ANNUAL REPORT 2013-14

FOR THE PERIOD

APRIL 2013 to MARCH 2014

KRISHI VIGYAN KENDRA
(Thoothukudi District)

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, Mudivaithanendal Post, Vagaikulam, Thoothukudi	0461-2269306	0461-2269306	pcscadkvk@gmail.com	www.scadkvk.org

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

Address	Telephone		E mail	Web Address
	Office	Fax		
SCAD 105A1, North Bye pass road, Vannarpettai, Tirunelveli	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. G. Alagukannan	8760658225	9942978627	gakannan@rediffmail.com

1.4. Year of sanction: 1995

1.5. Staff Position (as 31st March 2014)

Sl. No	Sanctioned post	Name of the incumbent	Designation	M /F	Discipline	Highest Qualification	Pay Scale	Basic pay	Date of joining KVK	Permanent /Temporary	Category (SC/ST/ OBC/ Others)
1	Programme Coordinator	Dr.G.Alagukannan	PC	M	Horti	M.Sc (Ag)., Ph.D	37400 – 67000	9000	1.8.2013	P	OBC
2	SMS	Dr.V.Srinivasan	SMS	M	Animal science	M.V.Sc., (Vet. medicine)	15600-39100	5400	8.7.99	P	Others
3	SMS	S. Sumathi	SMS	F	Home science	M.Sc., (H.Sc.Ext.,)	15600-39100	5400	1.12.2000	P	OBC
4	SMS	P.Velmurugan	SMS	M	Horti	M.Sc., (Horticulture)	15600-39100	5400	30.1.01	P	SC
5	SMS	M.Ashok Kumar	SMS	M	Plant protection	M.Sc.,(Ag) (Entomology)	15600-39100	5400	17.8.2009	P	OBC
6	SMS	A.Murugan	SMS	M	Agronomy	M.Sc., (Ag) (Agronomy)	15600-39100	5400	18.07.2011	P	SC
7	SMS	V. Naveen Chandru	SMS	M	Fisheries	M.F.Sc	15600-39100	5400	20.07.2013	P	OBC
8	Programme Assistant	I. Jeyakumar	Lab technicien	M	Lab Assistant		9300-34800	4200	12.07.2013	P	Others
9	Computer Programmer	J.Jove	Computer Prog.	M	Computer science	B.Sc. (Computer sci)	9300-34800	4200	01.04.2011	P	OBC
10	Farm Manager	K.Damodaran	Farm Manager	M	Agriculture	B.Sc.,(Agri)	9300-34800	4200	31.8.2009	P	OBC
11	Accountant/Superintendent	S.S. Ganesan	accountant	M	-		9300-34800	4200	1.6.96	P	Others
12	Stenographer	A. Vimala	Steno	F	-		5200-20200	2000	1.6.96	P	OBC
13	Driver 1	Dominic James	Driver	M	-		5200-20200	2000	1.6.96	P	OBC
14	Driver 2	Gulam Rasul Babu	Driver	M	-		5200-20200	2000	1.7.96	P	OBC
15	Supporting staff 1	Rajesh	Farm assistant	M	-		5200-20200	1800	1.12.96	P	SC
16	Supporting staff 2	Xavier	watchman	M			5200-20200	1800	12.11.01	P	OBC

1.6. Total land with KVK (in ha) : 20 ha

S. No.	Item	Area (ha)
1	Under Buildings	2.0
2.	Under Demonstration Units	0.8
3.	Under Crops	1.2
4.	Orchard/Agro-forestry	6.0
5.	Others	10.0

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	35 Lakhs			
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	3 Lakhs			
6	Vehicle cum Implement shed	ICAR	2.3.2012	60	3 Lakhs			

B) Vehicles

Type of vehicle	Year of purchase	Cost (Rs.)	Total kms. Run	Present status
Tempo cruiser	2004	4.96	259569	To be condemned
Bajaj boxer CT 100 delux	2004	0.39	72234	Road worthy
Hero Honda Splendor	2009	0.45	53023	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	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 SAC meeting conducted in 2013-14

