J. Interventions on drought mitigation (if the KVK included in this special programme)- Nil

PART XI. IMPACT

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

Name of specific technology/skill transferred	No. of participants	% of adoption	Change in income (Rs.)	
			Before (Rs./Unit)	After (Rs./Unit)
Use of transplanter for paddy	236	100	43066	47560
Soil sampling	444	57	43790	46155
CO(R) 49 for Samba season	56	37.5	34532	41728
CORH 3 for Navarai season	55	63.6	24817	34227

11. B. Cases of large scale adoption -Nil
(Please furnish detailed information for each case)

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

1. Popularization of CO(R) 49

In Tiruvallur district during Samba, BPT 5204 is grown in more than fifty per cent of the rice area. In the recent years BPT 5204 was noticed to be highly susceptible to pest and diseases. To cater the needs of the farmers for an alternate variety for Samba, KVK,-Tirur introduced a new variety CO(R) 49 released by TNAU during the year 2008 with a duration of 135 days. The variety possess semi dwarf, fine slender, white rice preferable looking qualities with resistance to stem borer, green leaf hopper, blast and Rice tungro virus. The variety was introduced by laying Front Line demonstrations (10 demos) per year at various locations in Tiruvallur District during Samba 2009 and 2010. The net income obtained in CO (R) 49 was Rs. 31,638 and Rs. 26,530 for BPT 5204 during Samba, 2009. In Samba, 2010 the net return for CO(R) 49 and BPT 5204 were Rs. 19,635 and 11541 respectively since the yield obtained in paddy crop is generally low because of unusual rainfall during Samba, 2010. Convinced by the performance of the variety 73 farmers(29 ha) in Tiruvallur District also raised CO(R)49 during Samba 2010 and obtained an average yield of 4803 kg/ha. during Samba, 2010 and 115 ha is expected in the ensuing season.

2. Use of transplanter for paddy cultivation

Paddy, occupies an area of 83000 ha in Tiruvallur District during Soranavari, Samba and Navarai seasons. Since the district is adjacent to Chennai and due to urbanization and other employment opportunities labour scarcity is the major problem during transplanting and other operations. On farm trials were laid during Samba, 2009 and it was found that use of transplanter was efficient, economical and labour saving. Hence the same was popularized during Navarai, 2010. The net income obtained during Samba, 2009 was Rs.31275 and Rs.26188 for transplanter and line planting respectively. In Navarai, 2010 the net income obtained for transplanter was (Rs.25030) comparatively higher than line planting (Rs.20306). During Sornavari, 2011 an area of 610 ha is expected to be raised with transplanter.

PART XII - LINKAGES

12. A. Functional linkage with different organizations

Name of organization	Nature of linkage
Department of Agriculture, Tiruvallur	<ul style="list-style-type: none"> • Assessing the training needs of the farmers in areas of crop improvement, production, protection and mechanization • Mid monthly and monthly zonal workshop • Field day programmes • Participating in conducting demonstrations • Participation in the training programmes • Participation in farmers' seminars • Trainings to Extension functionaries • Farm advisory services • ATMA programme
Dept. of Horticulture, Tiruvallur	<ul style="list-style-type: none"> • Assessing the training needs of the farmers in areas of crop improvement, production, protection and mechanization • Field day programmes • Participating in conducting demonstrations • Participation in the training programmes • Participation in farmers' seminars • Trainings to Extension functionaries • Off campus training programmes • Farm advisory services • Precision farming programme
Department of Agrl.Engineering,	<ul style="list-style-type: none"> • Assessing the training needs of the farmers in

