

**PROFORMA FOR ANNUAL REPORT 2011-12**

**(FOR THE PERIOD APRIL 2011 TO MARCH 2012)**

**KRISHI VIGYAN KENDRA (THOOTHUKUDI)**

## PART I - GENERAL INFORMATION ABOUT THE KVK

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

KVK Address	Telephone		E mail	Web Address
	Office	Fax		
SCAD KVK Vagaikulam Thoothukudi	0461- 2269306	0461- 2269306	<a href="mailto:pcscadkvk@gmail.com">pcscadkvk@gmail.com</a> <a href="mailto:scad_kvkv@yahoo.co.in">scad_kvkv@yahoo.co.in</a>	<a href="http://www.scadkvkthoothukudi.org">www.scadkvkthoothukudi.org</a>

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

Address	Telephone		E mail	Web Address
	Office	Fax		
SCAD Bye pass road Vannarapettai Thirunelveli	0462- 2501008	0462-2501007	scb_scad@yahoo.com	www.scad.org.in

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

Name	Telephone / Contact		
	Residence	Mobile	Email
Dr. V.Srinivasan	9943773002	9942978486	Srinivasan_v_2001@yahoo.com

### 1.4. Year of sanction: 1995

### 1.5. Staff Position (as 31<sup>st</sup> March 2012)

Sl. No.	Sanctioned post	Name of the incumbent	Designation	M/F	Discipline	Highest Qualification	Pay Scale	Basic pay	Date of joining KVK	Permanent Or Temporary	Category (SC/ST/OBC/Others)
1	Programme Coordinator	Vaccant									
2	SMS	Dr.V.Srinivasan	PC i/c	M	Vet. Medicine	M.V.Sc., (Vet. medicine)	15600-39100	22330+5400	08.07.1999	P	OTHERS
3	SMS	S.Sumathi	SMS	F	Home sci. Extension	M.Sc., (H.Sc.Ext.,)	15600-39100	21733+5400	01.12.2000	P	OBC
4	SMS	P.Velmurugan	SMS	M	Horti.	M.Sc., (Horticulture)	15600-39100	20332+5400	30.01.2001	P	SC
5	SMS	A.Murugan	SMS	M	Agronomy	M.Sc.,(Ag)	15600-39100	15600+5400		P	SC
6	SMS	V.Mohan	SMS	M	Soil science	M.Sc.,(Soil Science)	15600-39100	16717+5400	19.08.2009	P	OBC
7	SMS	M.Ashok kumar	SMS	M	Plant prtection	M.Sc., (Entomology)	15600-39100	16717+5400	17.08.2009	P	OBC
8	Programme Assistant	S.Manikandan	Prog.ast.	M	Fisheries	B.F.Sc.	9300-34800	10990+4200	01.08.2009	P	OBC
9	Programme Assistant (Computer)	J.Jove	Computer Prog.	M	Computer sci.	B.Sc. (Computer sci)	9300-34800	10230+4200	31.08.2009	P	OBC
10	Farm Manager	K.Damodaran	Farm Manager	M	Agriculture	B.Sc.,(Agri)	9300-34800	10990+4200	01.08.2009	P	OBC
11	Assistant	S.S.Ganesan	accountant	M			9300-34800	16418+4200	01.06.1996	P	OBC
12	Steno	S.Vimala	Steno	F			5200-20200	8611+2000	01.06.1996	P	OBC
13	Driver	Gulam rasul babu	Driver	M			5200-20200	8611+2000	01.06.1996	P	OBC
14	Driver	James	Driver	M			5200-20200	8631+2000	01.07.1996	P	OBC
15	Supporting staff	Rajash	Farm assistant	M			5200-20200	6911+1800	01.12.1996	P	SC
16	Supporting staff	Xavier	watchman	M			5200-20200	7334+1800	12.11.2001	P	OTHERS

**1.6. Total land with KVK (in ha) : 20.8 ha**

S. No.	Item	Area (ha)
1.	Under Buildings	2.0
2.	Under Demonstration Units	0.8
3.	Under Crops	1.0
4.	Orchard/Agro-forestry	1.0
5.	Others	7.0

**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	2001	1100	42 Lakhs			
2.	Farmers Hostel	ICAR				02.03.2011	305	Roof level
3.	Staff Quarters	ICAR	2007	650	24 Lakhs			
4.	Demonstration Units	ICAR	2006	200	1.89 Lakhs			
	1. Poultry shed							
	2. Vermicompost unit							
5.	Storage Godown	ICAR	2.3.2012	45		02.03.2011		
6.	Vehicle cum Implement shed	ICAR	2.3.2012	60		02.03.2011		

**B) Vehicles**

Type of vehicle	Year of purchase	Cost (Rs.)	Total kms. Run	Present status
Tempo cruiser	2004	4.96	239419	To be condemned
Bajaj boxer CT 100 delux	2004	0.39	56561	Road worthy
Hero Honda Splendor	2009	0.45	35512	Road worthy

**C) Equipments & AV aids**

Name of the equipment	Year of purchase	Cost (Rs.)	Present status
OHP	1996	18315	ok
Slide projector	1996	14265	not in use
Electronic type writer	1996	19200	Not in use
Mf tractor and trailer	1999	362400	To be condemned
Photo copier	2005	82840	Ok
Computer with printer and accessories	2005	68800	Under repair and spares not available : to be condemned
Digital photo camera	2005	19990	Under repair : to be condemned
LCD projector screen and laptop computer	2007	98600	Under repair and spares not available : To be condemned
Fax machine	2009	15000	OK
Power tiller	2010	150000	OK
Generator	2011	150000	OK
AV aid	2011	15000	OK
EPABX	2011	15000	OK

### 1.8. Details of SAC meeting conducted in 2011-12

Sl.No.	Date	Number of Participants	No. of absentees	Salient Recommendations	Action taken
1	5.7.2011	16	15	<b>Dr.Prabu Kumar, ZPD, Bangalore</b> <ul style="list-style-type: none"> <li>Concentrate on secondary agriculture than primary agriculture.</li> <li></li> </ul>	<b>Dr.Prabu Kumar, ZPD, Bangalore</b> <ul style="list-style-type: none"> <li>Training programmes were conducted on processing and value addition on agriculture produce. Technologies were collected for value addition on millets. A proposal submitted for establishment of primary and secondary processing unit for millets. It is likely to be established at Jegaveerapandiyapuram cluster.</li> </ul>
				<ul style="list-style-type: none"> <li>Ensure quality seed production, technology and then marketing.</li> </ul>	<ul style="list-style-type: none"> <li>Through KVK the farmers produced VBN-4 black gram seed of 1 ton and the same was marketed through farmers group.</li> </ul>
				<ul style="list-style-type: none"> <li>Kvk action plan should be based on ensuring quality seed and planting material production/availability</li> </ul>	<ul style="list-style-type: none"> <li>KVK action plan was prepared according to the availability of seeds.</li> </ul>
				<ul style="list-style-type: none"> <li>Entrepreneurship development with proper license like kannur KVK should be established .SMS (HS) should visit gadag ,patharamathi and kannur KVK.</li> </ul>	<ul style="list-style-type: none"> <li>Exposure visits have been planned to visit Kannur KVK for branding and marketing the agriculture produce.</li> </ul>
				<ul style="list-style-type: none"> <li>ITK validation must for bio char programme.</li> </ul>	<ul style="list-style-type: none"> <li>On Farm Trail was conducted to validate the Bio char programme. The results are very much encouraging. ITK</li> </ul>

					practices compiled in 2011-12.
				<ul style="list-style-type: none"> <li>Start mobile SMS.</li> </ul>	<ul style="list-style-type: none"> <li>It has been planned to start mobile SMS services from this April 2012 onwards</li> </ul>
				<b>Dr.Ganesan, Dean, AC&amp;RI, Kilikulam</b> <ul style="list-style-type: none"> <li>KVK has to use knowledge available at AC&amp;RI, Kilikulam</li> <li>Bio char concept has to be standardized. This can be done in collaboration with AC&amp;RI, Kilikulam. The dean is willing to extent his help to validate this technology</li> </ul>	<ul style="list-style-type: none"> <li>Bio char has been supplied for M.Sc student research work in Killikulam Agriculture College.</li> </ul>
				<ul style="list-style-type: none"> <li>Due to labour scarcity and non availability selective mechanization has to be promoted.</li> </ul>	<ul style="list-style-type: none"> <li>Seed drill cum Fertilizer was introduced in FLD programme.</li> <li>It has also been planned to promote groundnut decorticator and motorized weeder for dry land crop in the year 2012-13 under FLD.</li> </ul>
				<b>NABARD AGM</b> <ul style="list-style-type: none"> <li>Soil to market concept has been promoted in Ottapidaram block for Maize farmers and this can adopted by KVK</li> <li></li> </ul>	<ul style="list-style-type: none"> <li>Soil to market concept has been promoted in KVK through FLD programme on Baby corn, Sorghum and Black gram seed production in Vilathikulam, Thoothukudi, Ottapidaram blocks</li> </ul>
				<ul style="list-style-type: none"> <li>KVK can arrange a cluster approach in untapped potential area and NABARD can collaborate to</li> </ul>	<ul style="list-style-type: none"> <li>A proposal has been submitted to NABARD for conducting training</li> </ul>

				provide credit support for producers company	programme for champion farmers on TOT mode
				<b>P.H.ARS.Kovilpatty.</b> <ul style="list-style-type: none"> <li>We should focus on dry land farmer's problem like quality seed production on oil seeds, pulses, minor millets etc.</li> </ul>	<ul style="list-style-type: none"> <li>We are focusing on dry land farmer's problem by quality seed production on pulses /millets etc.</li> </ul>
				<ul style="list-style-type: none"> <li>Minor millets cultivation and consumption has to be encouraged</li> </ul>	<ul style="list-style-type: none"> <li>Minor millets cultivation and consumption was encouraged through conducting training programmes and awareness created for women Self Help Group members</li> </ul>
				<ul style="list-style-type: none"> <li>Promotion of farm mechanization for crop cultivation and ARS has model units which can be utilized.</li> </ul>	<ul style="list-style-type: none"> <li>ARS Mechanical weeder has been included in our FLD programme for this coming year.</li> </ul>
				<b>UTRC Head</b> <ul style="list-style-type: none"> <li>Record the economics of Prosopis pod feed trail.</li> </ul>	<ul style="list-style-type: none"> <li>The nutritive value and the economics for Prosopis pod feed trail has been recorded. The prosopis pod feed can replace wheat bran and bajra in cattle feed.</li> </ul>
				<ul style="list-style-type: none"> <li>KVK can promote rabbit and turkey</li> </ul>	Turkey poult are produced and given to 50 farmers
				<b>Dr.Nagoor meeran</b> <ul style="list-style-type: none"> <li>Promote seed production in Athoor And Srivaigantham.</li> <li></li> </ul>	<ul style="list-style-type: none"> <li>Fish seed production training conducted to Athoor farmers.</li> <li></li> </ul>
				<ul style="list-style-type: none"> <li>Promote Artemia Cultivation for ornamental fish culture farmers in Tuticorin</li> </ul>	<ul style="list-style-type: none"> <li>Artemia cultivation training conducted for salt pan workers</li> </ul>

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				<ul style="list-style-type: none"> <li>Promote integrate fish cultivation in dry land area</li> </ul>	<ul style="list-style-type: none"> <li>Demonstration on composite fish culture has been extended to 56 village ponds.</li> </ul>
				<ul style="list-style-type: none"> <li>Promote hygienic dry fish preparation.</li> </ul>	<ul style="list-style-type: none"> <li>One training programme has been organized for keelavaipar and tharuvaikulam villages.</li> </ul>
				<ul style="list-style-type: none"> <li>Promote inland fish cultivation with help of C.E (Agri .Engn) and fisheries department</li> </ul>	<ul style="list-style-type: none"> <li>We stocked fish fingerlings in four farm ponds constructed by IAM WARM project.</li> </ul>
				<p><b>ADAH</b></p> <ul style="list-style-type: none"> <li>Promote Green Fodder and azolla.</li> </ul>	<ul style="list-style-type: none"> <li>The following seedlings and seeds of green fodder has been distributed to farmers through FLD Programme CO-4, hedge Lucern, Subapul, Glyricidia, CoFS – 29etc</li> </ul>
				<ul style="list-style-type: none"> <li>Promote heifer calf rearing.</li> </ul>	<ul style="list-style-type: none"> <li>The training was organized for 10 farmers on heifer calf rearing</li> </ul>
				<p><b>Mrs.Salini.AD (FISHERIES)</b></p> <ul style="list-style-type: none"> <li>Promote back yard ornamental fish culture for SHG</li> </ul>	Three back yard ornamental fish unit has been established through FLD Programme
				<p><b>Dr.Madan (CMFRI,Tuticorin)</b></p> <ul style="list-style-type: none"> <li>Pearl culture training can be given to farmers.</li> </ul>	<ul style="list-style-type: none"> <li>Discussion was made with CMFRI Thoodhukudi. It has been planned to conduct a training programme for rural youth in this coming year.</li> </ul>

## PART II - DETAILS OF DISTRICT

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

S. No	Farming system/enterprise
1	Dry farming – single crop in a year using NE monsoon , Major crops- chillies, pearl millet, maize, onion, fodder sorghum, sorghum, black gram , green gram, gingelly, sunflower, groundnut, castor, redgram, cotton, tomato, ,Brinjal, cluster bean. Major livestock – goat, sheep, backyard poultry, Cross breed cattle, Non descript cattle.
2	Garden land farming – two or three crops in a year using open or tube well irrigation. Major crops- vegetables, banana, groundnut, flowers, chillies, Drum stick, and cotton. Major livestock- cross bred cattle, goat, backyard poultry
3	Tank fed/ river command area farming – one or two crops in a year. Major crops – Banana and paddy. Major livestock – cross bred cattle, goat, backyard poultry
4.	Coastal region – Marine fishing, goat rearing ,salt pan workers

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

S. No	Agro-climatic Zone	Characteristics
01	Southern zone	The topography of the zone is undulating. This zone lies on the rain shadow area of the Western Ghats. The mean annual rainfall is 850mm with a contribution about 470mm from North East monsoon. The soil of this region falls under major groups viz., black, red, alluvial and lateritic. saline coastal alluvial soils are also present in the coastal belt. In black soil only one crop, either cotton or sorghum is raised. Direct seeded rice is cultivated under rain fed condition. On red soil, groundnut crop is raised. Under garden land conditions, Bajra and chillies form the major crops.

S. No	Agro ecological situation	Characteristics
01.	Hot semiarid eco region ( H <sub>1</sub> D <sub>2</sub> )	Hot and dry summers and mild winters with a mean annual rainfall of 600 to 1000mm and a length of growing period of 90-150 days in a year. Soil type- red loamy soil, Rain fed cultivation is the traditional practice with crops like millets, pulses, and oilseeds under irrigated conditions cotton, sugarcane and rice are the major crops . Severity of the soil erosion and drought due to poor moisture holding capacity of soil are the major constraints.
	Hot subhumid to semiarid eco region with coastal alluvium derived soil ( S <sub>7</sub> CD <sub>2-5</sub> )	Crop growth period 90-210 + days, coastal alluvium soil type

### 2.3 Soil type/s

S. No	Soil type	Characteristics
01	Red loam	The red colour is due to the presence of various oxides of iron. They are poor in fertility, low base exchange capacity, and deficient in organic matter. The clay mineral is mainly kaolinite. The texture of the soil varies from loam to silt clay and clay loam. The pH is around neutral or slightly acidic. Some soils, due to lime bearing feldspar may have a higher pH range of 8.0.
02	Lateritic soil	Yellowish-red colour soils derived from laterites which contain a large proportion of primary kaolinite clay minerals. They exhibit plasticity, cohesion, shrinkage, and expansion and base saturation qualities to a small extent. They have poor water retention. The soils have a fairly high organic matter content but low level of lime and magnesia and are generally deficient in phosphorus and potassium. The pH of laterite soils is on the acidic side due to lack of lime and magnesia.