Sl.No.	Date	Salient Recommendations	Action taken
1.	1.7.2013	AIR Tirunelveli is broadcasting farm news information's daily in the morning for that KVK can send the news so that it will reach the masses soon	AIR Tirunelveli has already been approached and it has been decided to broadcast 13weeks program through AIR
2.		KVK can introduce the successful farmers and trained farm women for interview to AIR	Mr. Elangovan a progressive farmer from sawyapuram and Mrs. Uthami of Maravamadam village Thoothukudi are going to give their experiences in innovative farming systems adopted by them in AIR Tirunelveli
		KVK scientists can participate in the AIR talk and interview	All the SMS of SCAD-KVK are regularly recording the latest development in agriculture fields for broadcasting
		KVK can collaborate with AIR and organize Radio Farm school programme consist of 13 weeks and register farmers for that programme	Efforts are on to enroll the farmers for AIR farm school programs
		Kitchen garden cultivation awareness is very much required for the urban middle class people and they also need quality seed pockets , KVK can train entrepreneurs in this line to help them	Already 22 training have been delivered to women self help group members, supplied 4000 numbers of quality kitchen garden seed kit pockets for the purpose which includes the semi urban area. .
		Promote the usage of small millets and its cooking methods through the NGOs and other service organization like Lions, rotary clubs	5 On campus trainings on small millets have been completed already. Method demonstration on value addition, marketing techniques were taught to the beneficiaries. The value added products are being displayed at SCAD – KVK display board for better understanding
		While promoting fresh water prawn cultivation do it cautiously with full technical back up as it is very sensitive	One FLD has been designed to popularize the fresh water prawn cultivation along with crab culture will be implemented during 2014
		To prevent transmission of endoparasitic egg through coloustrum feeding , it should be treated before feeding this technique can be promoted	SMS (Animal Science) is disseminating information about this through training programmes
		Veterinary college , KVK and AH department need to integrate in disease control programme and conducting campaigns so that we can avoid unnecessary repetitions	Before finalizing any programme all the concerned department personal opinion are sought regularly to avoid repetitions. It is a routine activity of SCAD – KVK
		Promote oral pellet vaccine for Ranikhet disease control and VCRI Tirunelveli can collaborate in assessing its impact	One FLD programme has been designed in collaboration with VCRI, Tirunelveli to popularize the pellet vaccination for Ranikhet disease
		Artificial pearl culture technique is ready for commercialization and this can be utilized by KVK	Efforts are on to get the full technical detail on artificial pearl culture from CMFRI Tuticorin
		Do some awareness campaigns for marine fishermen and seashore fishermen regarding the proper usage of fishing net	Off campus trainings have been planned to create awareness on proper usage of fishing net
		Create awareness on the fishermen in improving the un hygienic situation prevailing at present in the seashore after landing the fish catch	Through SCAD health care programme hygiene and environment issues are being addressed regularly to the 22 coastal area fisherman community
		Include some fishermen also in SAC meeting	Trainings are going on to the fisherman communities. Representatives from fisherman communities will be included in the next SAC meeting
		Puduvalvu project is having good group base in the selected blocks and it is ready to	Efforts are on to offer both on and off campus training to puduvalvu members

		take up the technological support of KVK and ready to help KVK in organizing training programme to them	
		Horticulture department is implementing the poly house demonstration in Thoothukudi KVK can give technological back up to farmers and Horticulture officers in promotion of this technology	A special programme on poly house cultivation has been included in the 2014action plan and will be implemented in the coming year
		KVK can link their contact small and marginal farmers to ulavar sandai for marketing their produces	The mushroom and baby corn growers are linked with ulavar santhai for effective marketing
		Link baby corn cultivation farmers to ulavar sandai	The mushroom and baby corn growers are linked with ulavar santhai for effective marketing
		Inform the DD Agribusiness regarding the produces available for marketing once in 15 days. They can spread the information and link the buyers and producers	SCAD KVK is in regular touch with DD – Agri business to market the product of KVK
		Department of agri business gives support for starting value addition business KVK can pass on this message	Efforts are on to get the support of DD – Agri business for value addition
		KVK can promote the IFS models and Micro nutrient usage	A special programme on IFS is already initiated in 5 farmers' field. Training demonstration, FLD, OFT programmes have been delivered on regular basis to address the micro nutrient related problems
		AH department is ready to take up the technologies available in KVK	SCAD – KVK is regularly in touch with JD(AH) and discuss all the important technologies for sharing the information mutually. 3 training programmes were organized for the AH dept. extension officials in the year 13-14
		ATMA is ready to give funds for demonstration on oral pellet vaccine , booklet printing , Hydrogel application for drought mitigation, and Technology VCD preparation purposes	Funds of ATMA has been availed for extension activities programmes, and technology video preparation (* Rs.1.4 lakshs)
		KVK can promote organic farmers like Mr.Ilangovan	Organic farming practices are in the regular training agenda in all KVK's training programmes to promote organic farmers in Thoothukudi District.
		Promote the technologies like Precision farming, shade net cultivation, drip and fertigation, net house cultivation	A special programme on shade net cultivation has already been included in 2014 action plan and will be implemented in 2014
		ACRI killikulam can help the KVK for mushroom cultivation technology both financially and technically as they have a DBT sponsored programme	The required spawn bottles are being procured from ACRI, Killikulam
		Promote premonsoon sowing with tropiculture for black gram and green gram	Training on premonsoon sowing in black and green gram have already been given
		Farmers need support for the purchase of agriculture implements to overcome the labour shortage	Farmers are facilitated to avail 50% subsidy for farm implement purchase (SCAD is also providing interest free loan to purchase the same)
		KVK need to give scientific feed back to the Research system	KVK is regularly giving feedback of FLD, OFT for research system.
		KVK can buy technology from IIHR for MN mixture , neem and pungam soap preparation and start producing it locally	Efforts are on to get IIHR banana special preparation technology from IIHR
		ICAR can give vaccine production laboratory funds to KVK at least region wise ,TANUVAS can think on this line to commersialise their vaccine through KVKs	Efforts are on the commercialization of the vaccines production in collaboration with TANUVAS, Tirunelveli, JD (AH), Thoothukudi for oral pellet vaccine

		KVK can take up farm radio school using successful farmers like Ilango	Mr. Elango is going to record his experience on IFS in AIR, Tirunelveli
		Promote Natural resource Management like NICRA project	Efforts were made to establish custom hiring centre at Keelapoovani, and Vilathikulam villages as like NICRA and assistance is given by diverging funds from SCAD for the establishment of baby ponds for water harvesting
		Promote EM, Biochar, biodigester slurry and organic farming	EM – Biochar, organic inputs are regularly produced and supplied to the needy farmers

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_1 D_2)	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_7 CD_{2-5})	Crop growth period 90-210 + days, coastal alluvium soil type