Tiruvallur	<p>area of mechanization</p> <ul style="list-style-type: none"> • Participating in conducting demonstrations • Participation in the training programmes • Participation in farmers' seminars
Department of fisheries, Tiruvallur	<ul style="list-style-type: none"> • Participating in conducting demonstrations • Participation in the training programmes • Participation in Training programme • Providing technical guidance
Regional station for forage production and demonstration, Alamathi, Chennai	<ul style="list-style-type: none"> • Training and Technical guidance
Krishi Vigyan Kendra, Kattupakkam	<ul style="list-style-type: none"> • Participating in conducting demonstrations • Participation in the training programmes • Participation in farmers' seminars • Training and Technical guidance
Institute of Poultry Production and management (IPPM), Madhavaram, Chennai	<ul style="list-style-type: none"> • Participating in conducting demonstrations • Participation in the training programmes • Training and Technical guidance
Indian Bank training Institute, Tiruvallur	<ul style="list-style-type: none"> • Participation in the training programmes • Training to Self Help Groups
ATMA	<ul style="list-style-type: none"> • Training • Demonstrations • Research
Vazhndhukattuvom thittam, Tiruvallur	<ul style="list-style-type: none"> • Training • Demonstration
DIET, Tirur	<ul style="list-style-type: none"> • Training • Information
Urban Horticulture Development Centre, Chennai	<ul style="list-style-type: none"> • Training • Demonstrations
Commissionerate of Agriculture, Chennai	<ul style="list-style-type: none"> • District oriented • crop based problems & remedy • Seminar • Participating in Technology week
State Bank of India, Tiruvallur	<ul style="list-style-type: none"> • Training • Participation in Technology week programme
Indian Bank, Tiruvallur	<ul style="list-style-type: none"> • Training • Participating in Technology week

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.)
NADP precision farming	April 2008	NADP (RKVY), Government of Tamil Nadu	7.49 lakhs

12.C. Details of linkage with ATMA

a) Is ATMA implemented in your district Yes

If yes, role of KVK in preparation of SREP of the district- Facilitator

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)
03	Training programmes	SRI cultivation	-	1	Fifty farmers participated in the training programme and the techniques of nursery raising, use of SRI marker, transplanting and use of conoweeder were trained to the farmers
04	Demonstrations	Demo on SRI Demo on ICM in pulses		2	Demo on SRI and Demo on ICM in pulses were raised at KVK farm each in 1 ha

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

12.E. Nature of linkage with National Fisheries Development Board - Nil

12.F. Details of linkage with RKVY - Nil

12. G. Kisan Mobile Advisory Services - service is not yet activated

PART XIII- PERFORMANCE OF INFRASTRUCTURE IN KVK

13. A. Performance of demonstration units (other than instructional farm) : Sanction awaited.

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

Name of the crop	Date of sowing	Date of harvest	Area (ha)	Details of production			Amount (Rs.)		Remarks
				Variety	Type of Produce	Qty. qtl	Cost of inputs	Gross income	
Cereals Paddy	02.12.10	27.12.10	0.8	ADT 43	Seed(FS)	13.07	19,630	27,447	The seeds will be supplied for certified seed production to farmers
Pulses									
Green gram	28.12.10	11.03.11	0.08	VBN (Gg)2)	Seed	0.40	1430	1920	The crop was severely affected by <i>spodoptera litura</i> and the yield was generally low in the district
Black gram	29.12.10	15.03.11	0.04	VBN (Bg)5	Seed	0.15	670	750	
Fodder bank	15.09.10	26.03.11	0.12	COCN4 Guinea grass Desmanthus	Slips	11,700	1365	4680	Demo unit is maintained for further harvest

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

Sl. No.	Name of the Product	Qty	Amount (Rs.)		Remarks
			Cost of inputs	Gross income	
1.	Azolla	130	470	650	Azolla is continuously produced in the KVK instructional farm and supplied to the farmers
2.	Vermicompost	200 sqft	547kg	2735	Demo unit is maintained for further harvest
3.	Mushroom Spawn production	59	430	1180	

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

Sl. No	Name of the animal / bird / aquatics	Details of production			Amount (Rs.)		Remarks
		Breed	Type of Produce	Qty.	Cost of inputs	Gross income	
1.	Goat	Tellicherry	Animal	5	44,561	17,700	The demo unit is a permanent structure and is being maintained

13.E. Utilization of hostel facilities: The trainees of Tiruvallur district have not availed the hostel facilities

13.F. Database management

S. No	Database target	Database created
1.	-	District profile of Tiruvallur district
2.	-	Activities of KVK, Tiruvallur

13.G. Details on Rain Water Harvesting structure and micro-irrigation system : 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	State Bank of India	Coimbatore	-	TNAU, General Fund Account	-	-	-
With KVK	State Bank of India	Tiruvallur	1844	Training organisation, KVK	11173519584	600002127	0001844