03	Black soil	They have a characteristic dark colour, varying from dark brown to deep black. They are formed by the weathering of trap rocks. These soils have a clay percentage ranging from 40-60%. The composition of clay is chiefly of the montmorillonite group and thus shows swelling and shrinking. The pH varies from 7.5 – 8.5.
04	Sandy coastal alluvial	These are sandy and deep but lack in profile development. Salinity is no problem due to the water table being low and thus having free drainage. These sandy stretches are put under coconut and cashew plantations.
05	Red sandy soil	These are derived from granites, graniloid, gneisses, quartzites and sand stones. The colours are due to red haematite and yellow limonite. Characteristic clay minerals are mainly kaolinitic and illitic types, with smaller amounts of montmorillonite, Base Exchange capacity is from 5 to 25 meq per 100 gm of soil and pH generally on the acidic side, ranging from pH 4.5-6.5

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

S. No	Crop	Area (ha)	Production (Metric tons)	Productivity (kg /ha)	% to the total area sown
1.	<b>A. FOOD GRAINS:</b>				
	<b>a) CEREALS &amp; MILLETS</b>				
	Paddy	20007	96614	4829	10.49
	Sorghum	8959	18097	2020	4.70
	Pearlmillet	9390	18442	1964	4.92
	<b>b) PULSES</b>				
	Blackgram	37924	16231	428	19.88
	Greengram	35410	10871	307	18.56
2	<b>B. FIBRE</b>				
	Cotton	3634	3923 (in bales)	1.08 (in bales)	2.06
3.	<b>C. OIL SEEDS</b>				
	Groundnut	517	673	1301	0.27
	Gingelly	1120	420	375	0.59
	Sunflower	1254	528	421	0.66
4.	<b>D. OTHER CROPS</b>				
	Chillies	11664	4537	389	6.11

Source: District Statistical hand book of Thoothukudi,2010-11 (Latest Public citation)

#### 2.5. Weather data-2010-11

Months	Temperature		Humidity	
	Maximum	Minimum	Maximum	Minimum
June-2010	34.7	28.9	82	53
July	34.6	28.4	83	56
August	34.7	28.4	84	55
September	33.2	27.5	89	63
October	33.3	27.6	89	62
November	30.0	26.5	93	78
December	28.8	24.5	93	75
January-2011	28.9	24.1	92	71
February	30.1	25.2	92	70
March	31.9	26.2	92	69

## Weather data-Rainfall 2011-12

Months	Rain fall(mm)
April 2011	16.92
May	34.84
June	3.48
July	6.86
August	24.16
September	51.25
October	116.87
November	307.42
December	127.13
January-2012	7.71
February	5.55
March	35.83
Total	738.02

Source: 1. Scientific officer, Meterological Observatory, Tuticorin post trust (Temperature and Humidity)  
2. Joint Director of Agriculture ,Thoothukudi ( for rainfall )

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

Category	Population	Production	Productivity
<b>Total Cattle</b>	109933		
<b>Sheep</b>	246238		
<b>Goats</b>	220018		
<b>Pigs</b>	2621		
<b>Rabbits</b>	NA		
<b>Total Poultry</b>	252233		

Source: Regional Joint Director of Animal Husbandry. Thoothukudi

Category	Area	Production	Productivity
Fish			
<i>Marine</i>	<b>163.5 km</b>	<b>41050 tonnes</b>	-
<i>Inland</i>			
Prawn	NA	NA	NA
Scampi	NA	NA	NA
Shrimp	NA	NA	NA

Source: Assistant Director of Fisheries ,Thoothukudi

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

## 2.8 Details of Operational area / Villages

Sl. No.	Taluk	Blocks/groups of villages	How long the village is covered under operational area of the KVK (specify the years)	Major crops & enterprises being practiced	Major problems identified	Identified thrust areas
1	Ottapidaram	Pudhupacheri Sevalkulam Pachaiperumalpuram Sankarajapuram S pudhur Jambulingapuram	5	Rice	Poor yield due to Improper utilization of resources,blast stemborer and leaf folder problem	ICPM
				Goat	Contagious diseases like Anthrax,HS,, pox ,and PPR leads to animal death. Reduction of Animal weight due to ecto and endo parasitism	Comprehensive disease control against infectious diseases and ecto and endo parasites
				Back yard poultry rearing	Mortality in birds due to ranikhet disease, Poor performance in birds due to intestinal worm infection, Lack of interest in poultry rearing due to predator problem	Training on the economic importance of backyard poultry Vaccination and deworming for the backyard poultry Introduction of safe country housing models
				Dairy farming		
					Mastitis	Prevention measures for mastitis
					Ill thrift in calves	Control of endo and ecto parasites
					Mortality in cows due to infectious diseases	Vaccination against infectious diseases
2	Ottapidaram	Kuppanapuram Keelamangalam Melamangalam	5	Bhendi	Bhendi –Fruit borer and Yellow vein Mosaic diseases problems	Bio intensive Pest Management (BIPM) & introduction of resistant varieties
				Chilli	Chilli –fruit dropping, Damping off disease, Sucking pests	IDM & Bio intensive Pest Management (BIPM), varietal introduction
				Groundnut	Poor yield due to improper application of nutrients	ICM, Varietal introduction
				Blackgram, Greengram,	B/G grams – Aphid problem during cultivation and Pulse beetle problem during storage	ICM
				Goat	Contagious diseases like Anthrax,HS,, pox ,and PPR leads to animal death. Reduction of Animal weight due to ecto and endo parasitism	Comprehensive disease control against infectious diseases and ecto and endo parasites
				Dairy farming		

					Mastitis	Prevention measures for mastitis
					Ill thrift in calves	Control of endo and ecto parasites
					Mortality in cows due to infectious diseases	Vaccination against infectious diseases
					Lack green fodder availability	Green fodder cultivation
3.	Ottapidaram	Sindhalakattai Kakkarampatti Veppalodai	5		Poor sanitation	Eco sanitary toilet
				Goat	Contagious diseases like Anthrax, HS., pox, and PPR leads to animal death. Reduction of Animal weight due to ecto and endo parasitism	Comprehensive disease control against infectious diseases and ecto and endo parasites
				Back yard poultry rearing	Mortality in birds due to ranikhet disease, Poor performance in birds due to intestinal worm infection, Lack of interest in poultry rearing due to predator problem	Training on the economic importance of backyard poultry Vaccination and deworming for the backyard poultry Introduction of safe country housing models
				Dairy farming		
					Mastitis	Prevention measures for mastitis
					Ill thrift in calves	Control of endo and ecto parasites
					Mortality in cows due to infectious diseases	Vaccination against infectious diseases
4	Vilathikulam	K kumarettiyapuram	9	Cumbu, Tinai, sorghum	Poor marketing of agricultural produce Poor yield due to local varieties, earhead caterpillar in cumbu	Formation of commodity groups Indigenous low cost storage facility promotion
				Blackgram, Greengram	Poor pod setting due to improper appln. Nutrients and pest management, labour scarcity weed management	Pre monsoon sowing in pulses Introduction of Short duration and drought resistant and high yielding varieties in pulses, introduction of dry land weeder
				Chilli	Flower and fruit drops due to improper application of nutrients and pesticides	INM & IPM practices
				Back yard poultry rearing	Mortality in birds due to ranikhet disease, Poor performance in birds due to intestinal worm infection, Lack of interest in poultry rearing due to predator problem	Training on the economic importance of backyard poultry Vaccination and deworming for the backyard poultry Introduction of safe country housing models
				Fisheries	Lack of awareness in fish rearing in village ponds	Composite fish cultivation in village ponds
5	Vilathikulam	Vedapatti Virushampatti Mamunainarpuram	5	Chilli	Chilli – Poor nutrient management	ICPM and varital introduction

		Keelavilathikulam				
		Velidupatti Ayan bommaiyapuram		Cotton	Cotton-Sucking pests problem	IPM
				Onion	Onion-purple blotch	IDM
				Back yard poultry rearing	Mortality in birds due to ranikhet disease, Poor performance in birds due to intestinal worm infection, Lack of interest in poultry rearing due to predator problem	Training on the economic importance of backyard poultry Vaccination and deworming for the backyard poultry Introduction of safe country housing models
				Goat	Contagious diseases like Anthrax,HS., pox ,and PPR leads to animal death. Reduction of Animal weight due to ecto and endo parasitism	Comprehensive disease control against infectious diseases and ecto and endo parasites
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				Dairy farming		
					High cost of concentrate feeding	Feeding prosobis pods as an alternative concentrate feed to reduce the cost of feeding
					Ill thrift in calves	Control of endo and ecto parasites
					Mortality in cows due to infectious diseases	Vaccination against infectious diseases
					Lack of green fodder	Green fodder cultivation
				Fisheries	Lack of awareness in fish rearing in village ponds	Composite fish cultivation in village ponds
6	Vilathikulam	Soorankudi Thangammalpuram Kumarasakkanapuram Veerakanchipuram	5	Blackgram, Greengram	Poor pod setting due to improper appln. Nutrients and pest management, labour scarcity weed management	Pre monsoon sowing in pulses Introduction of Short duration and drought resistant and high yielding varieties in pulses , introduction of dry land weeder
				Back yard poultry rearing	Mortality in birds due to ranikhet disease, Poor performance in birds due to intestinal worm infection, Lack of interest in poultry rearing due to predator problem	Training on the economic importance of backyard poultry Vaccination and deworming for the backyard poultry Introduction of safe country housing models
				Fisheries	Lack of awareness in fish rearing in village ponds	Composite fish cultivation in village ponds
		Sippikulam	2	Goat	Contagious diseases like Anthrax,HS., pox ,and PPR leads to animal death.	Comprehensive disease control against infectious diseases and ecto and endo parasites

					Reduction of Animal weight due to ecto and endo parasitism	
				Back yard poultry rearing	Mortality in birds due to ranikhet disease, Poor performance in birds due to intestinal worm infection, Lack of interest in poultry rearing due to predator problem	Training on the economic importance of backyard poultry Vaccination and deworming for the backyard poultry Introduction of safe country housing models
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					Ill thrift in calves	Control of endo and ecto parasites
					Mortality in cows due to infectious diseases	Vaccination against infectious diseases
					Lack of green fodder	Green fodder cultivation
7	Tuticorin	Varatharajapuram Umarikottai Thattaparai N.Sillukanpatti Thalavaipuram Kallanparambu	7	Green gram Black gram  Chilli  Promotion of kitchen garden and medicinal garden  Goat and Milch animal rearing  Poultry  Women drudgery	<ul style="list-style-type: none"> <li>Moisture stress &amp; poor soil fertility</li> <li>Low yield due to local seeds</li> <li>Flowers and fruit drop</li> <li>Nutritional deficiency in human being</li> <li>Health hazards</li> <li>Poor shelf life of the produce</li> <li>Mortality in kids due to enteritis</li> <li>Lack of awareness on poultry management</li> <li>Increased drudgery of farm women in cooking</li> <li>Improper utilization of agricultural waste</li> <li>Health hazards</li> </ul>	<ul style="list-style-type: none"> <li>Seed hardening</li> <li>Foliar nutrition</li> <li>Introduction of HYV and Short duration varieties</li> <li>Use of hormonal application</li> <li>Promotion of kitchen garden in backyard of house holds</li> <li>Promotion of vegetable preservator</li> <li>Introduction of Sarai cooker</li> </ul>
8		Perurani V.R.Patti Thimmarajapuram Allikulam Andal nagar M. Kootunkadu	6	Jasmine  Marikolundhu Kanagambaram  Paddy  Women drudgery  Goat and Milch animal rearing Poultry	<ul style="list-style-type: none"> <li>Non availability of flower round the year</li> <li>Heavy incidence of wilt</li> <li>Low yield and</li> <li>Increased cost of inputs and labour</li> <li>Increased drudgery of farm women</li> <li>Improper utilization of agricultural waste</li> <li>Health hazards</li> <li>Mortality in kids due to enteritis</li> <li>Lack of awareness on poultry management</li> </ul>	Pruning and INM  IPM  Paddy direct seeding along cono weeder  Introduction of Sarai cooker

9		Korampallam Athimarapatti Kuliankarisal Kootampuli Sawerapuram	4	Paddy  Banana  Rice fallow pulses  All crops	<ul style="list-style-type: none"> <li>• Low production due to imbalance fertilizer application</li> <li>• Poor grain quality and low test weight due to zinc deficiency</li> <li>• Soil salinity</li> <li>• Incidence of stem borer and leaf folder</li> <li>• Labour shortage and increased cost of inputs</li> <li>• Yield level getting reduced due to non application of micro nutrient</li> <li>• Wilt incidence</li> <li>• Cigar end rot in nendran</li> <li>• Low productivity per area</li> <li>• Low yield due to local var</li> <li>• Incidence of YMV</li> <li>• Poor microbial activity in soil and low organic matter</li> <li>• Low price for commodity</li> </ul> <p>Soil and water pollution</p>	<p>Soil test and LCC based fertilizer management</p> <p>Zinc management Introduction of RMD var IPM</p> <p>SRI</p> <p>Foliar application of Micronutrient</p> <p>Precision farming</p> <p>Introduction of short duration HYV IPM</p> <p>Vermicompost and bio fertilizer</p> <ul style="list-style-type: none"> <li>• Formation of commodity groups</li> <li>• Delayed marketing</li> <li>• Organic farming</li> <li>• Biopesticides</li> </ul>
10	Srivaigundam	Singithurai	5	Marine fisheries	Low fish landing	<ul style="list-style-type: none"> <li>• Awareness</li> <li>• Information center</li> <li>• Demonstration</li> </ul>
11	Thiruchendur	Veerapandiapatnam	5	Fisheries	<ul style="list-style-type: none"> <li>• Improper fish drying leading to low value dry fish production</li> </ul>	<ul style="list-style-type: none"> <li>• Club formation</li> <li>• Improved drying technology</li> <li>• Availing loan</li> </ul>
12	Udankudi	Semmarikulam Kalvilai	1	Paddy,	Low yield, pest and disease probm, labour problem	IPM & INM technologies, , Drudgery reduction among farm women
				Banana,	Low yield, pest and disease probm,	IPM & INM technologies,
				coconut	Low yield, pest and disease probm, labour problem	IPM & INM technologies, Drudgery reduction among farm women
				Dairy, goat units	Prevalence of predator	Promotion of backyard

				& poultry	attack and no awareness on vaccination	poultry in cage system Disease control in livestock and poultry Promotion of green fodder cultivation
						•
13	sathankulam	Pannamparai Naganai		Paddy	1.Low yield due to Brown Plant Hopper and Ear head bug attack  2.Low yield due to no awareness on fertilizer management  3.Labour shortage during cropping period	1.Integrated pest management  2.Integrated Nutrient Management  3.Mechanization on weeding, harvesting
				Banana	1.Low yield due to no awareness on nutrient management  2.low yield due to wilt disease and stem weevil	1.Integrated Nutrient Management technologies  2.Pest and disease management
				Coconut	1.Low yield due to Rhinoceros beetle, red palm weevil attack  2.Labour shortage for harvesting	Integrated pest management  Coconut climber for harvesting coconut nuts  Intercropping with coco
				Poultry	1.Prevalence of predator attack  2.Mortality due to Ranikhet disease  3. Low production potential of desi birds	Promotion of backyard poultry in cage system  Promoting vaccination & disease management  Introduction of improved backyard poultry breeds
				Cattle	Loss in milk production due to Mastitis Incidence Drudgery faced by woman while milking of animals like back pain, knee pain etc	Disease prevention and management  Drudgery reduction of farm women
				Goat	Ill thrift due to ecto and endoparasitism	Disease prevention and management
						•



## 2.9 Priority Thrust Areas

S. No	Thrust area
1.	Promotion of soil test based nutrient management
2.	Improvement of soil fertility through sustainable practices
3.	Promotion of ICM practices and latest high yielding varieties for major crops like Paddy, Banana, Chilli, Maize, Blackgram, Green gram, Tomato, Onion, and Cotton
4.	Promotion of ecological pest control measures and organic farming techniques
5.	Promotion of Bio fertilizers and Vermicompost usage
6.	Promoting Tree planting in wastelands and in the backyards
7.	Ensuring nutritional security of farm women through Kitchen gardening, storage and healthy cooking habits
8.	Promotion of value added product preparation from prosopis juliflora , milk ,fishes ,banana ,and minor millets
9.	Promotion of alternative poultry farming , improved backyard poultry breeds, and artificial incubation of eggs.
10.	Promotion of comprehensive disease control measures in livestock
11.	Promotion of feeding and breeding management in cattle and goats
12.	Promotion of inland freshwater fish cultivation in village ponds

## PART III - TECHNICAL ACHIEVEMENTS

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

OFT				FLD			
1		2		2		2	
Number of OFTs		Number of farmers		Number of FLDs		Number of farmers	
Targets	Achievement	Targets	Achievement	Targets	Achievement	Targets	Achievement
5	5	45	50	17	17	163	184

Training				Extension Programmes			
3		4		4		4	
Number of Courses		Number of Participants		Number of Programmes		Number of participants	
Targets	Achievement	Targets	Achievement	Targets	Achievement	Targets	Achievement
200	217	3000	3861	850	1144	10000	15251

Seed Production (Qtl.)		Planting materials (Nos.)	
5		6	
Target	Achievement	Target	Achievement
30.0	31.7	70000	77553
Livestock, poultry strains and fingerlings (No.)		Bio-products (Kg)	
7		8	
Target	Achievement	Target	Achievement
11070	11395	3000	3660

**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 (no.)	
1.	Improvement of soil fertility through sustainable practices	Banana	Low organic carbon content in soil Reduced yield in banana due to non application of agricultural waste as manure and Degradation of soil quality Poor water holding capacity.	Assessing the utility of enriched biocharcoal soil sinking for improving the soil quality and yield in Banana		8	2	0	54	0				153

2.	Promotion of ICM practices and latest high yielding varieties for major crops like Paddy, Banana, Chilli, Maize, Blackgram, Green gram, Tomato, Onion, and Cotton	Banana	Low organic carbon content in soil Reduced yield in banana due to non application of agricultural waste as manure and Degradation of soil quality Poor water holding capacity.		ICMP in banana	4	2	1	55	0			154
3.	Promotion of ICM practices and latest high yielding varieties for major crops like Paddy, Banana, Chilli, Maize, Blackgram, Green gram, Tomato, Onion, and Cotton	Tomato	1. Leaf curl virus infection 2. Poor nursery practices  3. PKM1, the other ruling variety is susceptible to leaf curl virus and give only 25-30 t/ha	Assessment of suitable variety for leaf curl disease resistance and high yield with COTH 2 Tomato		4	2	0	53	2kg	-	-	153