2.3 Soil types

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 baseexchange 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, geneisses, 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.	**A. FOOD GRAINS:**				
	a) CEREALS & MILLETS				
	Paddy	11850	53562	4520	
	Millets	69991	87488	1250	
	b) PULSES	58364	22761	390	
2	**B. FIBRE**				
	Cotton	4879	6440	1.32	
3.	**C. OIL SEEDS**	4140	8362	202	
4.	**D. OTHER CROPS**				

* Source: Joint Director of Agriculture, Thoothukudi District (Year 2013 – 14)

2.5. Weather data

Month	Rainfall (mm)	Temperature ^{0} C		Humidity (%)	
		Maximum	Minimum	Maximum	Minimum
June -2013	1.37	35.7	28.3	82	43
July	0.37	35.2	27.9	80	48
August	8.11	34.7	28.1	81	54
September	3.86	34.5	27.8	80	54
October	66.03	32.8	26.8	82	64
November	125.96	29.8	25.4	91	79
December	75.19	29.5	25.1	89	76
January - 2014	28.4	29.8	24.4	89	73
February	18.2	30.6	25.0	90	72
March	26.8	32.7	27.2	87	71

Source: 1. Scientific officer, Meterological Observatory, Tuticorin post trust (Temperature and Humidity)
2. Dept.of Eco.and Statistics , Chennai -6 (for rainfall)

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

Category	Population	Production	Productivity
Total Cattle	109933		
Sheep	246238		
Goats	220018		
Pigs	2621		
Rabbits	**NA**		
Total Poultry	252233		

Source: Regional Joint Director of Animal Husbandry. Thoothukudi

Category	Area	Production	Productivity
Fish			
Marine	**163.5 km**	**41050 tonnes**	**-**
Inland			
Prawn	**NA**	**NA**	**NA**
Scampi	**NA**	**NA**	**NA**
Shrimp	**NA**	**NA**	**NA**

Source: Assistant Director of Fisheries ,Thoothukudi

2.7 District profile has been Updated for 2013-14 Yes / ~~No~~: Yes

2.8 Details of Operational area / Villages

Sl. No.	Taluk	Block	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	Ottapidaram	Jegaverapandiapuram Vedanatham Athanoor	10	Pearl millets	Poor marketing of agricultural produce Poor yield due to local varieties, earhead caterpillar in pearl millets	Introduction of high yielding , improved crop varieties Promotion of ICM practices for major crops
					Sorghum	Poor marketing of agricultural produce Poor yield due to local varieties,	Awareness creation on drought mitigation and promotion of appropriate agronomic techniques , Promotion of ICM practices for major crops like pulses
					Blackgram, Greengram	Poor pod setting due to improper appln. Nutrients and pest management, labour scarcity weed management	
					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
2	Ottapidaram	Ottapidaram	Kuppanapuram Keelamangalam Melamangalam	10	Okra	Okra –Fruit borer and Yellow vein Mosaic diseases problems	Promotion of ICM practices for major crops like okra
					Chilli	Chilli –fruit dropping, Damping off disease, Sucking pests	Promotion of ICM practices for major crops like chilli
					Groundnut	Poor yield due to improper application of nutrients	Promotion of ICM practices for major crops like oil seeds

					Blackgram, Greengram,	B/G grams – Aphid problem during cultivation and Pulse beetle problem during storage	Awareness creation on drought mitigation and promotion of appropriate agronomic techniques Promotion of ICM practices for major pulses.
					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	**Vilathikulam**	**Vilathikulam**	K kumarettiyapuram Sokkalingapuram karisalkulam	5	Pearl millets, Tinai, sorghum	Poor marketing of agricultural produce Poor yield due to local varieties, earhead caterpillar in pearl millets	Promotion of ICM practices for major crops like millets
					Blackgram, Greengram	Poor pod setting due to improper appln. Nutrients and pest management, labour scarcity weed management	Awareness creation on drought mitigation and promotion of appropriate agronomic techniques promotion of ICM Practices for major crops like pulses
					Chilli	Chilli –fruit dropping, Damping off disease, Sucking pests	Promotion of ICM practices for major crops like chilies
					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
					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	
					Dairy farming		
						High cost of concentrate feeding	Feeding prosobis pods as an alternative concentreate 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
4	**Vilathikulam**	**Vilathikulam**	Soorankudi Thangammalpuram Kumarasakkanapuram Veerakanchipuram	3	Blackgram, Greengram	Poor pod setting due to improper appln. Nutrients and pest management, labour scarcity weed management	Awareness creation on drought mitigation and promotion of appropriate agronomic techniques Promotion of ICM practices.
					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. Reduction of Animal weight due to ecto and endo parasitism	Comprehensive disease control against infectious diseases and ecto and endo parasites
					Dairy farming		
						High cost of concentrate feeding	Feeding prosobis pods as an alternative concentreate 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
5	**Thoothukudi**	**Thoothukudi**	Thalavaipuram Kallanparambu	10	Green gram Black gram	Poor pod setting due to improper appln. Nutrients and pest management, labour scarcity weed management	Awareness creation on drought mitigation and promotion of appropriate agronomic techniques Promotion of ICM practices for major crops like Pulses.