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

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

S.No.	Particulars	Sanctioned	Released	Expenditure
A.	Recurring Contingencies			
1.	Pay & Allowances	45,00,000 64,44,000	1,58,04,000	88,84,215
2.	Travelling allowances	1,25,000		1,24,513
3.	Contingencies			
A	Stationery, telephone, postage and other expenditure on office running, publication of Newsletter and library maintenance	1,90,000		1,90,000
B	POL, repair of vehicle, tractor and equipments	1,50,000		1,50,000
C	Meals/refreshment for trainees ceiling upto Rs.40/ day /trainee be maintained)	90,000		90,000
D	Training material (Posters, charts, demonstrations material including chemicals etc. required for conducting the training)	50,000		50,000
E	Frontline demonstration except oilseeds and pulses (minimum of 30 demonstration in a year)	1,90,000		1,89,831
F	FLD on special Pulses Programme	50,000		50,000
G	On farm testing (on need based, location specific and newly generated information in the major production systems of the area)	90,000		89,548
H	Training of extension functionaries	10,000		9,538
I	Maintenance of buildings	25,000		24,795

J	Extension activities	25,000		25,000
K	Farmers field school	25,000		24,527
L	Chemical and glass wares for SWTL	2,50,000		2,05,251
M	Petty items – SWTL	1,00,000		55,000
N	Soil and Plant sample processing	50,000		25,000
O	Library	5,000		5,000
	Total (A)	1,23,69,000	1,58,04,000	1,01,92,218
B	Non-Recurring Contingencies			
1.	Works (8.00 lakhs)	1,00,000		1,00,000
	a) Fencing cum compound wall			
	b) Farm ponds	1,00,000		1,00,000
	c) Vehicle & Implements shed	3,00,000		3,00,000
	d) Irrigation system	2,00,000		2,00,000
	f) Bore well	1,00,000		1,00,000
2.	Equipments & furniture	2,00,000		2,00,000
	a) Furniture & Furnishing			
	b) Power tiller	1,50,000		1,50,000
	c) Digital camera	25,000		25,000
	d) SWTL	10,00,000		10,00,000
	e) Generator	1,00,000		99,850
	f) LCD Projector	1,00,000		99,675
	g) Plant Health Diagnostics facility	10,00,000		10,00,000
	h) EPBAX System	50,000		39,240
3.	Library (Purchase of assets like books & journals)	10,000		10,000
	TOTAL (B)	34,35,000		33,98,915
	GRANT TOTAL (A+B)	1,58,04,000		1,35,91,133

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

Year	Opening balance as on 1 st April	Income during the year	Expenditure during the year	Net balance in hand as on 1 st April of each year
April 2008 to March 2009	86,944	6050	656	92,338
April 2009 to March 2010	92,338	83732	46,060	1,30,010
April 2010 to March 2011	1,30,010	4,01,971	1,49,574	3,82,407

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. R.Manimaran	SMS (Plant Breeding & Genetics)	Technology demonstration for harnessing Pulses productivity	MPKV, Rahuri, Maharashtra	04.06.10 & 05.06.10
Dr.R.Kumaraperumal	SMS (Soil Science)	Neem and Pongamia soap preparation	IIHR, Bangalore	21. 05.10 & 22.05.10
Dr.R.Kumaraperumal	SMS (Soil Science)	Integrated Farming System	KVK, Kattupakkam	10.11.10 to 12.11.10
Dr.M.Nirmala Devi	SMS(Agrl. Extension)	New initiatives in Transfer of Technology	TNAU, Coimbatore	24.03.11 & 25.03.11
Dr.S.Muthuramalingam	SMS (Horticulture)	Protected cultivation of Horticultural crops	TNAU, Coimbatore	28.03.11 & 29.03.11
Th. R.Samundeeswaran	Computer Programmer	Database management	TNAU, Coimbatore	29.03.11 to 31.03.11
Th.D.Kumar	Farm Manager	Weather based advisory service	TNAU, Coimbatore	30.03.11 to 01.04.11

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