4.	Promotion of ICM practices and latest high yielding varieties for major crops like Paddy, Banana, Chilli, Maize, Blackgram, Green gram, Tomato, Onion, and Cotton	Bhendi	1. Lower productivity, 2. YVMV infection, 3. High cost of cultivation		Introduction of COBh(H) 1 Bhendi	7							152
5.	Promotion of ICM practices and latest high yielding varieties for major crops like Paddy, Banana, Chilli, Maize, Blackgram, Green gram, Tomato, Onion, and Cotton	Chilli	Lack of knowledge on plant protection measures. Poor yield due to fruit borer incidence Poor market price due to poor keeping quality		Promoting KKM-1 chilli high yielding variety	5							153

6.	Promotion of ICM practices and latest high yielding varieties for major crops like Paddy, Banana, Chilli, Maize, Blackgram, Green gram, Tomato, Onion, and Cotton	Onion	Cultivation of low yielding unnamed varieties -Thrips and cutworm pest attack -Blight disease incidence -High cost of cultivation		Introduction of small onion seed setting variety	7	2	0	25	8kg			153
7.	Promotion of Inter cropping	Coconut	Low yield in coconut per unit area Under utilization of the land		Multitier inter cropping system in coconut with cocoa, banana	7	2	1	12	1800 plant			153

8.	Promotion of ICM practices and latest high yielding varieties for major crops like Paddy, Banana, Chilli, Maize, Blackgram, Green gram, Tomato, Onion, and Cotton	Paddy	Low yield due to lack of knowledge of fertilizer management		Integrated Nutrient Management on Paddy	9	2	1	24	300 kg			154
9.	Promotion of ICM practices and latest high yielding varieties for major crops like Paddy, Banana, Chilli, Maize, Blackgram, Green gram, Tomato, Onion, and Cotton	Black Gram	Drought for pulses Lower yield caused by drought	Assessment of performance of foliar application of methyl bacterium for drought tolerance in pulses		9	2	1	32	50 kg			152

10	Promotion of ICM practices and latest high yielding varieties for major crops like Paddy, Banana, Chilli, Maize, Blackgram, Green gram, Tomato, Onion, and Cotton	Black Gram	Drought for pulses Lower yield caused by drought		Participatory method of seed production for vamban -5 varieties	8	2	1	36	100kg			154
11	Promotion of feeding and breeding management in cattle and goats	Dairy cows	1. High cost of feeding,	Inclusion of Prosopis juliflora pod flour as an alternative concentrate feed for dairy cows to bring down the cost of concentrate feeding		7	2	0	25	0			152

12	Promotion of feeding and breeding management in cattle and goats	Fodder	Non availability of round the year quality green fodder results in feeding only the dry fodder ( costlier – one bundle of 10 kg fodder is sold @ Rs. 27)		Multi tier fodder cultivation to get round the year green fodder for livestock	6	1	1	54	0	60070		150
13	Promotion of comprehensive disease control measures in livestock	Dairy cattle	Delay in appearance of oestrus after parturition results in increased intercalving interval and thereby increases the production cost, Mastitis incidence decreases the milk yield	Assessing the Role of different mineral mixtures with or without vitamins in Post partum anoestrus management in crossbred cows	Clean milk production in dairy cattle	10	1	1	24	0	0		0



14	Promotion of comprehensive disease control measures in livestock	Goat	1. mortality in goats due to infectious disease like HS, Anthrax, PPR, ET 2. mortality in goats due to liverfluke and other helminthiosis 3. poor weight gain due to tick infestation		Comprehensive Disease control measures in goats	8	1	1	39			46	0
15	Ensuring nutritional security of farm women through Kitchen gardening, storage and healthy cooking habits	Improved cookers	Traditional method of cooking is very drudgery prone and leads to health hazards		Promotion of Sarai cooker	11	1	3	59				0
16	Ensuring nutritional security of farm women through Kitchen gardening, storage and healthy cooking habits	Vegetable	Poor shelf life of the produce. Poor nutritional quality and distress role of vegetables		Promotion of Farmers friendly low cost vegetable preservative	10	1	1	59	1000			154

17	Promotion of value added product preparation from prosopis juliflora , milk ,fishes ,banana ,and minor millets	Maize	Poor yield due to downy mildew disease and stem borer Lack of knowledge on hybrid variety. Labour shortage for de – sheathing maize cobs.		Promotion of baby corn cultivation for value added maize products preparation	8	1	1	14	50 kg			154
18	Promotion of value added product preparation from prosopis juliflora , milk ,fishes ,banana ,and minor millets	Sorghum	Lack of awareness on value addition to sorghum		Introduction of Sorghum CO(S) 30 for value added product preparation	8	1	0	24	100kg			152



### 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			
				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
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	Tomato –COTH-2	TNAU	Tomato	1		1		10															
	Arka Ananya	IIHR	Tomato	1		1		10															
02	Bhendi variety – CO-Bh-1	TNAU	Bhendi		1	2						5	5			12		12		12	0	12	0
03	Prosopis pod flour as an alternative concentrate feed ingredient	CAZRI, Jodhpur	Dairy cattle	1		2	Exhibition-1									25	12	6	4	212	217	58	62
04	Composite fish culture in village ponds with stunted fingerlings	TANUVAS	Fish		1	24	Exhibition, film show-1					5	3	9	7	12	8	19	25	124	65	28	60
05	Ecological fruity fly control in Moringa	TNAU	Moringa													6	12	18	12				
06	Ranikhet disease vaccine- Lasota	TANUVAS	Poultry			4	Exhibition, - 1 film show									48	24	31	19				
07	Ranikhet disease vaccine- RDVK	TANUVAS	Poultry			4	Vet.camp-6									48	24	31	19				
08	Ranikhet disease vaccine- Oral pellet vaccine	TANUVAS	Poultry			4										48	24	31	19				
09	Baby corn maize cultivation	DMR	Maize		1	4										42	168	25	123				
10	Sorghum Co S -30 cultivation	TNAU	Sorghum		1	4										25	36	19	27				
11	Mineral mixture feeding to enhance fertility in cattle	TANUVAS	Dairy cattle	1		2	Exhibition-1	10								28							
12	Post milking teat dipping with antiseptics	TANUVAS	Dairy cattle		1	4	Exhibition-1					10				32							
13	Enriched biochar soil sinking	International Biochar research	Banana	1		4		5		5						10	14	12	8				
14	ICM in banana	TNAU, IIHR, NRC banana	Banana		1	4						10				19	17	12	10				
15	Comprehensive disease control in goats	TANUVAS	Goat		1	9	Veterinary camp-49					15	15	15	15	34	48	24	22				
16	Chilli variety – KKM-1	TNAU	Chilli		1	2						6		4		15	18	19	10				

17	Low cost efficient vegetable preservator	CRIDA	Vegetable preservation		1	4	Exhibition,						4		2	24	55	22	56					
18	Improved charcoal cooker Sarai cooker	ICMR	Charcoal cooker		1	4	Exposure visit, field day						6		4	15	65	12	66					
19	Improved back yard poultry breed – Vanaraja,	PDOP, Hyderabad	Backyard poultry				Exposure visit, exhibition, field day					5	10	5	5	150	210	45	80					
20	Improved back yard poultry breed – NDC-1	TANUVAS	Backyard poultry		1	4							5		5	45	26	28	16					
21	Improved Japanese quail breed – nandanam III	TANUVAS	Japanese Quail			4	Exhibition,									25	5	22	6					
22	Cage system of backyard poultry rearing under semi intensive system	TANUVAS	Backyard poultry		1	6	Exhibition,									25	21	35	20					
23	Homestead low cost incubator for hatching backyard poultry eggs	TANUVAS	Backyard poultry hatchery		1	6	Exhibition,						6	4	4	3	150	210	45	80				
24	Small onion seed variety Co(ON)-5	TNAU	Onion		1	2							6	4			15	16						
25	Green fodder- CN hybrid CO-4	TNAU	Green fodder		1	2	Field day, exhibition						8		2		12	10	6	6				
26	Green fodder – hedge lucerne	TNAU	Green fodder			2							8		2		12	10	6	6				
27	Green fodder – STYLO	ICAR	Green fodder			2	Film show										30	30	20	20				
28	Green fodder- CoFS 29	TNAU	Green fodder			2	Field day -2										30	30	20	20				
29	Black gram drought and YMV resistant variety	TNAU	Blackgram		1	3	Field day -2						10	5			30	15	10	10				
30	Methyl bacterium seed treatment for Drought tolerance	TNAU	Blackgram	1		2		5	5								30	15	10	10				

## **PART IV - On Farm Trial**

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

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

### **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
Evaluation of Breeds						
Nutrition Management						
Disease of Management						
Value Addition						
Production and Management	1					
Feed and Fodder	1					
Small Scale income generating enterprises						
<b>TOTAL</b>	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					
Varietal Evaluation	Tomato	PKM-1,COth-2,ArkaAnanya	10	10	1.2
Integrated Pest Management					
Integrated Crop Management	Black gram	Methylobacterium seed treatment and foliar application to enhance the drought tolerance	10	10	4
Integrated Disease Management					
Small Scale Income Generation Enterprises					
Weed Management					
Resource Conservation Technology	Banana	Enriched biochar soil application	10	10	2
Farm Machineries					
Integrated Farming System					
Seed / Plant production					
Value addition					
Drudgery Reduction					
Storage Technique					
Mushroom cultivation					
<b>Total</b>			30	30	7.2

##### 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
Evaluation of breeds				
Nutrition management	Dairy cattle	Assessing utility of prosobis juliflora pod flour as an cheap alternative concentrate feed ingredient	10	10
Disease management				
Value addition				
Production and management	Dairy cattle	Assessing the utility of different mineral mixtures to prevent post partum anoestrus and delayed onset of oestrus	10	10
Feed and fodder				
Small scale income generating enterprises				
<b>Total</b>			20	20

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

-NIL



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

##### Results of On Farm Trial

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
Tomato	Irrigated	Low yield Poor cropping pattern	Assessing the tomato varieties for pest and disease resistance and high yield	10	PKM-1	No of fruit setting in the plant No of infected plants / unit area	28 1/sq.m	PKM -1 is susceptible for leaf curl virus infection during vegetative stage results in reduced yield	The shelf life of the produce is high than other varieties	Nil	
					COTH-2	No of fruit setting in the plant No of infected plants / unit area	46 nil	Healthy seedlings are produced with the usage of portray Due to high yielding variety more fruit setting is observed Stalking should be provided for effective yield.	Nice red colour for easy marketing	Nil	
					Arka Ananya	No of fruit setting in the plant No of infected plants / unit area	42 nil	Healthy seedlings are produced with the usage of portray Due to high yielding variety more fruit setting is observed	Nice red colour for easy marketing	Nil	
Black gram	Dry land farming	Drought for pulses Lower yield caused by drought	Assessment of performance of foliar application of methyl bacterium for drought tolerance in pulses	10	2% DAP foliar application	No of pods / plants No of seed / pods	25.2 5.4	During the last season 2011 – 2012 there is no drought to assess the crop result	Not able to assess the drought during the crop season	Nil	
					methyl bacterium foliar spray ( pre flowering post flowering )	No of pods / plants No of seed / pods	25.4 5.5	During the last season 2011 – 2012 there is no drought to assess the crop result	Not able to assess the drought during the crop season		
Banana	Irrigated	Poor soil fertility Low bunch weight and low yield	Assessing the utility of enriched bio char soil sinking for improving the soil fertility and yield in banana	10	Soil application rice hull ash @ 2kg / sucker	No of fingers /hand Bunch weight Microbial count	15.4 15.5 1.5 X10 <sup>8</sup>	Improvement in the water holding capacity reduced the requirement of number of irrigations			

					Soil application of enriched bio char @ 2kg / sucker	No of fingers /hand Bunch weight Microbial count	17.4 20.5 4.2 X 10 <sup>8</sup>	Improvement in the water holding capacity reduced the requirement of number of irrigations  Increase in the number of fingers and bunch weight and there by higher yield	Less irrigation is enough for the crop Usage of less chemical fertilizer Increase in the bunch weight and there by higher yield than the T1		
Dairy cows	Semi intensive system of rearing	High cost of concentrate feeding reduces the profit margin in dairy farming	Assessing he utility of prosobis juliflora pod flour as an alternate concentrate feed in dairy cattle	10	Grazing + green fodder + concentrate feeding	Milk yield Cost of concentrate feed/kg	11.5 lit/day 14.5				
					Grazing + green fodder + concentrate feed (replacing upto 1kg of wheat bran or pearl millet in the daily ration )	Milk yield Cost of concentrate feed /kg	11.5 lit/day 12.5	Prosobis juliflora pod flour safely replaces wheat bran or pearl millet in concentrate feed in dairy cattle ration upto one kg/day without affecting the milk yield and there by reduces the daily feed cost by Rs.2 per cattle.  Prosobis pod flour grinding and transport cost can be reduced by establishing grinder mill in the locality were the pods are collected	Prosobis pod flour gives good flavor to the concentrate feed and stimulates the cattle to eat the concentrate feed without waste		
Dairy cows	Semi intensive system of	Delayed on set of first heat after calving due to mineral and	Assessing the utility if different mineral mixtures	10	Grazing + concentrate feeding + green fodder	1)Time required for first heat from calving	141 days	Inter calving period was very high			

	rearing	vitamin deficiency results in increased intercalving period and infertility in dairy cows				2) No. of inseminations required for pregnancy 3) Intercalving period 4) percentage of animals become pregnant	4.85 585 days 85 %				
				10	Grazing + green fodder + mineral mixture	1) Time required for first heat from calving 2) No. of inseminations required for pregnancy 3) Inter calving period 4) percentage of animals become pregnant	109.8 days 3.6 465.25 days 100 %	it is a very useful technology to reduce the inter calving period in cattle, but still could not able to achieve one calf a year target	Some of the cows refused to eat the concentrate feed topped with Mineral mixture may be because of the metallic flavor		
				10	Grazing + green fodder + mineral mixture fortified with Vitamins	1) Time required for first heat from calving 2) No. of inseminations required for pregnancy 3) Intercalving period 4) percentage of animals become pregnant	85.2 days 2.5 421.5 days 100 %	it is a very useful technology to reduce the inter calving period in cattle <b>Very promising technology to achieve one calf a year target</b>	Nil		

Contd..

Technology Assessed	Source of Technology	Production	Please give the unit (kg/ha, t/ha, lit/animal, nuts/palm, nuts/palm/year)	Net Return (Profit) in Rs. / unit	BC Ratio
13	14	15	16	17	18
PKM-1	TNAU	36.2	t/ha	1.2lakhs/ha	1.8
CO(TH)-1	TNAU	50.5	t/ha	1.92lakhs/ha	2.31
Arka Ananya	IIHR	43.2	t/ha	1.6lakhs/ha	2.28

2% DAP foliar application	TNAU	750	Kg / ha	16000/ha	2.6
methyl bacterium foliar spray ( pre flowering post flowering )	TNAU	750	Kg / ha	16000/ha	2.6
Soil application rice hull ash @ 2kg / sucker	- Farmers ITK	43.5	t/ha	2.0lakhs/ha	4.09
Soil application of enriched bio char @ 2kg / sucker	International Biochar Research Initiatives	51.25	t/ha	2.2lakhs/ha	5.07
Grazing + concentrate feeding	TANUVAS	11.5	Lit/cow/day	13200/cow	1.43
Grazing + concentrate feed (replacing upto 1kg of wheat bran or pearl millet in the daily ration )	CAZRI,Jodhpur	11.5	Lit/cow/day	13800/cow	1.51
Grazing + concentrate feeding + green fodder	Farmers practice	2400	Lit/calving/cow	12800/cow	1.25
Grazing + green fodder + mineral mixture	TANUVAS	2650	Lit/calving/cow	15600/cow	1.43
Grazing + green fodder + mineral mixture fortified with Vitamins	TANUVAS	2850	Lit/calving/cow	18400/cow	1.52

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

<b>1</b>	<b>Title of Technology Assessed</b>	Assessing the utility of enriched bio char soil sinking for improving the soil fertility and yield in banana
	Problem Definition	Poor soil fertility and water holding capacities Low bunch weight and low yield
	Details of technologies selected for assessment	Soil application of enriched bio char @ 2kg / sucker
	Source of technology	International biochar initiatives
	Production system and thematic area	Irrigated , resource conservation agriculture
	Performance of the Technology with performance indicators	
	Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques	Improvement in the water holding capacity and soil fertility is higher than the T1 Increase in the bunch weight and there by higher yield
	Final recommendation for micro level situation	Enriched biochar soil application improves the soil fertility and physical parameters and there by improves the yield
	Constraints identified and feedback for research	Nil
	Process of farmers participation and their reaction	