					Chilli	Chilli –fruit dropping, Damping off disease, Sucking pests	Promotion of ICM practices for major crops like chilies
					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
					Poultry	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
6	**Srivaigundam**	Srivaigundam	Ramanathapuram Aniaparanallur , Sakkammalpuram	1	Dairy farming	High cost of concentrate feeding	Feeding prosobis pods as an alternative concentreate 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
					Brinjal	Flowers and fruit drop Fruit borer and shoot borer attack	IPM and INM
					Promotion of kitchen garden and medicinal garden	Nutritional deficiency in human being Health hazards Poor shelf life of	• Promotion of kitchen garden in backyard of house holds • Promotion of vegetable preservator
					Goat and Milch animal rearing Poultry	the produce Mortality in kids due to enteritis Lack of awareness on poultry management	Promotion of backyard poultry in cage system Disease control in livestocks and poultry Promotion of green fodder cultivation
					Banana,	Low yield, pest and disease , problem,	Promotion of ICM practices for major crops like banana

7	**Srivaikundam**	Karunkulam	Keelapoovani	1	Blackgram, Greengram	Poor pod setting due to improper appln. Nutrients and pest management, labour scarcity weed management	Awareness creation on drought mitigation and promotion of appropriate agronomic techniques Promotion of ICM practices for major crops like Pulses.
					Pearl millets, Tinai, sorghum	Poor marketing of agricultural produce Poor yield due to local varieties, earhead caterpillar in pearl millets	Formation of commodity groups Indigenous low cost storage facility promotion
					Dairy, goat units & poultry	Prevalence of predator attack and no awareness on vaccination	Promotion of backyard poultry in cage system Disease control in livestock and poultry Promotion of green fodder cultivation
8	**Thiruchendur**	Udankudi	Kalvilai Meignagnapuram	2	Paddy,	Low productivity in paddy Lack of non lodging high yield and saline resistant varieties. Lack of knowledge in INM and IPM practices	Promotion of ICM practices for major crops like Paddy
					Banana,	Low yield, pest and disease , problem,	Promotion of ICM practices for major crops like banana
					coconut	Low yield, pest and disease problem,, labour problem	IPM & INM technologies, Drudgery reduction among farm women
					Dairy, goat units & poultry	Prevalence of predator attack and no awareness on vaccination	Promotion of backyard poultry in cage system Disease control in livestocks and poultry Promotion of green fodder cultivation
9	**Sathankulam**	sathankulam	Pannamparai Naganai	2	Paddy	Low productivity in paddy Lack of non lodging high yield and saline resistant varieties. Lack of knowledge in INM and IPM practices	Promotion of ICM practices for major crops like Paddy
					Banana	Low yield due to no awareness on nutrient management .low yield due to	Promotion of ICM practices for major crops like banana

						wilt disease and stem weevil	
					Coconut	.Low yield due to Rhinoceros beetle, red palm weevil attack Labour shortage for harvesting	Promotion of ICM practices for major crops like coconut
					Poultry	.Prevalence of predator attack .Mortality due to Ranikhet disease 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.	Introduction of high yielding , improved crop varieties in agriculture and horticulture
4.	Promotion of ICM practices for major crops like Paddy, Banana, Chilli, Maize, Blackgram, Green gram, Tomato, Onion and Cotton
5.	Promotion of ecological pest control measures and organic farming techniques
6.	Promotion of Bio fertilizers and Vermicompost usage
7.	Promoting Tree planting in wastelands and in the backyards
8.	Ensuring nutritional security of farm women through Kitchen gardening, storage and healthy cooking habits
9.	Promotion of value added product preparation from prosopis juliflora , milk ,fishes ,banana ,and minor millets
10.	Promotion of IFS model farming system
11.	Promotion of drought mitigation measure
12.	Promotion of alternative poultry farming , improved backyard poultry breeds, and artificial incubation of eggs.
13.	Awareness creation on drought mitigation and promotion of appropriate agronomic techniques
14.	Comprehensive disease control measures in livestock
15.	Feeding and breeding management in cattle and goats
16.	Promotion of inland freshwater fish cultivation in village ponds

PART III – TECHNICAL ACHIEVEMENTS

3A. Details of target and achievements of mandatory activities

OFT				FLD			
1				2			
Number of OFTs		Number of farmers		Number of FLDs		Number of farmers	
Targets	Achievement	Targets	Achievement	Targets	Achievement	Targets	Achievement
5	5	40	41	13	13	80	80

Training				Extension Programmes			
3				4			
Number of Courses		Number of Participants		Number of Programmes		Number of participants	
Targets	Achievement	Targets	Achievement	Targets	Achievement	Targets	Achievement
250	244	7500	7405	850	959	10000	13925

Seed Production (Qtl)		Planting materials (Nos)	
5		6	
Target	Achievement	Target	Achievement
15.0	28.6	50000	16900

Livestock, poultry strains and fingerlings (No)		Bio-products (Kg)	
7		8	
Target	Achievement	Target	Achievement
15000	11880	1500	910

3B1. 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(Kg)
1	Improvement of soil fertility through sustainable practices	Paddy	Low yield, soil salinity , drainage problem , pest and disease problem,, labour problem		ICMP for Paddy cultivation in saline soils	8	1	1	22	2.5			180
2	Promotion of ICM practices and latest high yielding varieties for major crops	Red gram	Low yield and lack of technology awareness Non availability of short duration variety to match with the NE monsoon rain based dry land farming in Red gram	Assessing the transplanting techniques for improving red gram productivity		5	2	1	15	20kg	5000		200
3	Promotion of ICM practices and drought management technology for pulses crops	Black Gram	Drought accrue for cropping period	Assessment and performance of methyl bacterium application for drought tolerance in pulses		4	1	1	12	25kg			100
4	Promotion of ICM practices and latest high yielding varieties for major crops	Green gram	Labour shortage and high cost of labour leads to poor intercultivation practices and reduced productivity in pulses cultivation		Demonstration on total mechanization in Green gram with ICMP	8	2	1	36	5.0			1000
6	Promotion of value added product preparation Promotion of ICMP practices for crops	Sorghum	Poor marketing of agricultural produce Poor yield due to local varieties,		Demonstration on Co(s)30 dual purpose sorghum Variety for seed production and value added product preparation	8	1	0	24	1.0			200

7	Promoting Tree planting in wastelands and in the backyards	Casurina melia dubia	Increase in cultivable waste land area due to labour shortage and high cost of cultivation and water shortage		Demonstration on casurina and melia dubia cultivation in cultivable waste land as an alternative tree crops	2	1	0	14		30000		2000
8	Promoting vegetable Tree planting in wastelands and in the backyards	Moringa	Low yield ,lack of high yield ,off season varieties and technology	Assessment of high yielding Moringa		2	3	0	20	2Kg			500
9	Promoting new cereal vegetable crop	Baby corn	Lack of awareness in baby corn cultivation Lack of market avenues Lack of knowledge in baby corn value addition		Demonstration on baby corn cultivation and its value addition	4	6	0	15	10kg			500
10	Promotion of high yielding and pest and disease	Lab Lab	Low yield ,lack of high yield ,off season varieties and technology		Introduction of new Co (GP)4. Push type lab lab beans & ICM practices for round the year cultivation	2	2	0	20	20kg			1000
11	Promotion of feeding and breeding and disease management in cattle and goats	Dairy cows	Low milk yield in cow due to production diseases like ketosis in dairy cows 2. high cost of feeding, 3. infertility in cows 4. ill thrift due to endo and ecto parasitism 5. loss of production due to mastitis 6. Drudgery in milking for women in squatting position	Herbal therapy for mastitis management		18	2	2	150	0			

12	Promotion of comprehen sive 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 4.poor weight gain during the summer months due to shortage of grazing fodder		Broiler goat rearing	8	4	2	125				
13	Promotion of Bio fertilizers and Vermicom post usage	All crops	Lack of awareness in biofertilizer usage and vermicompostin g techniques		Promotion of enterpreunership for value addition of Prosopis products	25	2	2	25				2500
14	Promotion of ecological pest control measures and organic farming techniques	All crops	Lack of awareness in ecological pest and disease management and organic farming			8	1	2	15				2000 lit
15	Promotion of alternative poultry farming , improved backyard poultry breeds, and artificial incubation of eggs.	Backy ard poultr y	1. Rearing desi breeds of low laying capacity 2. Poor feeding practices Mortality due to ranikhet disease 3. Allowing the birds for incubation results in reduced egg production 4. Mortality in chicks due to predators attack like mongoose, wild cats, and eagle		Promotion of backyard poultry rearing with improved breeds	10	2	2	44			1500	
16	Promotion of inland freshwater fish cultivation in village ponds	Fish	1.un utilization of potential water bodies 2.less water storage period (6 months)		Composite fish cultivation with stunted fingerlings in village common ponds	8	1	0	54			10000	
17	Promotion of ornamental fish cultivation in backyards	Orna menta l fish	Lack of awareness about ornamental fish cultivation		Ornamental fish cultivation in backyard	10	1	0	14			5000	

18	Alternate livelihood for fisherman community	Crab fattening	Lack of awareness about ornamental fish cultivation		Crab fattening	4	1	0	12			5000	

3B2. Details of technology used during reporting period

S.No	Title of Technology	Source of technology	Crop/ Enterprise	No. of programmes conducted				No. Of farmers Covered															
								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	ICMP for Paddy cultivation in saline soils	TNAU	Paddy TRY - 3		1	5	6					5	5	0	0	16	18	11	5	8	9	5	4
2	Assessing the suitability of coriander varieties	TNAU	Coriander CO 4	1		2	4					10				15	26	21	12	6	11	7	6
3	Assessing the transplanting techniques for improving red gram productivity	TNAU	Red gram CO (Rg) 7	1		8	6	7								46	38	53	28	14	2	5	7
4	Assessment and performance of methyl bacterium application for drought tolerance in pulses	TNAU	Black Gram VBN (Bg) 4	1			5	7		3		5	0	5	0	35	43	52	47	8	2	16	8
5	Demonstration on total mechanization in Green gram with ICMP	TNAU	Green gram		1	4	8					10	0	0	0	26	8	8	6	6	3	6	9
6	Demonstration on Co(s)30 dual purpose sorghum Variety for seed production and value added product preparation	TNAU	Sorghum Co (s) 30		1	14	16					5	0	3	2	64	85	42	36	3	8	14	7
7	Demonstration on casurina and melia dubia cultivation in cultivable waste land as an alternative tree crops	TNAU	Casurina melia dubia		1	5	8					5	0	2	0	32	46	23	31	14	9	3	12
8	Assessment of high yielding Moringa	TNAU	Drum stick	1		7	12					5	0	5	0	27	34	49	21	18	13	14	16
9	Demonstration on baby corn cultivation and its value addition		Baby corn		1	9	18					10	0	0	0	132	86	53	48	13	16	8	14