2	<b>Title of Technology Assessed</b>	Assessment of performance of foliar application of methyl bacterium for drought tolerance in pulses
	Problem Definition	Lower yield caused by drought in pulses
	Details of technologies selected for assessment	methylo bacterium seed treatment methylo bacterium foliar spray( pre flowering post flowering )
	Source of technology	TNAU
	Production system and thematic area	Dryland farming, ICM
	Performance of the Technology with performance indicators	During the last season 2011 – 2012 there is no drought to assess the crop result
	Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques	
	Final recommendation for micro level situation	
	Constraints identified and feedback for research	Not able to assess the drought during the crop season
	Process of farmers participation and their reaction	

3	<b>Title of Technology Assessed</b>	Assessing the tomato varieties for pest and disease resistance and high yield			
	Problem Definition	Low yield due to high pest disease attack and Poor cropping pattern			
	Details of technologies selected for assessment	COTH-1 and ArkaAnanya			
	Source of technology	TNAU and IIHR			
	Production system and thematic area	Irrigated , Varietal evaluation			
	Performance of the Technology with performance indicators		PKM-1	COTH-2	Arka Ananya
		No.of fruit setting /plant	28	46	42
		Infected plant/m <sup>2</sup>	1	nil	nil
		Yield(t)/ha	36.2	50.5	43.2
	Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques				
	Final recommendation for micro level situation	Both COTH-2 and Arka Ananya varieties are resistant to leaf curl virus infection and found equally good for higher net income for the farmers			
	Constraints identified and feedback for research				
	Process of farmers participation and their reaction	Healthy seedlings are produced with the usage of protray Due to high yielding variety more fruit setting is observed			
		Due to usage of high yielding variety the farmers were able to get the high yield. As they practiced integrated pest management they were able to reduce the cost of cultivation Nice red colour for easy marketing			

<b>4</b>	<b>Title of Technology Assessed</b>		Assessing the utility of prosobis juliflora pod flour as an alternate concentrate feed in dairy cattle		
	Problem Definition		High cost of concentrate feeding reduces the profit margin in dairy farming		
	Details of technologies selected for assessment	T1	Grazing + green fodder + concentrate feeding		
		T2	Grazing + green fodder + concentrate feed (replacing upto 1kg of wheat bran or pearl millet in the daily ration )		
	Source of technology		CAZRI, Jodhpur		
	Production system and thematic area		Semi intensive system of rearing		
	Performance of the Technology with performance indicators			T1	T2
			Milk yield in lit/day	11.5	11.5
			Cost of concentrate feed /kg in Rs.	14.8	12.5
			Net return Rs.	13200	13800
			BCR	1.43	1.51
	Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques				
	Final recommendation for micro level situation		<p>Prosobis juliflora pod flour safely replaces wheat bran or pearl millet in concentrate feed in dairy cattle ration upto one kg/day without affecting the milk yield and thereby reduces the daily feed cost by Rs.2 per cattle.</p> <p>Prosobis pod flour grinding and transport cost can be reduced by establishing grinder mill in the locality where the pods are collected</p>		
	Constraints identified and feedback for research		Nil		
	Process of farmers participation and their reaction		Prosobis pod flour gives good flavor to the concentrate feed and stimulates the cattle to eat the concentrate feed without waste		



5	<b>Title of Technology Assessed</b>		Assessing the utility of different mineral mixtures in management of post partum anaestrus in dairy cows			
	Problem Definition		Delayed on set of first heat after calving due to mineral and vitamin deficiency results in increased intercalving period and infertility in dairy cows			
	Details of technologies selected for assessment	T-1	Grazing + concentrate feeding + green fodder			
		T-2	Grazing + green fodder + mineral mixture without vitamins			
		T-3	Grazing + green fodder + mineral mixture fortified with Vitamins			
	Source of technology		TANUVAS			
	Production system and thematic area		Semi intensive system of rearing			
	Performance of the Technology with performance indicators		T-1	T-2	T-3	
		Time required for first heat from calving	141	109.8	85.2	
		No.of inseminations required for pregnancy	4.85	3.6	2.5	
		Intercalving period	585	465.25	421.5	
		percentage of animals become pregnant	85	100	100	
	Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques		it is a very useful technology to reduce the inter calving period in cattle  <b>Very promising technology to achieve one calf a year target</b>			
	Final recommendation for micro level situation		Fortified mineral mixtures contains Vitamin A,D,E in addition to the regular mineral like Ca,P,Cu,Se,Mg,Mn, which is very found to very much helpful to bring the animal into heat faster than feeding plain mineral mixture alone and also improves the conception rate also thereby it is advisable to feed on fortified mineral mixture to the high yielding milking cows			
	Constraints identified and feedback for research		Some of the cows refused to eat the concentrate feed topped with Mineral mixture may be because of the metallic flavor			
	Process of farmers participation and their reaction		Feeding of mineral mixture improves the fertility and general appearance of the animal besides improving the milk yield in cows			

#### 4.D1. Results of Technologies Refined

##### Results of On Farm Trial

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

Contd..

Technology Refined	Source of Technology for Technology Option1 / Justification for modification of assessed Technology Option 1	Production	Please give the unit (kg/ha, t/ha, lit/animal, nuts/palm, nuts/palm/year)	Net Return (Profit) in Rs. / unit	BC Ratio
13		14	15	16	17

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

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

## PART V – FRONTLINE DEMONSTRATIONS

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

Sl. No.	Category	Farming Situation	Season and Year	Crop	Variety/ breed	Hybrid	Thematic area	Technology Demonstrated	Area (ha)		No. of farmers/ demonstration			Reasons for shortfall in achievement
									Proposed	Actual	SC/ST	Others	Total	
	Oilseeds													
	Pulses	Dry land farming	R/S 2011 – 2012	Black gram	Vamban (BG) – 5		Promotion of high yielding new varieties	<ul style="list-style-type: none"> <li>• Resistant variety for YMV disease</li> <li>• Bio fertilizers application</li> <li>• Rhizobium – seed treatment</li> <li>• Targa super (Quizalo ) weedicide application to control weed .</li> <li>• Zinc sulphate basal application</li> <li>• Pulse wonder spray</li> <li>• Monocrotopos spray to control pests.</li> </ul>	5	5	0	15	15	
	Cereals	Irrigated	R/S 2011 – 2012	Paddy	CR – 1009		Saline soil management and saline resistant high yielding varieties	Daincha 20kg /ha @ 50/kg Gypsum 500 kg /ha @ 1.6 / kg Azospirillum – 2 kg / ha Phosphobacteria 2kg g/ha ZnSO <sub>4</sub> – 12.5 kg /ha for blending with urea Seed (CR - 1009) – 85kg/ha	4	4	0	10	10	
	Millet													
	Millet	Dry land farming	R/S 2011- 2012	Sorghum	Co-(S) 30		Demonstration of dual purpose sorghum	<ul style="list-style-type: none"> <li>• Demonstration of sorghum variety Co(S)-30 for value</li> </ul>	10	10	20	5	25	

							varieties	<ul style="list-style-type: none"> <li>addition</li> <li>Biofertilizers soil application</li> <li>Rhizobium-seed treatment</li> <li>Pseudomonas application</li> <li>Atrazine application to control weed</li> </ul>						
	Baby corn	Irrigated	Round the year 2011-2012	Baby corn		G-5414	Popularizing Baby corn variety for value addition	<ul style="list-style-type: none"> <li>Soil test based NPK application</li> <li>Biofertilizers soil application</li> <li>Rhizobium-seed treatment</li> <li>Detassling</li> <li>Post harvest technology and marketing</li> <li>Value added products</li> </ul>	5	5	7	13	20	
	Vegetables													
	Bhendi	Irrigated	Rabi-2012	Bhendi		Co(Bh)-2	Popularizing the Bhendi	<ul style="list-style-type: none"> <li>Soil test based NPK application</li> <li>Biofertilizers soil application</li> <li>Rhizobium-seed treatment</li> <li></li> </ul>						
	Flowers													
	Ornamental													
	Fruit	Irrigated	R/S 2011-2012	Banana	Kozhikudu		ICMP	<ul style="list-style-type: none"> <li>Sulphate of potash – 50 kg / ha</li> <li>Micro nutrient mix (banana) – 5 kg/ha</li> </ul>	2 ha	15	0	15	15	

								<ul style="list-style-type: none"> <li>• Carbendazime – 1 kg /ha</li> <li>• Copper oxy chloride 2.5 kg / ha</li> </ul>						
	Spices and condiments	Irrigated	2011-12 rabi summer	Chilli	KKM-1		ICMP	Seed treatment with pseudomonas Raised bed Nursery Panchakavya application to enhance fruit setting	4	4	5	5	10	
	Commercial													
	Medicinal and aromatic													
	Fodder	Irrigated	Dec- 2010	CN Hybrid	Hedge Lucerne	Co(CN)-4	Promotion of green fodder cultivation	CN Hybrid Co-4 and Hedge Lucerne cultivation and feeding green fodder to livestock	1	1	3	7	10	
	Plantation	Irrigated	R/S 2011-2012	Cocoa	Pharesteero		Multitier system of intercropping in coconut with cocoa	Cocoa intercropping in Coconut plantation	3	3	0	7	7	
	Fibre													
	Dairy	Semi intensive system of rearing	2011-2012	Dairy cattle	Cross bred cattle		Hygienic milk production in cattle	Revolving stool for milking Post milking antiseptic teat dipping	10 units	10	0	10	10	
	Poultry	Semi intensive system of rearing	2011-12	Backyard poultry	Namakkal Desi chicken -1		Promotion of improved backyard poultry rearing	Scientific rearing of improved backyard poultry breed: NDC-1 Cage system of	10	10	5	5	10	



	Sericulture													
	Apiculture													
	Implements													
	Vegetable preservator		2011-2012	Vegetable	Vegetable Preservator (CRIDA Model) 15 kg capacity		Extending the shelf life of vegetables using low cost preservators	Vegetable Preservator (CRIDA Model) 15 kg capacity	5	5	3	2	5	
	Improved cookers		2011-2012	Sarai cooker	Sarai cooker – 12 liters capacity		Ergonomics and low cost fuel cooker	Sarai (Charcoal cooker)	10	10	6	4	10	
	Others (specify)													

### 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	
	Oilseeds											
	Pulses	Dry land farming	R/s 2011-12	Black gram	VBN BG-5		Promotion of high yielding new varieties	<ul style="list-style-type: none"> <li>Resistant variety for YMV disease</li> <li>Bio fertilizers application</li> <li>Rhizobium – seed treatment</li> <li>Targa super (Quizalo ) weedicide application to control weed .</li> <li>Zinc sulphate basal application</li> <li>Pulse wonder spray</li> <li>Monocrotopos spray to control pests.</li> </ul>	69.5	13.2	164.6	Bajra, sorghum,
	Cereals	Irrigated	R/s 2011-12	Paddy	CR 1009		Saline soil management and saline resistant high	Daincha 20kg /ha @ 50/kg	74.3	4.21	75.90	Black gram Paddy

						yielding varieties	Gypsum 500 kg /ha @ 1.6 / kg Azospirillum – 2 kg / ha Phosphobacteria 2g/ha Znso4 – 12.5 kg /ha for blending with urea Seed (CR -1009) – 85kg/ha					
Millets	Dry land farming	R/s 2011-12	Sorghum	Co-s 30		Demonstration of dual purpose sorghum varieties	<ul style="list-style-type: none"> <li>• Demonstration of sorghum variety (Co s-30) for value addition</li> <li>• Biofertilizers soil application</li> <li>• Rhizobium-seed treatment</li> <li>• Pseudomonas application</li> <li>• Atrazine application to control weed</li> </ul>					Bajra, sorghum
Baby corn	Irrigated	All season 2011 – 2012	Baby corn	G – 5414		Popularizing Baby corn variety for value addition	<ul style="list-style-type: none"> <li>• Soil test based NPK application</li> <li>• Biofertilizers soil application</li> <li>• Rhizobium-seed treatment</li> <li>• Detassling</li> <li>• Post harvest technology and marketing</li> <li>• Value added products</li> </ul>					Maize, chillies Vegetable
Vegetables onion	Irrigated	R/s 2010-11	Onion	Co-5		Introduction of high yielding varieties	Small onion seed variety CO-5	76.35	4.24	152.4		Chilli
Vegetables bhendi	Irrigated	R/s 2010-11	bhendi	Co (-bh) -2		Introduction of high yielding varieties	Small bhendi seed variety CO (bh) 2	75.25	4.04	142.8		Chilli
Banana	Irrigated	R/S 2011-2012	Banana	Kozhikudu		Alternate fertilization usage	<ul style="list-style-type: none"> <li>• Sulphate of potash – 50 kg / ha</li> <li>• Micro nutrient mix (banana) – 5 kg/ha</li> <li>• Carbendazime – 1 kg /ha</li> <li>• Copper oxy chloride 2.5 kg / ha</li> </ul>	73.5	4.30.	76.20		Paddy





## 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																			
Pulses	Demonstration on participatory method of seed production	Vamban BG-5		Dry land farming	15	5	8.4	5.2	6.8	5	36	18800	54000	35200	2.8	14120	25000	10880	1.7
Cereals	Demonstration on ICMP in PADDY	CR 1009		Irrigated	10	4	45	35	40	30	33	22000	48000	26000	2.1	20000	36000	16000	1.8
Millets																			
Sorghum	Demonstrating sorghum ( CO S -30 ) variety for value addition	Co S - 30		Dry land farming	25	10	28	20	24	18	33	12000	28800	16800	2.4	10000	18000	8000	1.8
Baby corn	Demonstrating Baby corn variety (G-5414) for value addition		G-5414	Irrigated	20	5	70	60	65	56	16	32000	97500	65500	3.0	25000	67500	42500	2.7
Vegetables	Introduction of small onion	Co (on ) 5		irrigated	10	2	160	120	140	80	75	42000	168000	126000	4.0	30000	96000	66000	3.2
	Introduction of Bhendi variety	Co (Bh) 2		irrigated	10	2	150	120	108	55	96	40000	108000	68000	2.7	30000	55000	25000	1.8
Flowers																			
Ornamental																			
Fruit	Demonstration on ICMP in Banana	Kozhikudu		Irrigated	10	2	750	570	660	450	46.7	98500	494000	395500	5.02	86500	374500	288000	4.33

Spices and condiments	KKM-1 chilli cultivation with ICMP	KKM-1		Irrigated	10	4	28.1	19.9	24.0	17.0	41.17	38515	84000	45485	2.18	32550	59500	26950	1.82
Commercial																			
Medicinal and aromatic																			
Fodder	CO-4 Fodder cultivation, Hedge Lucerne cultivation	Hedge lucerne	CO-4	Irrigated	10	1	395	335	370	325 (CO-3)	9.56	12500	22500	8000	1.86	10500	16700	6200	1.59
Plantation																			
Fibre																			
Others (pl.specify)																			

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

\*\* BCR= GROSS RETURN/GROSS COST

H – Highest Yield, L – Lowest Yield A – Average Yield

**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
<b>foliar spray application</b>		
Pulses – No of weeds/ m2	5 weeds	20 weeds
No of pods /plant	23	15
No of grain / pods	8	6
ICMP- Paddy No of hill / m2	18	18
No of tiller /hill	23	15
No of grain /tiller	340	256

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

Type of livestock	Name of the technology demonstrated	Breed	No. of Demo	No. of Units	Yield (q/ha)				% Increase	*Economics of demonstration (Rs./unit)				*Economics of check (Rs./unit)			
					Demo			Check if any		Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR
					H	L	A										
Dairy																	
Poultry	Promotion of improved backyard poultry rearing	NDC-1	10	10	2.1 kg/bird at 6 <sup>th</sup> month	1.5 kg/bird at 6 <sup>th</sup> month	1.95 kg/bird at 6 <sup>th</sup> month	1.1 kg/bird at 6 <sup>th</sup> month	57.6	520	1070	550	2.1	382	710	328	1.86
					152 eggs/annum	135 eggs/annum	145 eggs/annum	85 eggs/annum	58.6								
Rabbitry																	
Pigerry																	
Sheep and goat	Comprehensive disease control in goats	ND	40	40	15kg at 12 <sup>th</sup> month	12kg at 12 <sup>th</sup> month	13.5kg at 12 <sup>th</sup> month	12.0kg at 12 <sup>th</sup> month	12.5	1250	2800	1600	2.24	1200	2500	1300	2.1
Duckery																	
Others (pl.specify)																	

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

\*\* BCR= GROSS RETURN/GROSS COST

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

Data on other parameters in relation to technology demonstrated		
Parameter with unit	Demo	Check if any
Incidence rate of mortality in chicks due to predator attack	0	75%
Mortality rate in chicks in first 3 months of age due to diseases/stress	15 %	45%
Reduction of percentage of infectious diseases (ET,PPR,HS) in goats	100 %	Not applicable
Occurrence of diseases (ET,PPR,HS) in goats	0%	20%



					Demo			Check if any		Gross Cost	Gross Return	Net Return	**	Gross	Gross	Net	**
					BCR	Cost	Return						Return	BCR			
					H	L	A										
Oyster mushroom																	
Button mushroom																	
Vermicompost																	
Sericulture																	
Apiculture																	
Others (pl.specify)																	