10	Introduction of new Co (GP)4. Push type lab lab beans & ICM practices for round the year cultivation	**TNAU**	Lab Lab		**1**	**4**	**6**					**6**	**0**	**4**	**0**	**52**	**43**	**45**	**41**	**6**	**2**	**16**	**19**
11	Management of bovine ketosis using Monensin supplementation	**TNAUVAS**	Dairy cows	**1**		**8**	**12**					**8**	**2**	**4**	**4**	**64**	**45**	**24**	**36**	**14**	**8**	**16**	**9**
12	Profitable dairy farming practices	**TNAUVAS**	Goat		**1**	**9**	**13**					**0**	**10**	**0**	**0**	**48**	**62**	**38**	**47**	**14**	**7**	**4**	**9**
13	Promotion of backyard poultry rearing with improved breeds	**TNAUVAS**	Backyard poultry																				
14	Composite fish cultivation with stunted fingerlings in village common ponds	**CMFRI**	Fish		**1**	**8**	**15**					**2**	**0**	**2**	**0**	**32**	**41**	**36**	**42**	**7**	**6**	**4**	**5**
15	Ornamental fish cultivation in backyard	**CMFRI**	Ornamental fish		**1**	**6**	**9**					**2**	**1**	**0**	**0**	**22**	**25**	**18**	**21**	**6**	**2**	**6**	**3**
16	Crab fattening	**CMFRI**	Crab fattening		**1**	**7**	**8**					**2**	**0**	**2**	**2**	**23**	**26**	**17**	**19**	**8**	**5**	**0**	**6**

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					03					03
Integrated Pest Management										
Integrated Crop Management			03		02+03					08
Integrated Disease Management										
Small Scale Income Generation Enterprises										
Weed Management										
Farm Machineries										
Integrated Farming System										
Seed / Plant production										
Value addition										
Drudgery Reduction										
Storage Technique										
Mushroom cultivation										
Total			03		08					11

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

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

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

Thematic areas	Cattle	Poultry	Piggery	Rabbitry	Fisheries	TOTAL
Evaluation of Breeds						
Nutrition Management						
Disease Management	02					02
Value Addition						
Production and Management						
Feed and Fodder						
Small Scale income generating enterprises						
TOTAL	02					02

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

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

4.B. Achievements on technologies Assessed and Refined

4.B.1. Technologies Assessed under various Crops

Thematic areas	Crop	Name of the technology assessed	No. of trials	Number of farmers	Area in ha (Per trail covering all the Technological Options)
Integrated Nutrient Management					
Varietal Evaluation	Drumstick	Assessment of high yielding Drumstick varieties	10	10	0.2
Integrated Pest Management					
Integrated Crop Management	Red gram	Assessing the transplanting techniques in Red gram	7	7	0.2
Integrated Disease Management					
Small Scale Income Generation Enterprises					
Weed Management					
Resource Conservation Technology	Black gram	Assessment and performance of *PPFM application* for drought Tolerance in pulses	10	10	0.4
Farm Machineries					
Integrated Farming System					

Seed / Plant production					
Value addition					
Drudgery Reduction					
Storage Technique					
Mushroom cultivation					
Cropping system and crop intensification	Vegetables and spices	Assessment of cropping system for crop intensification suitable for Thoothukudi district	5	5	0.6
Total					

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

Thematic areas	Crop	Name of the technology assessed	No. of trials	Number of farmers	Area in ha (Per trail covering all the Technological Options)
Integrated Nutrient Management					
Varietal Evaluation					
Integrated Pest Management					
Integrated Crop Management					
Integrated Disease Management					
Small Scale Income Generation Enterprises					
Weed Management					
Resource Conservation Technology					
Farm Machineries					
Integrated Farming System					
Seed / Plant production					
Value addition					
Drudgery Reduction					
Storage Technique					
Mushroom cultivation					
Total					

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

Thematic areas	Name of the livestock enterprise	Name of the technology assessed	No. of trials	No. of farmers
Evaluation of breeds				
Nutrition management				
Disease management	Dairy cows	Herbal therapy for the management of clinical Mastitis	18	18
Value addition				
Production and management				
Feed and fodder				
Small scale income generating enterprises				
Total				

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

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

4.C1. Results of Technologies Assessed

Results of On Farm Trial

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
Red gram	Rainfed	Poor crop establishment in early stage Low yield due to terminal drought in long duration crops	Assessing the transplanting techniques in Red gram	7	Seed dibbling			Crop wilted due to acute drought in critical stages starting from 40 days and no yield could be obtained			
					Seedling transplanting			Crop wilted due to acute drought in critical stages The plant failed to establish in main field after transplanting			

Contd..

Technology Assessed	Source of Technology	Production	Please give the unit (kg/ha, t/ha, lit/animal, nuts/palm, nuts/palm/year)	Net Return (Profit) in Rs. / unit	BC Ratio
13	14	15	16	17	18
Technology option 1 (Farmer's practice)	Seed dibbling	Crop wilted in drought			
Technology option 2	Transplanting the seedling	Crop wilted in drought			
Technology option 3					

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
Drumstick	Irrigated	Low yield in due to drumstick the use of Local unnamed varieties	Assessment of drumstick varieties for high yield	10	PKM-1	Plant height	108 cm	Crop is in vegetative phase , the yield parameters will be assessed during the month of May-Aug	Plants have good vigour		
						No.of pods/plant					
						Pod weight /plant					
						Yield /tree					
					KDM-1	Plant height	120 cm		Plants have good vigour		
						No.of pods/plant					
						Pod weight /plant					
						Yield /tree					

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
Farmer's practice	TNAU	Crop is in vegetative phase (130 days old) , the yield parameters will be assessed during the month of May-Aug and reported separately			
Technology option 1 PKM-1	TNAU				
Technology option 2 KDM-1	UAS, Bagalkot				