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

\*\* BCR= GROSS RETURN/GROSS COST

H-High L-Low, A-Average

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

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

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

Name of the implement	Cost of the implement in Rs.	Name of the technology demonstrated	No. of Demo	Area covered under demo in ha	Labour requirement in Mandays		% save	Savings in labour (Rs./ha)	*Economics of demonstration (Rs./ha)				*Economics of check (Rs./ha)			
					Demo	Check			Gross cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR
Vegetable preservator (CRIDA – Model) 15 kg capacity	2176/unit	Demonstration of Vegetable preservator (CRIDA – Model) 15 kg capacity	5		1	1	-	-	Not applicable							
Improved charcoal cooker (12 liters)	1600/unit	Demonstration of Sarai cooker (12 liters capacity)	10		1	1	-	-	Not applicable							
Milking revolving stool	900/ unit		10		1	1	-	-	Not applicable							

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

\*\* BCR= GROSS RETURN/GROSS COST

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

Data on other parameters in relation to technology demonstrated		
Parameter with unit	Demo	Local
Shelf life of vegetables	9 days	4 days
Shelf life of fruits	8days	4 days
Shelf life of greens	5 days	2 days
Shelf life of roots and tubers	21 days	10 days
Retention of colour	7 days	4 days
Shrinkage of vegetables	7 days	4 days
<b>Sarai cooker</b>		
Kg. of fuel wood used for one cooking	250g of charcoal	5.2kg of fuel wood
Active Time spent for cooking	20 min	1.2 hrs
Smoke produced during cooking	Nil	Excessive smoke produced
Reduction in fuel wood used for cooking for one meal of 5 member family	250 g of charcoal = 750 g of wood Reduction in % - 60%	2 kg of wood
<b>Milking the cattle using</b>		

<b>revolving stool</b>		
Time required for complete milking in each cattle by the women	3.5 min	5.2 min
Pain felt by number of women in the knee joint during milking	20%	80%



### 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.	Vegetable preservator	Promotion of vegetable preservator	<ul style="list-style-type: none"> <li>• The higher humidity helps in increasing the shelf life of the produce up to 7 to 10 days according to the nature of the vegetables and fruits.</li> <li>• It saves energy prevents nutrient loss.</li> <li>• Colour is retained.</li> <li>• It helps in retaining shrinkage quality of the vegetables.</li> </ul>
2.	Sarai cooker	Demonstration of Sarai cooker (12 liters capacity)	<ul style="list-style-type: none"> <li>• It saves money uses up to 60% less fuel for cooking the same amount of food.</li> <li>• It saves time and effort in paying attention while cooking.</li> <li>• It conserves nutrients through steam cooking.</li> <li>• Easy to use and maintain the cooker.</li> <li>• Retain the natural flavour and taste of traditional cooking without the lingering taste of harmful smoke.</li> <li>• Very little smoke while initiating the improved bio charcoal stove and once ignited no smoke. Hence providing a healthy and clean cooking environment for women and their families.</li> <li>• It is affordable</li> <li>• It is adoptable to support the cooking needs of any family.</li> </ul>
3.	Dairy cows	use of ergonomic revolving stool for milking	<ul style="list-style-type: none"> <li>• Improves the work posture from squatting to sitting.</li> <li>• Provision of wheels makes the movement easy.</li> <li>• Reduces the physiological and muscular costs of milking activity.</li> <li>• Reduces the muscular skeletal problems while performing the activity.</li> </ul>
		post milking antiseptic teat dipping	<ul style="list-style-type: none"> <li>• Post milking antiseptic teat dipping with Mastinil spray solution effectively prevented the incidence of mastitis and kept the teat healthier without cracking due to cold or pox lesions</li> </ul>
	Poultry	Namakkal desi chicken -1	<ul style="list-style-type: none"> <li>• Performs well and needed good protection against cold during cooler months</li> </ul>
		Home stead incubator for hatching eggs	<ul style="list-style-type: none"> <li>• 76% hatchability could be achieved</li> <li>• Chick survival - 90% upto 4 weeks</li> </ul>
4	Paddy	ICMP –Paddy	<ul style="list-style-type: none"> <li>• Improve the soil properties and reduces the saline content</li> <li>• Higher germination for the seed and reduce the pest ,disease and rodents</li> <li>• Higher yields than other varieties</li> </ul>

5	Black gram	Participatory method of seed production for vamban -5 varieties	<ul style="list-style-type: none"> <li>• Reduce the weed intensities</li> <li>• Reduces the labour cost for weeding</li> <li>• More flower and pod incision, quality of seeds</li> <li>• Seed production will give more income to the normal grain purpose blackgram</li> </ul>
6	Sorghum	Demonstrating sorghum ( CO S -30 ) variety for value addition	<ul style="list-style-type: none"> <li>• Higher germination for the seed and no incidence of pest and disease.</li> <li>• Higher grain and fodder yields than other varieties</li> <li>• Drought tolerance and dual purpose varieties</li> </ul>
7	Boby corn	Demonstrating Baby corn variety (G-5414) for value addition	<ul style="list-style-type: none"> <li>• Reduce the pest and disease.</li> <li>• Higher grain and fodder yields than other varieties , dual purpose varieties</li> <li>• Higher nutrient value for this crop</li> <li>• Low cost of cultivation and inputs</li> </ul>
8	Banana	ICMP Banana nadu Variety	<ul style="list-style-type: none"> <li>• Reduce the potasic fertilizer application</li> <li>• Increase the bunch weight</li> <li>• The produce the quality of the banana fruits</li> <li>• Low cost of cultivation</li> </ul>
9	Bhendi	Introduction of new bhendi hybrid varieties-CO BH-1	<ul style="list-style-type: none"> <li>• High yielding varieties</li> <li>• No pest and diseases attack</li> <li>• More income to the farmer</li> </ul>
10	Chilli	Demonstration of High yielding chilly variety KKM-1	<ul style="list-style-type: none"> <li>• High yielding varieties</li> <li>• No pest and diseases attack</li> <li>• More income to the farmer</li> </ul>
11	Onion	Introduction of High yielding variety CO-ON-5	<ul style="list-style-type: none"> <li>• Reduce the cost of seeds</li> <li>• No pest and diseases attack</li> <li>• More income to the farmer</li> <li>• High yielding varieties</li> </ul>
12	Cocoa	Demonstration of Multitier system of intercropping in coconut with cocoa and banana	<ul style="list-style-type: none"> <li>• Good establishment is noted in the first year for coco plants</li> </ul>

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

S. No	Crop / Enterprise	Name of the technology demonstrated	Feed Back
1.	Vegetable preservator	Promotion of vegetable preservator	The shelf life of the produce is observed to be up to one week according to the nature of the vegetables and fruits. It saves energy and prevents nutrient loss. At present due to frequent current failure the zero energy preservator is much helpful for the farm women to store vegetables and fruits in this summer season. Colour is retained. Storage loss is minimized.
2.	Sarai cooker	Demonstration of Sarai cooker (12 liters capacity)	Farm women are very happy to save money on fuel cost. It saves their time and effort in paying attention while cooking. Easy to use and maintain the cooker. During initial stage they found little bit difficult to ignite the fire but after practice they were able to ignite the fire quickly. They experience very healthy, nutritious, tasty and clean cooking environment because of very little smoke.
3.	Milking revolving stool	Hygienic milk production in cattle use of ergonomic revolving stool post milking antibiotic teat dipping filtering the milk with clean muslin cloth	They feel much comfortable to conveniently sit and milk than squatting. At present they have no knee pain. Provision of wheel makes them easy to move. They also use this revolving stool for multi - purpose house hold activities.
4	Paddy	ICMP -Paddy	Improve the soil properties and reduce the saline content, Higher germination for the seed and reduce the pest ,disease and rodents ,Higher yields than other varieties
5	Black gram	Participatory method of seed production for vamban -5 varieties	Reduce the weed intensities Reduces the labour cost for weeding ,More flower and pod incision, quality of seeds ,Seed production will be more income to the normal grain purpose black gram
6	Sorghum	Demonstrating sorghum ( CO S -30 ) variety for value addition	Higher germination for the seed and reduce the pest ,disease .Higher grain and fodder yields than other varieties Drought tolerance and dual purpose varieties
7	Boby corn	Demonstrating Baby corn variety (G-5414) for value addition	Reduce the pest and disease. Higher grain and fodder yields than other varieties , dual purpose varieties Higher nutrient value for this crop Low cost of cultivation and inputs
8	Banana	ICMP Banana nadu Variety	Reduce the cost of cultivation particularly for fertilizer cost will be reduce, The increase the bunch weight and more no of hands in the bunch ,banana fruit color in more shining
9	Bhendi	Introduction of new bhendi hybrid varieties-CO BH-1	Reduce the pest and diseases and organic method of pest control so reduce pesticide cost To identified the particular pest and correct dosage of pesticide
10	Chilli	Demonstration of High yielding chilly variety KKM-1	To get in pest and diseases free chilli plant and reduce the cost of cultivation Usage of pheromone traps and all are organic method of pest management
11	Onion	Introduction of High yielding	Reduce the seed cost and seed will be used in planting material



Redgram																	
Others (pl.specify)																	
<b>Total</b>																	
<b>Vegetable crops</b>																	
Bottle gourd																	
Capsicum																	
Others (pl.specify)																	
<b>Total</b>																	
Cucumber																	
Tomato																	
Brinjal																	
Okra																	
Onion																	
Potato																	
Field bean																	
Others (pl.specify)																	
<b>Total</b>																	
<b>Commercial crops</b>																	
Sugarcane																	
Coconut																	
Others (pl.specify)																	
<b>Total</b>																	
Fodder crops	CO-4 Fodder cultivation,	Co(CN)-4	10	1	395	335	370	325 (CO-3)	9.56	12500	22500	8000	1.86	10500	16700	6200	1.59
Maize (Fodder)																	
Sorghum (Fodder)																	
Others (pl.specify)																	
<b>Total</b>		2	30	6													

H-High L-Low, A-Average

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



Training on Tissue culture Banana										
<b>c) Ornamental Plants</b>										
Nursery Management										
Management of potted plants										
Export potential of ornamental plants										
Propagation techniques of Ornamental Plants										
Others (pl.specify)										
<b>d) Plantation crops</b>										
Production and Management technology										
Processing and value addition										
Others (pl.specify)										
<b>e) Tuber crops</b>										
Production and Management technology										
Processing and value addition										
Others (pl.specify)										
<b>f) Spices</b>										
Production and Management technology										
Processing and value addition										
Others (pl.specify)										
<b>g) Medicinal and Aromatic Plants</b>										
Nursery management										
Production and management technology										
Post harvest technology and value addition										
Others (pl.specify)										
<b>Soil Health and Fertility Management</b>										
Soil fertility management										
Integrated water management										
Integrated nutrient management										
Production and use of organic inputs										
Management of Problematic soils										
Micro nutrient deficiency in crops										
Nutrient use efficiency										
Balanced use of fertilizers										
Soil and water testing										
Others (pl.specify)										
<b>Livestock Production and Management</b>										
Dairy Management										
Poultry Management	1	7	8	15	4	3	7	11	11	22







farmers/youths										
Others (pl.specify)										
<b>Agro-forestry</b>										
Production technologies										
Nursery management										
Integrated Farming Systems										
Others (Pl. specify)										
<b>TOTAL</b>	<b>30</b>	<b>192</b>	<b>195</b>	<b>387</b>	<b>109</b>	<b>107</b>	<b>216</b>	<b>301</b>	<b>302</b>	<b>603</b>















Composite fish culture	6	41	0	41	14	17	31	55	17	72
Freshwater prawn culture										
Shrimp farming										
Pearl culture										
Cold water fisheries										
Fish harvest and processing technology										
Fry and fingerling rearing										
Management of home stead incubator	1	4	2	6	0	0	0	4	2	6
Integrated pest management	2	26	0	26	0	0	0	26	0	26
Psychological and nutritional care for adolescent girls	3	0	15	15	0	28	28	0	43	43
<b>TOTAL</b>	12	70	18	88	14	45	59	84	63	147

**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										
Integrated Pest Management										
Integrated Nutrient management										
Rejuvenation of old orchards										
Protected cultivation technology										
Production and use of organic inputs										
Care and maintenance of farm machinery and implements										
Gender mainstreaming through SHGs										
Formation and Management of SHGs										
Women and Child care										
Low cost and nutrient efficient diet designing										
Group Dynamics and farmers organization										
Information networking among farmers										
Capacity building for ICT application										
Management in farm animals	1	19	4	23	5	2	7	24	6	30
Livestock feed and fodder production										
Household food security	3	0	78	78	0	41	41	0	119	119
Any other (pl.specify) importance of energy saving devices-sarai	5	8	55	63	9	33	42	17	88	105

cooker,enviro fit stove,vegetable preservator										
Training on KVK activities and income generation programmes for self help group members										
<b>Total</b>	9	27	137	164	14	76	90	41	213	254



<b>2</b>	<b>Production and value addition</b>										
2.a.	Fruit Plants										
2.b.	Ornamental plants										
2.c.	Spices crops										
<b>3.</b>	<b>Soil health and fertility management</b>										
	Pest and disease management in Groundnut and Paddy	<b>1</b>	<b>18</b>	<b>12</b>	<b>30</b>	<b>12</b>	<b>8</b>	<b>20</b>	<b>30</b>	<b>20</b>	<b>50</b>
<b>4</b>	<b>Production of Inputs at site</b>										
<b>5</b>	<b>Methods of protective cultivation</b>										
<b>6</b>	<b>Others (pl.specify)</b>										
<b>7</b>	<b>Post harvest technology and value addition</b>										
7.a.	Processing and value addition	<b>1</b>	<b>5</b>	<b>10</b>	<b>15</b>	<b>4</b>	<b>6</b>	<b>10</b>	<b>9</b>	<b>16</b>	<b>25</b>
7.b.	Others (pl.specify)										
<b>8</b>	<b>Farm machinery</b>										
8.a.	Farm machinery, tools and implements										
8.b.	Others (pl.specify)										
<b>9.</b>	<b>Livestock and fisheries</b>										
<b>10</b>	<b>Livestock production and management</b>										
10.a.	Animal Nutrition Management										
10.b.	Animal Disease Management	<b>1</b>	<b>15</b>	<b>10</b>	<b>25</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>15</b>	<b>10</b>	<b>25</b>
10.c.	Fisheries Nutrition										
10.d.	Fisheries Management										
10.e.	Clean milk production and value addition of milk	<b>1</b>	<b>18</b>	<b>12</b>	<b>30</b>	<b>12</b>	<b>8</b>	<b>20</b>	<b>30</b>	<b>20</b>	<b>50</b>
<b>11.</b>	<b>Home Science</b>										
11.a.	Household nutritional security										
11.b.	Economic empowerment of women	<b>2</b>	<b>0</b>	<b>26</b>	<b>26</b>	<b>0</b>	<b>30</b>	<b>30</b>	<b>0</b>	<b>56</b>	<b>56</b>
11.c.	Drudgery reduction of women										
11.d.	Others (pl.specify)										
<b>12</b>	<b>Agricultural Extension</b>										
12.a.	Capacity Building and Group Dynamics										
12.b.	Others (pl.specify)										
	<b>Total</b>	<b>4</b>	<b>23</b>	<b>48</b>	<b>101</b>	<b>28</b>	<b>44</b>	<b>60</b>	<b>39</b>	<b>92</b>	<b>131</b>

### Details of sponsoring agencies involved

**1.ATMA**

**2.Agribusiness department**

**3.Agric.engineering department**

**4.Agriculture department**

**5.Horticulture department**



5.b.	Others (pl.specify)										
	<b>Grand Total</b>	6	66	21	87	23	14	37	89	35	124



Group Conveners meetings										
Mahila Mandals Conveners meetings										
<b>Celebration of important days (specify)</b>										
Women's Day	3	0	2800	2800	0	1715	1715	0	16	16
World Food Day										
Farmers meeting	161	486	490	976	106	112	218	0	0	0
VLWC Meeting										
PLF Meeting	61		818	818	0	471	471	4	18	22
ATMA MEETING	4									
Tree planting										
Machinery Demo										
PRA	2									
Farm field school	20	83	101	184	62	70	132	8	10	18
Guidance & counseling for victims wife										
<b>Total</b>	<b>1146</b>	<b>1998</b>	<b>8095</b>	<b>9960</b>	<b>831</b>	<b>4149</b>	<b>4980</b>	<b>154</b>	<b>169</b>	<b>323</b>

Details of Veterinary campaigns and number of animals and farmers benefited

Sl.no.	Name of the village	Date	Number of farmers benefited	Number of livestock benefited				
				cattle	Sheep and goat	Poultry	others	Total
1.	Kootampuli	5.4.2011	12	0	60	0	0	60
2.	Vedanatham	21.4.2011	28	2	124	0	4	130
3.	Athimarapatti	26.4.2011	36	40	120	120	10	290
4.	Sindalakattai	28.4.2011	22	2	176	3	0	181
5.	Kuppanapuram	10.5.2011	19	15	154	0	0	169
6.	Chandragiri	19.5.2011	8	8	0	0	0	8
7.	Karayanpatti	21.5.2011	22	12	45	0	0	57
8.	Oosimesiapuram	11.6.2011	16	12	115	0	0	127
9.	Aathanoor	17.6.2011	17	1	119	0	1	121
10.	Sevelkulam	24.6.2011	17	13	185	0	0	198
11.	Tirumalaiyapuram	25.6.2011	32	64	82	60	4	210
12.	Kalvilai	9.7.2011	30	87	86	0	0	173
13.	Vedanatham	26.7.2011	29	3	111	0	0	114
14.	Athimarapatti	28.7.2011	28	44	36	70	6	156
15.	Kulaiyankaraisal	29.7.2011	22	26	18	0	0	44