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
Dairy cows	Semi intensive system	Loss in milk production due to udder infection and mastitis	Herbal therapy for the management of clinical Mastitis	7	Systemic and local Antibiotic administration based on the sensitivity of the causative organism involved along with anti inflammatory and antihistaminic agents	Success % in achieving clinical cure	86	Alternative herbal therapy with Aloe vera , turmeric and slaked lime paste topical application is equally effective in achieving clinical cure from mastitis in comparison to conventional antibiotic therapy. Besides providing cure, herbal therapy reduces the cost of treatment and minimizes the loss due to milk withholding period. This alternative treatment can be very well recommended as a first aid until the arrival of the veterinary service and latter on the course of the treatment to be decided by the treating veterinarian based on the results every day.	The farmers felt very nervous at the delay in starting the antibiotic treatment by the veterinarian . Herbal therapy with aloe vera, turmeric powder and slaked lime paste is easy to prepare and locally available everywhere and at low cost , thus reduces the cost of costlier antibiotics in mastitis treatment. But still the farmers expects the supervision of veterinarian in order to save the life of the affected cow.		
						success % in achieving clinical cure with e.coli mastitis	50				
						parity of the affected cows (ave.)	3				
						stage of lactation of the affected cows (ave.)	middle				
						ave. no.of days of treatement required to effect clinical cure from mastitis	3.85				
						ave. milk yield before mastitis	11				
						ave. milk yield after mastitis	9.25				
						% reduction in milk yield after mastitis	15.91				
						cost of treatment calculated at Rs. 300 per day of treatment	1157				
						ave. loss in milk with holding period (calculated as ave.of 7 days from last antibiotic infusion)	100.3625				
						cost of loss in milk during withholding period	2007.25				
						loss in revenue because of treatment for mastitis	3164.25				
						ave. milk withholidng period in days	10.85				
				11	Topical application of ground paste of Aloe vera (one full leaf), turmeric (50g) and slaked lime (5g) at one hour interval until complete cure	Success % in achieving clinical cure	82				
						success % in achieving clinical cure with e.coli mastitis	60				
						parity of the affected cows (ave.)	3				
						stage of lactation of the affected cows (ave.)	early				
						ave. no.of days of treatement required to effect clinical cure from mastitis	5.63				
						ave. milk yield before mastitis	10.31				

						ave. milk yield after mastitis	8.44				
						% reduction in milk yield after mastitis	18.13				
						ave. saving in terms of money for the treatment	1016				
						ave. saving in milk in lit. in terms of milk withholding period (calculated as ave.of 7 days from last antibiotic infusion)	59.08				

Contd..

Technology Assessed	Source of Technology	Production	Please give the unit (kg/ha, t/ha, lit/animal, nuts/palm, nuts/palm/year)	Net Return (Profit) in Rs. / unit	BC Ratio
13	14	15	16	17	18
Technology option 1 (Farmer's practice) Antibiotic therapy	TANUVAS	2775	Lit /lactation	19036	1.52
Technology option 2 Herbal therapy	TANUVAS	2532	Lit/lactation	20115	1.66
Technology option 3					

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
Black gram	Rainfed	Crop loss upto 50% due to prolonged drought during the cropping season	Assessment and performance of PPFM application for drought Tolerance in pulses		Seed treatment with rhizophos	Plants per sq.m	22				
						No. of pods /plant	10				
						No.seeds/pod	4				
						1000 seed weight (g)	40gm				
						No. of plants alive at maturation stage	15				
						Yield in kg/ha	240				
					Seed treatment of PPFM	Plants per sq.m	22				
						No. of pods /plant	12				
						No.seeds/pod	4				
						1000 seed weight (g)	42gm				
						No. of plants alive at maturation stage	17				
						Yield in kg/ha	378				
					Foliar application of PPFM	Plants per sq.m	22	Foliar application of the PPFM help in reducing the flower drops and increasing the yield than the conventional method of drought management practices	PPFM used to reduce the flower dropping in terminal water stress condition		
						No. of pods /plant	15				
						No.seeds/pod	5				
						1000 seed weight (g)	46gm				
						No. of plants alive at maturation stage	20				
						Yield in kg/ha	610				

Contd..

Technology Assessed	Source of Technology	Production	Please give the unit (kg/ha, t/ha, lit/animal, nuts/palm, nuts/palm/year)	Net Return (Profit) in Rs. / unit	BC Ratio
13	14	15	16	17	18
Technology option 1 (Farmer's practice)	seed treatment with rhizophos	506	Kg /ha	10770	1.6
Technology option 2	Seed treatment with PPFM	567	Kg/ha	13573	1.6
Technology option 3	Foliar application of PPFM	709	Kg/ha	22093	2.0

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
Vegetable	Irrigated	Low profitability due to poor usage and soil, air, water and space. Poor crop rotation techniques / mono cropping system	Assessment of crop rotation techniques for intensified agriculture in Tuticorin district.	05	TO-1 Chilli /Tomato as mono crop	Cropping intensity in %	200	The OFT was initiated during oct-Nov. 2013 and the data presented here is only upto march 2014 and the trial is continued upto sept 2014	Cultivation of more no. of compatible crops in the unit area gives more income than single crop		Cropping intensity
						No.of crops in a year	2				
						Gross cost for chilli crop	8600				
						Chilli yield from 0.2ha Green chilli Dry chilli	280kg 475kg				
						Gross income from chilli	Rs.23200				
					TO-2 Chilli with onion as intercrop	Cropping intensity in %	400				
						No.of crops in a year	4				
						Gross cost for one season	10300				
						Chilli(green)	470 kg				
						Chilli dry pods	460kg				

						Gross income from chilli + onion	34150				
						Onion	290 kg				
					TO-3 Radish , + Amaranthus, + Watermelon + Onion + Chilli	Cropping intensity in %	700				
						No.of crops in a year	7				
						Gross cost for one season	16700				
						Raddish 0.2ha	1350kg				
						Lablab +Water melon in 0.2ha	800kg 4860kg				
						Gross income from radish and lablab watermelon Total	6750 8000 38800 53630				

Contd..