16.	North sillukkanpatti	12.8.2011	32	18	510	150	12	690
17.	Velidupatti	13.8.2011	22	32	163	0	0	195
18.	Sankarajapuram	17.8.2011	23	49	84	0	0	133
19.	Veppalodai	20.8.2011	22	8	94	0	0	102
20.	Tiruvanandapuram	22.8.2011	8	0	100	0	0	100
21.	Sippikulam	23.8.2011	5	17	51	0	0	68
22.	Allikulam	9.9.2011	36	36	186	141	8	371
23.	Aathanoor	15.9.2011	22	3	113	0	0	114
24.	Melakootudankadu	20.9.2011	29	62	36	82	8	188
25.	Kuppanapuram	23.9.2011	17	22	100	0	0	122
26.	Kalvilai	24.9.2011	20	72	31	0	0	103
27.	Sippikulam	27.9.2011	5	54	45	0	0	99
28.	Oosimesiapuram	29.9.2011	11	8	64	0	0	72
29.	Kootampuli	7.10.2011	3	0	36	0	0	36
30.	Kootampuli	30.10.2011	3	0	36	0	0	36
31.	K.P.Thalavaipuram,	22.10.2011	5	0	50	0	0	50
32.	K.P.Thalavaipuram	16.11.2011	11	0	141	0	0	141
33.	kootampuli	20.11.2011	6	0	33	0	0	33
34.	S.Silukkanpatti	22.11.2011	32	75	350	100	10	535
35.	Sevelkulam	24.11.2011	19	18	265	0	0	283
36.	Sevelkulam	14.12.2011	18	13	170			183
37.	Oosemesihapuram	17.12.2011	12	6	121			127
38.	Velidupatti	22.12.2011	19	28	46		3	77
39.	Varthagareddipatti	21.12.2011	40	68	120			188
40.	Sokkalingapuram	20.1.12	5	37	5			42
41.	Vedanatham	21.1.12	18	8	86			94
42.	Tiruvanandapuram	27.1.12	17	25	60			85
43.	Kuppanapuram	28.1.12	26	40	138		1	179
44.	Sokkalingapuram	20.1.12	5	37	5			42
45.	Sankarajapuram	8.2.12	13	14	53			67
46.	Aathanoor	16.2.12	22	14	153			167
47.	Tirumalaiyapuram	21.2.12	27	19	95	15		129
48.	Sillangulam	15.3.12	6	14	9			23
49.	Sivalur	17.3.12	15	18	67			85
50.	Sindalakattai	22.3.12	12	2	25			27
51.	K.P.Thalavaipuram	13.3.12	19	26	165			191
	<b>Total</b>		<b>943</b>	<b>1172</b>	<b>5237</b>	<b>741</b>	<b>67</b>	<b>7215</b>

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

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

<b>Crop category</b>	<b>Name of the crop</b>	<b>Variety</b>	<b>Hybrid</b>	<b>Quantity of seed (qtl)</b>	<b>Value (Rs)</b>	<b>Number of farmers to whom provided</b>
Cereals (crop wise)						
Oilseeds						
Pulses	Black gram	VBN-5		10.40	10400	130
	Black gram	VBN-4		15.0	15000	153
	Green gram	CO-4		5.0	5500	62
Commercial crops						
Vegetables						

Flower crops						
Spices						
Fodder crop seeds						
	Hedgelucerne			0.35	7000	26
	Fodder Sorghum			0.30	6000	28
	Subabul			0.05	800	35
Fiber crops						
Forest Species						
Others (specify)						
Baby corn	Baby corn	G-5414		0.50	9600	36
Sorghum	Sorghum	CO(S)-30		2.0	2500	20
<b>Total</b>				<b>33.6</b>	<b>56800</b>	<b>490</b>

#### 9.B. Production of Planting materials by the KVK

Crop category	Name of the crop	Variety	Hybrid	Number	Value (Rs.)	Number of farmers to whom provided
Fruits	Mango	Banglora		1056	31680	53
		Neelam		1312	39360	100
	Pomaganate			50	1000	12
	Bitter lime			150	3500	25
	Amla	BSR-1		468	14040	300
	Guava	L-49		1200	36000	210
Ornamental plants						
	Thuja			300	3000	265
	Bougainvilla			45	225	30
	Cleodendran			500	5000	82
	Kannagambaram			26	130	16
	Daguma			186	1860	20
	Gundu malligai			164	1640	45
	bedilanthus			253	1265	56
	Hibiscus ordinary			23	230	21
	Hibiscus adduku			34	340	8
	Hibiscus rose			21	210	12
	sandal			324	6480	16
	Pitchi poo			21	210	12
	Badam			18	270	11
	Crotons (acalipah)			1300	13000	240
	Poovarasu			253	2530	210
	Alamonda			21	315	18
	Red Rose			8	80	5
	Durantha green			1300	6500	241
	Duranta white			1800	12600	320
	Cocoa			1800	5400	10
Medicinal and Aromatic						
	Thuthuvalai			35	700	12
	Adathodai			46	920	24
	Sarpaganda			8	160	4
	Gymnema			9	90	6

	Tulsi			30	300	13
	Nanthiavattai			10	200	4
	Vetiver			860	17200	241
	Aloevera			50	500	26
	omavalli			28	560	11
	Curry leaf			200	2000	120
	Pungam			800	16000	456
	Eucaliptus			10	100	6
Fodder crop saplings		CO-4		60000	30000	51
Forest Species						
	Vagai			120	3600	102
	Gulmuhar			250	7500	231
	Casuarina			200	1000	165
	Peoples tree			18	360	8
	Jatropha			10	50	4
	Tamarind			300	6000	162
	Kumil			850	17000	642
	Maruthu			460	9200	420
	Fig			0	0	0
	Gliricidia			600	6000	196
	Ailanthus			26	260	14
<b>Total</b>				<b>77553</b>	<b>306565</b>	<b>5256</b>

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

Bio Products	Name of the bio-product	Quantity Kg	Value (Rs.)	Number of farmers to whom provided
Bio Fertilizers	Azopirillum	550	22000	550
	Phosphobacteria	550	22000	550
	Rhizobium	600	24000	600
Bio-pesticide			0	
Bio-fungicide	Pseudomonas	50	5000	150
	T.viridi	50	5000	150
Bio Agents	Mushroom spawn	60	1800	12
Others (specify)	Vermicompost	1800	18000	250
<b>Total</b>		<b>3660</b>	<b>97800</b>	<b>2262</b>

### 9.D. Production of livestock materials

Particulars of Live stock	Name of the breed	Number	Value (Rs.)	Number of farmers to whom provided
<b>Dairy animals</b>				
Cows				
Buffaloes				
Calves				
Others (Pl. specify)				
<b>Poultry</b>				
Broilers				
Layers				
Duals (broiler and layer)				
Japanese Quail	Nandanam III	1285	25706	345
Turkey		84	12608	26

Emu				
Ducks				
Improved Backyard poultry	Vanaraja	630	37800	256
	Namakkal	100	6000	40
<b>Piggery</b>				
Piglet				
Others (Pl.specify)				
<b>Fisheries</b>				
Fingerlings	Stunted fingerlings	10000	25000	856
Goat	Jamunapari cross	26	95160	13
<b>Total</b>		<b>12125</b>	<b>202274</b>	<b>1536</b>

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

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

(A) KVK News Letter ((Date of start, Periodicity, number of copies distributed etc.) Not published in the reporting period

(B) Literature developed/published Nil

Item	Title	Authors name	Number
Research papers			
Technical reports	Promotion of inland fish cultivation in Thoothukudi district village ponds – A Poster	Mr.S.Manikandan Dr.,v.srinivasan Mr.G.Nagrajan	5
News letters			
Technical bulletins			
Popular articles			
Extension literature	Common infectious Diseases affecting livestock and its control measures	Dr.V.Srinivasan	2500
	Desi chicken rearing technique	Dr.V.Srinivasan	2500
	Improved charcoal cooker	Ms.S.Sumathi	2500
	Vegetable preservator CRIDA MODEL	Ms.S.Sumathi	2500
Others (Pl. specify)			
<b>TOTAL</b>	<b>5</b>		<b>10005</b>

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

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

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

**PROMOTION OF INLAND FISH CULTURE IN THOOTHUKUDI DISTRICT SEASONAL VILLAGE PONDS: THROUGH WATER COMMITTEE PARTICIPATION**

**Introduction**

Aquaculture has been globally recognized as the fastest growing food production sector. Aquaculture also ensures nutritional security, employment opportunity and improves the economic status of the country. The average rain fall of Thoothukudi district in southern Tamilnadu is 655.7 mm which is mainly collected during the north east monsoon period (October to December -410.1 mm).The district has 4152 hectare of seasonal tanks which are mainly used for domestic and live stock animals rearing purpose. If these water resources are utilized for composite fish culture by using extensive or semi intensive or appropriate resource bases through water committee, increased fish production and economic status of village can be expected. During the time of village level field visit and discussion with the village peoples we had indentified the following problems with respect to maintenances of village ponds and the fish cultivation 1.Un-utilization of potential common property water bodies for fish culture 2.Lack of awareness in fish culture technology 3.Non availability of quality fish seeds at correct time 4.Inadequate financial support.

**Materials and methods**

The front line demonstration (FLD) was conducted in seasonal village ponds in the district of Thoothukudi in southern Tamilnadu by Social Change and Development-Krishi Vigyan Kendra (SCAD-KVK) with the support of village water committee members.

**Intervention of SCAD-Krishi vigyan kentra**

- Formation of water committee in fish culture demonstration villages
- Dissemination of knowledge on composite fish culture technology
- Supply of seeds (advanced fry-3.5 to 6 cm/fingerling-7.5 to 10 cm)
- Monitoring and follow up

### **Formation of water committee**

The local community people were motivated to form water committee consisting 10-12 members representing different sections of the village including women, youth and men. They were given with awareness training on fish cultivation, group formation and financial management.

### **Selection of ponds**

Ponds retaining sufficient water for 7-8 months were selected for fish culture activity. The size of selected ponds ranged from 0.5 to 5.0 with 2-3 meter depth (1.5 meter minimum depth). The P<sup>H</sup> of selected ponds ranged between 7.5 and 8.5.

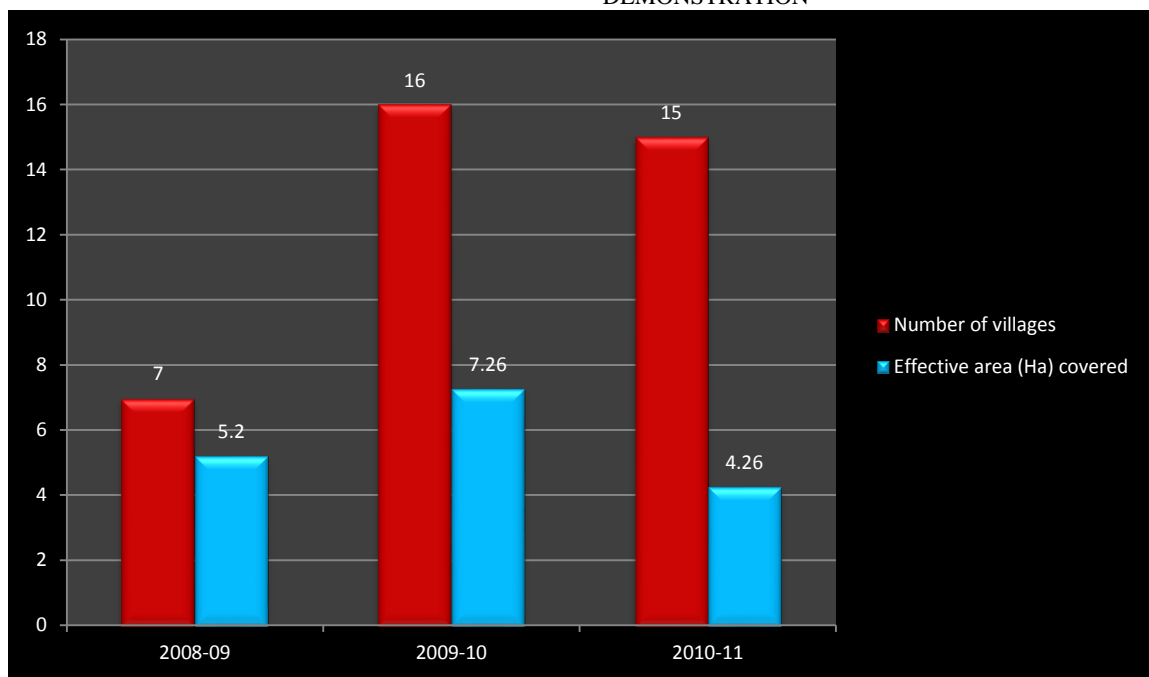
### **Pond Management**

At least 15-20 days waiting period was observed to reduce the water turbidity and increase the primary productivity after the pond was filled with monsoon rain. The goats (500-1000 numbers/day) were allowed normally into ponds for drinking purpose two times daily. The excreta deposited in the pond which helps to increase the primary productivity in pond. The fish seeds were stocked at the rate of 7500 numbers per hectare. Occasionally villagers fed with unconventional feed stuff such as paddy husk, broken black gram and green gram in irregular feeding schedule. Harvest was done before the water level falls below the critical level in seasonal ponds. Local community people were organized on the fish harvest field day after 6-8 months and the fishes are harvested partially or fully by using gill net/drag net/scoop net. Primarily the harvested fishes were sold to local community people at low prices and surplus amount of fishes were sold in the local market at its local market prices.

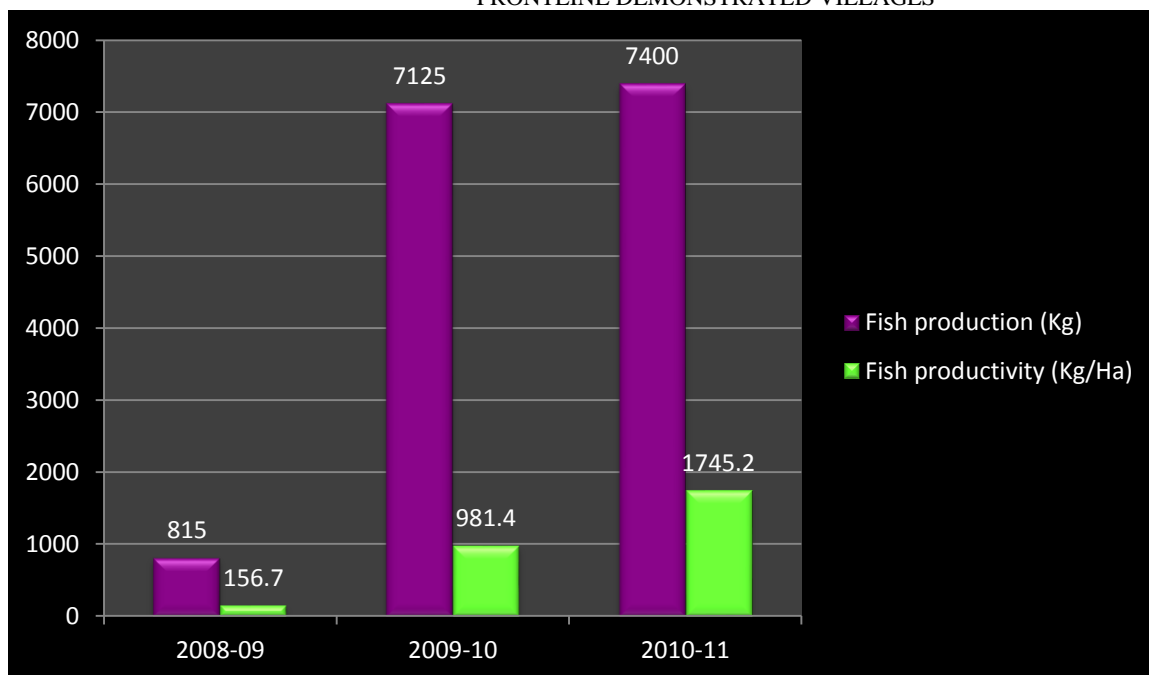
### **Result**

The demonstration was started from 2008-09 in seven village ponds and produced 815 kg of fishes in 5.2 hectare of effective water spread area. During 2009-10 period the demonstration was conducted in sixteen village ponds and produced 7125 kg of fishes in 7.26 hectare of effective water spread area and in 2010-11 period we conducted demonstration in fifteen village ponds and produced 7400 kg of fishes in 4.26 hectare of area. Based on the observation in the demonstration fish productivity were 156.7 kg/ha, 981.4 kg/ha, and 1745.2 kg/ha during 2008-09, 2009-10 and 2010-11 respectively.

NUMBER OF SELECTED VILLAGES AND EFFECTIVE AREA COVERED FOR COMPOSITE FISH CULTURE FRONTLINE DEMONSTRATION



FISH PRODUCTION (Kg) AND FISH PRODUCTIVITY (Kg/Ha) IN COMPOSITE FISH CULTURE FRONTLINE DEMONSTRATED VILLAGES



## Conclusion

This inland fish culture demonstration programme has played significant role in improving the economic status of villages and supply of protein to village community people at low cost. Now the inland fish culture has slowly spreading to the other villages as an entrepreneurial activity and the success achieved by the villagers through water committee has conveyed the message to the neighboring villages. Based on the experience gained, demonstration is being conducted in 56 village ponds during 2012-13 periods.

## Case study

### Comparison of composite fish culture with advanced fry and four month reared fingerling in seasonal village tank

#### Introduction

Soorangudi is village of Thoothukudi district in southern Tamilnadu this village has four hectare of two seasonal ponds which are mainly used for harvesting rain water and domestic purpose. Fish culture is a good venture in these village ponds which provides nutrition and income to the village without much external input and expenditure. During the 2009-10 periods the local community people were motivated by SCAD KVK to form water committee, they were given with awareness training on fish cultivation, group formation and financial management.

2009-10 periods

On 13.01.2010 SCAD KVK stocked 7000 number (Catla-2500, Rohu-2500, Mrigal -1000 and Common carp-1000) of fish seeds in one hectare of pond with support of water committee members. During the stocking time the average seed size of Catla 6-9 cm, Rohu 6-8 cm, Mrigal 6-8 cm and Common carp 3-5 cm these fish seeds were purchased from private fish farm. The  $P^H$  and transparency of water were measured monthly once in this pond. The range of  $P^H$ : 7.6-8.7 and transparency: 27-34. Local community people were organized on the fish harvest field day after 8 months and 1250 kg the fishes were harvested. The average weight of Catla 1.25-1.50 kg, Rohu 1-1.25 kg, Mrigal 1-1.25 kg and Common carp 0.75-1kg

2010-11 periods

On 12.01.2011 SCAD KVK stocked 2500 number (Catla-1000, Rohu-500, Mrigal -500 and Common carp-500) of fish fingerlings in one hectare of pond with support of water committee members. Before stocking of fingerlings they were grown for four months at SCAD KVK nursery pond with stunting method, at the time of stocking the average weight of fingerlings was 50-60 gram. The  $P^H$  and transparency of water were measured monthly once in this pond. The range of  $P^H$ : 7.6-8.7 and transparency: 27-34. Local community people were organized on the fish harvest field day after 7 months and 1200 kg the fishes were harvested. The average weight of Catla 1.25-1.50 kg, Rohu 1-1.25 kg, Mrigal 1-1.25 kg and Common carp 0.75-1kg.

Periods	Effective area (Ha)	Number of stocking	Stocking stage	Culture period	Fish production(Kg)	Production cost (Rs)
2009-10	1.0	7000	Advanced fry	8 months	1250	7000
2010-11	1.0	2500	Fingerling (four months reared)	7 months	1200	5000

#### Conclusion

Based on the observation in the demonstration the fish production were almost equal which were 1250 kg, 1200 kg during 2009-10 and 2010-11 respectively. So we can achieve high fish production with less production cost and less number of stocking in shorter culture period.

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

**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



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

- **Identification of courses for farmers/farm women**
  - Farmers/ Farm women group meeting
  - Individual discussion
  - Village survey
  - SAC meetings
- **Rural Youth**
  - Individual discussion
  - Village survey
  - SAC meetings
- **In service personnel**
  - Discussion with line dept. officials
  - SAC meetings

**10.G. Field activities**

- i. Number of villages adopted -6
- ii. No. of farm families selected - 90
- iii. No. of survey/PRA conducted- 6

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

Status of establishment of Lab :

- 1. Year of establishment : 2005
- 2. List of equipments purchased with amount :

Sl. No	Name of the Equipment	Qty.	Cost
1.	pH meter	1	9850
2.	EC meter	1	9950
3.	Spectrophotometer	1	59500
4.	Flame photometer	1	48000
5.	Precision balance	1	99500
6.	Top pan balance	1	98000
7.	water distillation still	2	98000
8.	Shaker	2	49000
9.	Hot air oven	1	14000
10.	Hot plate with stirrer	1	22000
11.	Kjeldhal digestion and distillation set	2	59000
12.	Nitrogen auto analyzer with digestion block	1	202932
13.	Willie mill	1	26000
Total			795732

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

Details	No. of Samples analyzed	No. of Farmers benefited	No. of Villages	Amount realized (Rs.)
Soil Samples	899	770	339	35735
Water Samples	545	535	278	27205
Plant samples	14	14	14	1400
Manure samples	0	0	0	0
Others (specify)	0	0	0	0
Blood samples	72	72	21	3600
<b>Total</b>	<b>1530</b>	<b>1391</b>	<b>652</b>	<b>67940</b>

**Details of samples analyzed during the 2011-12 :**

Details	No. of Samples analyzed	No. of Farmers benefited	No. of Villages	Amount realized (Rs.)
Soil Samples	152	152	10	7600
Water Samples	12	12	6	600
Plant samples				
Manure samples				
Others (specify)				
Blood samples	12	12	6	600
<b>Total</b>	<b>176</b>	<b>176</b>	<b>22</b>	<b>8800</b>

**10.I. Technology Week celebration**

Nil

**1. J. Interventions on drought mitigation (if the KVK included in this special programme)**  
 - Not included -

**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)
Vaccination of goats against infectious diseases	120	80%	1850/annum	3800/annum
Breeding of milch animals between 60-90 days post calving	80	75%	7000/annum	10000/annum
Vaccinating the backyard poultry against Ranikhet disease	165	85%	600/annum	1200/annum
Deworming the goats	120	90%	1850/annum	3800/annum
Biofertilizer application for crops	60	50%	10000/ha	12000/ha
Kitchen gardening during rainy season	50	85%	250	900
Mineral mixture feeding to the milch animals to avoid production diseases and delayed fertility in cows	35	85%	7000/annum	10000/annum
Tailoring	40	65%	00	1250/month
Foliar application of IIHR mineral mixture to banana	15	80%	40000/acre	45000/acre
Composite fish culture in village ponds	25	80%	3000/annum	8000/annum
Use of certified seeds and importance of quality seeds in improving the yield in blackgram	25	90%	32000/ha	40000/ha
Cultivation of green fodder CoFS 29	25	18	18000/unit	25000/unit
Cultivation of Co(CN)-4 fodder	62	45	18000/unit	25000/unit

NB: Should be based on actual study, questionnaire/group discussion etc. with ex-participants.

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

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

**PART XII - LINKAGES**

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

Name of organization	Nature of linkage
AC & RI, Killikulam	<ul style="list-style-type: none"> <li>• Participated in the SAC meetings and advised us in selecting suitable technologies for demonstration</li> <li>• Supplied KKM -1 chilli seeds for demonstration</li> </ul>
AH Dept, Tuticorin	<ul style="list-style-type: none"> <li>• Supported to conduct animal health campaigns in 28 villages</li> <li>• Collaborated in training the free goat scheme beneficiaries</li> <li>• 35 VAS attended the extension functionaries training conducted at KVK</li> <li>• 75 trainees visited KVK demo units</li> </ul>
Dept.of Horticulture, Tuticorin	<ul style="list-style-type: none"> <li>• 75 farmers visited KVK demo units</li> </ul>
Dept. of Agriculture, Tuticorin	<ul style="list-style-type: none"> <li>• 150 farmers visited KVK demo units</li> </ul>

Dept of Organic Certification, Coimbatore	<ul style="list-style-type: none"> <li>4 farmers were included in organic certification</li> </ul>
Central institute for fodder production and demonstration, Alapati Chennai	<ul style="list-style-type: none"> <li>Supplied 100 mini kits for demonstration of cowpea and stylo crops</li> </ul>
KVK, Kattupakkam	<ul style="list-style-type: none"> <li>Supplied 40 numbers of woner Rat trap</li> </ul>
Veterinary University Training and Research Centre	<ul style="list-style-type: none"> <li>Participated in the SAC meetings and extension functionaries training programme and guided us in formulating the OFT and FLD programmes</li> </ul>
Fisheries college, Thoothukudi	<ul style="list-style-type: none"> <li>Participated in the SAC meetings and extension functionaries training programme and guided us in formulating the OFT and FLD programmes</li> </ul>

NB The nature of linkage should be indicated in terms of joint diagnostic survey, joint implementation, participation in meeting, contribution received for infrastructural development, conducting training programmes and demonstration or any other

## 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.)
Farm school	Jan 2011	ATMA	66000

## 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? No involvement

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

S. No.	Programme	Particulars	No. of programmes attended by KVK staff	No. of programmes Organized by KVK	Other remarks (if any)
01	Meetings	8	8		
02	Research projects				
03	Training programmes	28	20		
04	Demonstrations				
05	Extension Programmes				
	Kisan Mela				
	Technology Week				
	Exposure visit	4	4		
	Exhibition				
	Soil health camps				
	Animal Health Campaigns				
	Others (Pl. specify)				
06	Publications				
	Video Films				
	Books				
	Extension Literature				
	Pamphlets				
	Others (Pl. specify)				
07	Other Activities (Pl. specify)				

	Watershed approach				
	Integrated Farm Development				
	Agripreneurs development				

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

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

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

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

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

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

## 12. G Kisan Mobile Advisory Services

Nil

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

## PART XIII- PERFORMANCE OF INFRASTRUCTURE IN KVK

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

Sl. No.	Demo Unit	Year of establishment	Area (ha)	Details of production			Amount (Rs.)		Remarks
				Variety	Produce	Qty.	Cost of inputs	Gross income	
1	Poultry unit	2010	160sq.m	Vanaraja Namakkal-1	Chicks	730	48365	48800	
					Egg	3120			
				J.quails N-3	Quails	1285	37966	25706	
2	Vermicompost	2006	20sq.m	compost		1800kg	12500	18000	
3	Mushroom	2011	20sq.m	mushroom		25kg	16500	25000	

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

Name of the crop	Date of sowing	Date of harvest	Area (ha)	Details of production			Amount (Rs.)		Remarks
				Variety	Type of Produce	Qty.	Cost of inputs	Gross income	
Cereals									
Spices & Plantation crops									
Coconut		Round the year	0.8	Tall	Nuts	2750	7910	10250	
			3.0	TXD	"	350	9000	4500	
					Tender nuts	620	-	5200	
Fruits									
Mango		April-July	1.0	Bangalore	fruits	950kg	15200	9500	
				Neelam	fruits	520		5200	
Sapota		June – aug	0.4	PKM-1	fruits	150	2500	1500	
CO-4		April – march	0.01	Co-4	Slips	60000	12500	30000	
Tree seedlings			1	Tree seedlings	Seedlings	77533	256200	306565	



**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	South Indian Bank	Tirunelveli	0254	Social change and development	0254 0530 0000 1819	627059002	SIBL 000 0254
	-do-	-do-			0254 0530 0000 1884		
	-do-	-do-			0254 0530 0000 1885		
	-do-	-do-			0254 0530 0000 462		

**14.C. Utilization of funds for the year 2011-12 (Rs. in Lakh)**

S. No.	Particulars	Sanctioned	Released	Expenditure
<b>A. Recurring Contingencies</b>				
1	<b>Pay &amp; Allowances</b>	55		55.1
2	<b>Traveling allowances</b>	1.5		1.49
3	<b>Contingencies</b>			
A	Stationery, telephone, postage and other expenditure on office running, publication of Newsletter and library maintenance (Purchase of News Paper & Magazines)	1.9		1.9
B	POL, repair of vehicles, tractor and equipments	1.5		1.49
C	Meals/refreshment for trainees (ceiling upto Rs.40/day/trainee be maintained)	0.8		0.8
D	Training material (posters, charts, demonstration material including chemicals etc. required for conducting the training)	0.25		0.25
E	Frontline demonstration except oilseeds and pulses (minimum of 30 demonstration in a year)	2.7		2.7
F	Frontline demonstration on special pulses Programme	0.3		0.3
G	On farm testing (on need based, location specific and newly generated information in the major production systems of the area)	0.5		0.5
H	Training of extension functionaries	0.25		0.24
I	Maintenance of buildings	0.25		0.25
J	Library	0.05		0.05
K	Extension activities	0.25		0.25
L	Farmer's field school	0.25		0.25
	<b>TOTAL (A)</b>	<b>65.5</b>		<b>65.57</b>
<b>B. Non-Recurring Contingencies</b>				
1	<b>Works</b>	23.32		23.32
2	<b>Equipments including SWTL &amp; Furniture</b>	0		0
3	<b>Vehicle</b> (Four wheeler/Two wheeler, please specify)	0		0



4	Library (Purchase of assets like books & journals)	0	0
<b>TOTAL (B)</b>		<b>23.32</b>	<b>23.32</b>
<b>C. REVOLVING FUND</b>			
<b>GRAND TOTAL (A+B+C)</b>		<b>88.82</b>	<b>88.89</b>

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

Year	Opening balance as on 1 <sup>st</sup> April	Income during the year	Expenditure during the year	Net balance in hand as on 1 <sup>st</sup> April of each year
April 2009 to March 2010	502423	363450	308657	557216
April 2010 to March 2011	557216	369497	312522	614191
April 2011 to March 2012	614191	425642	516494	523339

#### 15. Details of HRD activities attended by KVK staff during 2011-12

Name of the staff	Designation	Title of the training programme	Institute where attended	Dates
Dr.V.Srinivasan ,	SMS Animal science cum Programme coordinator i/c	Workshop on documenting and scouting rural innovation	TANUVAS, Chennai	21.9.2011
Dr.V.Srinivasan ,	SMS Animal science cum Programme coordinator i/c	QRT workshop	Pondicherry KVK	4.8.2011
A.Murugan	SMS Agronomy	Fodder production training	TANUVAS, Chennai	22and 23.9.2011
S.Sumathi	SMS Home science	Psychology of vision training	SCAD,Tirunelveli	27and 28.9.2011
S.Sumathi	SMS Home science	Psychology of vision Training	SCAD,Tirunelveli	1.10.11
Dr.V.Srinivasan ,	SMS Animal science cum Programme coordinator i/c	convergence of AICRP centre and KVK for effective technology dissemination	ARS,Kovilpatti	28.10.2011
S.Sumathi	SMS Home science	Women: Redefining the course of action towards transformation	ACWW, Madurai	16-18 November 2011
Dr.V.Srinivasan ,	SMS Animal science cum Programme coordinator i/c	KVK National conference	Jabalpur Conducted by ICAR	3-5th Dec.2012
S.Manikandan	Programme assistant (fisheries )	National Conference on New vistas in Indian Aquaculture	CIBA, Chennai	23-24 th FEBRAURY 2012

S.Manikandan	Programme assistant (fisheries )	Workshop on <i>Walk-the-Talk</i>	WORD,Namakkal	7-10 th FEBRAURY 2012
Mr.Jove	Computer programmer	QRT workshop	Pondicherry KVK	4.8.2011
A.Murugan	SMS Agronomy	Strengthening the capabilities on formulation of technical programme for KVKs	TNAU,Coimbatore	20.03.12 to 22.03.12
M.Ashokkumar	SMS Plant protection	Entrepreneurs development programmes for KVK mangers	TNAU,Coimbatore	14.03.12 to 16.03.12
V.Mohan	SMS Soil science	Natural Disaster management	TNAU,Coimbatore	27.03.12 to 28.03.12
A.Damodharan	Farm manager	Natural Disaster management	TNAU,Coimbatore	27.03.12 to 28.03.12

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

# SUMMARY FOR 2010-11

## I. TECHNOLOGY ASSESSMENT

### Summary of technologies assessed under various crops

Thematic areas	Crop	Name of the technology assessed	No. of trials
Integrated Nutrient Management			
Varietal Evaluation	Tomato	Assessing the different tomato varieties for disease resistance and high yield	10
Integrated Pest Management			
Integrated Crop Management	Black gram	Assessing the utility of methylobacteria for drought tolerance	10
Integrated Disease Management			
Small Scale Income Generation Enterprises			
Weed Management			
Resource Conservation Technology	Banana	Assessing the utility of enriched biocharcoal soil application in improving the soil quality and yield	10
Farm Machineries			
Integrated Farming System			
Seed / Plant production			
Value addition			
Drudgery Reduction			
Storage Technique			
Others (Pl. specify)			
<b>Total</b>			

### Summary of technologies assessed under livestock

Thematic areas	Name of the livestock enterprise	Name of the technology assessed	No. of trials
Disease Management			
Evaluation of Breeds			
Feed and Fodder management			
Nutrition Management	Dairy cattle	Assessing utility of prosobis juliflora pod flour as an cheap alternative concentrate feed ingredient	10



## II. TECHNOLOGY REFINEMENT

### Summary of technologies refined under various crops

Thematic areas	Crop	Name of the technology refined	No. of trials
Integrated Nutrient Management			
Varietal Evaluation			
Integrated Pest Management			
Integrated Crop Management			
Integrated Disease Management			
Small Scale Income Generation Enterprises			
Weed Management			
Resource Conservation Technology			
Farm Machineries			
Integrated Farming System			
Seed / Plant production			
Value addition			
Drudgery Reduction			
Storage Technique			
Others (Pl. specify)			
<b>Total</b>			

### Summary of technologies assessed under refinement of various livestock

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





Ornamental																		
Fruit	ICMP	Demonstration on ICMP in Banana	1	10	2	660	450	46.7			98500	494000	395500	5.02	86500	374500	288000	4.33
Spices and condiments	ICMP	KKM-1 chilli cultivation with ICMP	1	10	4	24.0	17.0	41.17			38515	84000	45485	2.18	32550	59500	26950	1.82
Commercial																		
Medicinal and aromatic																		
Fodder	Fodder development	CO-4 Fodder cultivation, Hedge Lucerne cultivation	1	10	1	370	325 (CO-3)	9.56			12500	22500	8000	1.86	10500	16700	6200	1.59
Plantation																		
Fibre																		
Others (pl.specify)																		
		Total																

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

\*\* BCR= GROSS RETURN/GROSS COST





Common carps	Inland fish culture	Composite fish culture with stunted fish fingerlings	1	4	4	Under observation											
Mussels																	
Ornamental fishes	Ornamental fish cultivation	Ornamental fish rearing using small ring tanks in the backyard	1	3	3	Under observation											
Others (pl.specify)																	
<b>Total</b>																	

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

\*\* BCR= GROSS RETURN/GROSS COST

**Other enterprises**

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

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

\*\* BCR= GROSS RETURN/GROSS COST















Rabbit Management										
Animal Nutrition Management										
Animal Disease Management										
Feed and Fodder technology										
Production of quality animal products										
Goat management	3	39	16	55	22	36	58	61	52	113
Turkey and Quail management	2	13	1	14	8	0	8	21	1	22
<b>Home Science/Women empowerment</b>										
Household food security by kitchen gardening and nutrition gardening										
Design and development of low/minimum cost diet										
Designing and development for high nutrient efficiency diet										
Minimization of nutrient loss in processing										
Processing and cooking										
Gender mainstreaming through SHGs	2	0	55	55	0	6	6	0	61	61
Storage loss minimization techniques										
Value addition	11	56	72	128	35	33	68	91	105	196
Women empowerment										
Location specific drudgery production										
Rural Crafts										
Women and child care										
An Interactive training for the Prosopis commodity groups on value addition and marketing strategies										
<b>Agril. Engineering</b>										
Farm machinery and its maintenance										
Installation and maintenance of micro irrigation systems										
Use of Plastics in farming practices										
Production of small tools and implements										
Repair and maintenance of farm machinery and implements										
Small scale processing and value addition										
Post Harvest Technology										
Others (pl.specify)										
<b>Plant Protection</b>										
Integrated Pest Management										
Integrated Disease Management										
Bio-control of pests and diseases	1	4	0	4	2	0	2	6	0	6



Others (pl.specify)										
<b>Agro-forestry</b>										
Production technologies										
Nursery management										
Integrated Farming Systems										
Others (Pl. specify)										
<b>TOTAL</b>	<b>30</b>	<b>192</b>	<b>195</b>	<b>387</b>	<b>109</b>	<b>107</b>	<b>216</b>	<b>301</b>	<b>302</b>	<b>603</b>















Composite fish culture	6	41	0	41	14	17	31	55	17	72
Freshwater prawn culture										
Shrimp farming										
Pearl culture										
Cold water fisheries										
Fish harvest and processing technology										
Fry and fingerling rearing										
Management of home stead incubator	1	4	2	6	0	0	0	4	2	6
Integrated pest management	2	26	0	26	0	0	0	26	0	26
Psychological and nutritional care for adolescent girls	3	0	15	15	0	28	28	0	43	43
<b>TOTAL</b>	12	70	18	88	14	45	59	84	63	147

**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										
Integrated Pest Management										
Integrated Nutrient management										
Rejuvenation of old orchards										
Protected cultivation technology										
Production and use of organic inputs										
Care and maintenance of farm machinery and implements										
Gender mainstreaming through SHGs										
Formation and Management of SHGs										
Women and Child care										
Low cost and nutrient efficient diet designing										
Group Dynamics and farmers organization										
Information networking among farmers										
Capacity building for ICT application										
Management in farm animals	1	19	4	23	5	2	7	24	6	30
Livestock feed and fodder production										
Household food security	3	0	78	78	0	41	41	0	119	119
Any other (pl.specify) importance of energy saving devices-sarai	5	8	55	63	9	33	42	17	88	105

cooker,enviro fit stove,vegetable preservator										
Training on KVK activities and income generation programmes for self help group members										
<b>Total</b>	9	27	137	164	14	76	90	41	213	254



<b>3.</b>	<b>Soil health and fertility management</b>										
	Pest and disease management in Groundnut and Paddy	<b>1</b>	<b>18</b>	<b>12</b>	<b>30</b>	<b>12</b>	<b>8</b>	<b>20</b>	<b>30</b>	<b>20</b>	<b>50</b>
<b>4</b>	<b>Production of Inputs at site</b>										
<b>5</b>	<b>Methods of protective cultivation</b>										
<b>6</b>	<b>Others (pl.specify)</b>										
<b>7</b>	<b>Post harvest technology and value addition</b>										
7.a.	Processing and value addition	<b>1</b>	<b>5</b>	<b>10</b>	<b>15</b>	<b>4</b>	<b>6</b>	<b>10</b>	<b>9</b>	<b>16</b>	<b>25</b>
7.b.	Others (pl.specify)										
<b>8</b>	<b>Farm machinery</b>										
8.a.	Farm machinery, tools and implements										
8.b.	Others (pl.specify)										
<b>9.</b>	<b>Livestock and fisheries</b>										
<b>10</b>	<b>Livestock production and management</b>										
10.a.	Animal Nutrition Management										
10.b.	Animal Disease Management	<b>1</b>	<b>15</b>	<b>10</b>	<b>25</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>15</b>	<b>10</b>	<b>25</b>
10.c.	Fisheries Nutrition										
10.d.	Fisheries Management										
10.e.	Clean milk production and value addition of milk	<b>1</b>	<b>18</b>	<b>12</b>	<b>30</b>	<b>12</b>	<b>8</b>	<b>20</b>	<b>30</b>	<b>20</b>	<b>50</b>
<b>11.</b>	<b>Home Science</b>										
11.a.	Household nutritional security										
11.b.	Economic empowerment of women	<b>2</b>	<b>0</b>	<b>26</b>	<b>26</b>	<b>0</b>	<b>30</b>	<b>30</b>	<b>0</b>	<b>56</b>	<b>56</b>
11.c.	Drudgery reduction of women										
11.d.	Others (pl.specify)										
<b>12</b>	<b>Agricultural Extension</b>										
12.a.	Capacity Building and Group Dynamics										
12.b.	Others (pl.specify)										
	<b>Total</b>	<b>4</b>	<b>23</b>	<b>48</b>	<b>101</b>	<b>28</b>	<b>44</b>	<b>60</b>	<b>39</b>	<b>92</b>	<b>131</b>

### Details of sponsoring agencies involved

**1.ATMA**

**2.Agribusiness department**

**3.Agri.engineering department**

**4.Agriculture department**

**5.Horticulture department**





Conveners meet										
Self Help Group Conveners meetings										
Mahila Mandals Conveners meetings										
<b>Celebration of important days (specify)</b>										
Women's Day	3	0	2800	2800	0	1715	1715	0	16	16
World Food Day										
Farmers meeting	161	486	490	976	106	112	218	0	0	0
VLWC Meeting										
PLF Meeting	61		818	818	0	471	471	4	18	22
ATMA MEETING	4									
Tree planting										
Machinery Demo										
PRA	2									
Farm field school	20	83	101	184	62	70	132	8	10	18
Guidance & counseling for victims wife										
<b>Total</b>	<b>1146</b>	<b>1998</b>	<b>8095</b>	<b>9960</b>	<b>831</b>	<b>4149</b>	<b>4980</b>	<b>154</b>	<b>169</b>	<b>323</b>

Details of Veterinary campaigns and number of animals and farmers benefited

Sl.no.	Name of the village	Date	Number of farmers benefited	Number of livestock benefited				
				cattle	Sheep and goat	Poultry	others	Total
1.	Kootampuli	5.4.2011	12	0	60	0	0	60
2.	Vedanatham	21.4.2011	28	2	124	0	4	130
3.	Athimarapatti	26.4.2011	36	40	120	120	10	290
4.	Sindalakattai	28.4.2011	22	2	176	3	0	181
5.	Kuppanapuram	10.5.2011	19	15	154	0	0	169
6.	Chandragiri	19.5.2011	8	8	0	0	0	8
7.	Karayanpatti	21.5.2011	22	12	45	0	0	57
8.	Oosimesiapuram	11.6.2011	16	12	115	0	0	127
9.	Aathanoor	17.6.2011	17	1	119	0	1	121
10.	Sevelkulam	24.6.2011	17	13	185	0	0	198
11.	Tirumalaiyapuram	25.6.2011	32	64	82	60	4	210
12.	Kalvilai	9.7.2011	30	87	86	0	0	173



13.	Vedanatham	26.7.2011	29	3	111	0	0	114
14.	Athimarapatti	28.7.2011	28	44	36	70	6	156
15.	Kulaiyankaraisal	29.7.2011	22	26	18	0	0	44
16.	North sillukkanpatti	12.8.2011	32	18	510	150	12	690
17.	Velidupatti	13.8.2011	22	32	163	0	0	195
18.	Sankarajapuram	17.8.2011	23	49	84	0	0	133
19.	Veppalodai	20.8.2011	22	8	94	0	0	102
20.	Tiruvanandapuram	22.8.2011	8	0	100	0	0	100
21.	Sippikulam	23.8.2011	5	17	51	0	0	68
22.	Allikulam	9.9.2011	36	36	186	141	8	371
23.	Aathanoor	15.9.2011	22	3	113	0	0	114
24.	Melakootudankadu	20.9.2011	29	62	36	82	8	188
25.	Kuppanapuram	23.9.2011	17	22	100	0	0	122
26.	Kalvilai	24.9.2011	20	72	31	0	0	103
27.	Sippikulam	27.9.2011	5	54	45	0	0	99
28.	Oosimesiapuram	29.9.2011	11	8	64	0	0	72
29.	Kootampuli	7.10.2011	3	0	36	0	0	36
30.	Kootampuli	30.10.2011	3	0	36	0	0	36
31.	K.P.Thalavaipuram,	22.10.2011	5	0	50	0	0	50
32.	K.P.Thalavaipuram	16.11.2011	11	0	141	0	0	141
33.	kootampuli	20.11.2011	6	0	33	0	0	33
34.	S.Silukkanpatti	22.11.2011	32	75	350	100	10	535
35.	Sevelkulam	24.11.2011	19	18	265	0	0	283
36.	Sevelkulam	14.12.2011	18	13	170			183
37.	Oosemesiapuram	17.12.2011	12	6	121			127
38.	Velidupatti	22.12.2011	19	28	46		3	77
39.	Varthagareddipatti	21.12.2011	40	68	120			188
40.	Sokkalingapuram	20.1.12	5	37	5			42
41.	Vedanatham	21.1.12	18	8	86			94
42.	Tiruvanandapuram	27.1.12	17	25	60			85
43.	Kuppanapuram	28.1.12	26	40	138		1	179
44.	Sokkalingapuram	20.1.12	5	37	5			42
45.	Sankarajapuram	8.2.12	13	14	53			67
46.	Aathanoor	16.2.12	22	14	153			167
47.	Tirumalaiyapuram	21.2.12	27	19	95	15		129
48.	Sillangulam	15.3.12	6	14	9			23
49.	Sivalur	17.3.12	15	18	67			85
50.	Sindalakattai	22.3.12	12	2	25			27
51.	K.P.Thalavaipuram	13.3.12	19	26	165			191
	<b>Total</b>		<b>943</b>	<b>1172</b>	<b>5237</b>	<b>741</b>	<b>67</b>	<b>7215</b>

## VI. PRODUCTION OF SEED/PLANTING MATERIAL

### 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)						
Oilseeds						
Pulses	Black gram	VBN-5		10.40	10400	130
	Black gram	VBN-4		15.0	15000	153
	Green gram	CO-4		5.0	5500	62
Commercial crops						
Vegetables						
Flower crops						
Spices						
Fodder crop seeds						
	Hedgelucerne			0.35	7000	26
	Fodder Sorghum			0.30	6000	28
	Subabul			0.05	800	35
Fiber crops						
Forest Species						
Others (specify)						
Baby corn	Baby corn	G-5414		0.50	9600	36
Sorghum	Sorghum	CO(S)-30		2.0	2500	20
<b>Total</b>				<b>33.6</b>	<b>56800</b>	<b>490</b>

### 9.B. Production of Planting materials by the KVK

Crop category	Name of the crop	Variety	Hybrid	Number	Value (Rs.)	Number of farmers to whom provided
Fruits	Mango	Banglora		1056	31680	53
		Neelam		1312	39360	100
	Pomaganrate			50	1000	12
	Bitter lime			150	3500	25
	Amla	BSR-1		468	14040	300
	Guava	L-49		1200	36000	210
Ornamental plants						
	Thuja			300	3000	265
	Bougainvilla			45	225	30
	Cleodendran			500	5000	82
	Kannagambaram			26	130	16
	Daguma			186	1860	20
	Gundu malligai			164	1640	45
	bedilanthus			253	1265	56
	Hibiscus ordinary			23	230	21
	Hibiscus adduku			34	340	8
	Hibiscus rose			21	210	12
	sandal			324	6480	16
	Pitchi poo			21	210	12
	Badam			18	270	11
	Crotons			1300	13000	240

	(acalipah)					
	Poovarasu			253	2530	210
	Alamonda			21	315	18
	Red Rose			8	80	5
	Durantha green			1300	6500	241
	Duranta white			1800	12600	320
	Cocoa			1800	5400	10
Medicinal and Aromatic						
	Thuthuvalai			35	700	12
	Adathodai			46	920	24
	Sarpaganda			8	160	4
	Gymnema			9	90	6
	Tulsi			30	300	13
	Nanthiavattai			10	200	4
	Vettiver			860	17200	241
	Aloevera			50	500	26
	omavalli			28	560	11
	Curry leaf			200	2000	120
	Pungam			800	16000	456
	Eucaliptus			10	100	6
Fodder crop saplings		CO-4		60000	30000	51
Forest Species						
	Vagai			120	3600	102
	Gulmuhar			250	7500	231
	Casuarina			200	1000	165
	Peoples tree			18	360	8
	Jatropha			10	50	4
	Tamarind			300	6000	162
	Kumil			850	17000	642
	Maruthu			460	9200	420
	Fig			0	0	0
	Gliricidia			600	6000	196
	Ailanthus			26	260	14
<b>Total</b>				<b>77553</b>	<b>306565</b>	<b>5256</b>

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

Bio Products	Name of the bio-product	Quantity Kg	Value (Rs.)	Number of farmers to whom provided
Bio Fertilizers	Azopirillum	550	22000	550
	Phosphobacteria	550	22000	550
	Rhizobium	600	24000	600
Bio-pesticide			0	
Bio-fungicide	Pseudomonas	50	5000	150
	T.viridi	50	5000	150
Bio Agents		60	1800	12
Others (specify)	Vermicompost	1800	18000	250
<b>Total</b>		<b>3660</b>	<b>97800</b>	<b>2262</b>

## 9.D. Production of livestock materials

Particulars of Live stock	Name of the breed	Number	Value (Rs.)	Number of farmers to whom provided
<b>Dairy animals</b>				
Cows				
Buffaloes				
Calves				
Others (Pl. specify)				
<b>Poultry</b>				
Broilers				
Layers				
Duals (broiler and layer)				
Japanese Quail	Nandanam III	1285	25706	345
Turkey		84	12608	26
Emu				
Ducks				
Improved Backyard poultry	Vanaraja	630	37800	256
	Namakkal	100	6000	40
<b>Piggery</b>				
Piglet				
Others (Pl. specify)				
<b>Fisheries</b>				
Fingerlings	Stunted fingerlings	10000	25000	856
Goat	Jamunapari cross	26	95160	13
<b>Total</b>		<b>12125</b>	<b>202274</b>	<b>1536</b>

## VII. DETAILS OF SOIL, WATER AND PLANT ANALYSIS 2011-12

Details	No. of Samples analyzed	No. of Farmers benefited	No. of Villages	Amount realized (Rs.)
Soil Samples	152	152	10	7600
Water Samples	12	12	6	600
Plant samples				
Manure samples				
Others (specify)				
Blood samples	12	12	6	600
<b>Total</b>	<b>176</b>	<b>176</b>	<b>22</b>	<b>8800</b>

## VIII. SCIENTIFIC ADVISORY COMMITTEE

<b>Number of SACs conducted</b>
one

## IX. NEWSLETTER

<b>Number of issues of newsletter published</b>
Nil

**X. RESEARCH PAPER PUBLISHED**

<b>Number of research paper published</b>
Nil

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

<b>Activities conducted</b>				
<b>No. of Training programmes</b>	<b>No. of Demonstration s</b>	<b>No. of plant materials produced</b>	<b>Visit by farmers (No.)</b>	<b>Visit by officials (No.)</b>

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