Technology Assessed	Source of Technology	Production	Kg/0.2ha	Net Return (Profit) in Rs. / unit	BC Ratio
13	14	15	16	17	18
Technology option 1 (Farmer's practice)	TNAU	Chilli yield from 0.2ha Green chilli Dry chilli	 280kg 475kg	14600	2.7
Technology option 2	TNAU	Chilli(green)	270 gm	23850	3.3
		Chilli dry pods	460 kg		
		Onion	290kg		
Technology option 3	ITK	Raddish	1350kg	36930	3.2
		Lablab + Water melon in 0.2ha Amaranthus	800kg 4860kg 1450Kg		

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

	OFT no.	1			
1	Title of Technology Assessed	Assessing the transplanting techniques in Red gram			
2	Problem Definition	Low yield and no awareness on transplanting technology in red gram; crop losses due to terminal drought occurrence.			
3	Details of technologies selected for assessment	seed dibbling directly		transplanting of seedling raised in polybags.	
4	Source of technology	TNAU		TNAU	
5	Production system and thematic area	Rainfed & integrated crop management			
6	Performance of the Technology with performance indicators	T1		T2	
		Population /sq.m	3	Population / sq.m	4
7	Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques				
8	Final recommendation for micro level situation	Crop wilted due to acute prolonged dry spell and drought			
9	Constraints identified and feedback for research				
10	Process of farmers participation and their reaction				

1	Title of Technology Assessed	Assessment of high yielding Drumstick varieties	
2	Problem Definition	Low yield in moringa due to the use of poor seed vigour	
3	Details of technologies selected for assessment	PKM-1	KDM-1
4	Source of technology	TNAU	UAS, Bagalkot
5	Production system and thematic area	Irrigated , varietal introduction	
6	Performance of the Technology with performance indicators	Avg. Plant height at 100 DAS- 108 cm	Avg. Plant height at 100 DAS- 115 cm
7	Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques	Other yield parameters will be noted only after pod formation	
8	Final recommendation for micro level situation	Trial is in progress and the will be reported separately in next year annual report	
9	Constraints identified and feedback for research		
10	Process of farmers participation and their reaction	The farmers of selected villages were very keen to assess the yield components and followed the package of practices very carefully.	

<table>
<tr><td></td><td>OFT-3</td><td colspan="3"></td></tr>
<tr><td>1</td><td>Title of Technology Assessed</td><td colspan="3">Herbal therapy for the management of clinical Mastitis</td></tr>
<tr><td>2</td><td>Problem Definition</td><td colspan="3">Loss in milk production due to udder infection and mastitis</td></tr>
<tr><td>3</td><td>Details of technologies selected for assessment</td><td>1. Systemic and local Antibiotic administration based on the sensitivity of the causative organism involved along with anti inflammatory and antihistaminic agents</td><td colspan="2">Topical application of ground paste of Aloe vera (one full leaf), turmeric (50g) and slaked lime (5g) at one hour interval until complete cure</td></tr>
<tr><td>4</td><td>Source of technology</td><td>(TANUVAS)</td><td colspan="2">(TANUVAS, 2012)</td></tr>
<tr><td>5</td><td>Production system and thematic area</td><td colspan="3">Semi intensive rearing, Disease prevention and control in livestock</td></tr>
<tr><td>6</td><td>Performance of the Technology with performance indicators</td><td colspan="3"><table>
<tr><td>Parameters</td><td>TO-1</td><td>TO-2</td></tr>
<tr><td>Success % In Achieving Clinical Cure</td><td>86</td><td>82</td></tr>
<tr><td>Success % In Achieving Clinical Cure With E.Coli Mastitis</td><td>50</td><td>60</td></tr>
<tr><td>Parity Of The Affected Cows (Ave.)</td><td>3</td><td>3</td></tr>
<tr><td>Stage Of Lactation Of The Affected Cows (Ave.)</td><td>Middle</td><td>Early</td></tr>
<tr><td>Ave. No.Of Days Of Treatement Required To Effect Clinical Cure From Mastitis</td><td>3.85</td><td>5.63</td></tr>
<tr><td>Ave. Milk Yield Before Mastitis</td><td>11</td><td>10.31</td></tr>
<tr><td>Ave. Milk Yield After Mastitis</td><td>9.25</td><td>8.44</td></tr>
<tr><td>% Reduction In Milk Yield After Mastitis</td><td>15.91</td><td>18.13</td></tr>
<tr><td>Cost Of Treatment Calculated At Rs. 300 Per Day Of Treatment For Conventional Antibiotic Therapy</td><td>1157</td><td>NA</td></tr>
<tr><td>Total Cost Of Alternative Herbal Therapy Calculated At Rs. 25 Per Day</td><td>NA</td><td>141</td></tr>
<tr><td>Ave. Loss In Milk during With Holding Period (Calculated As Ave.Of 7 Days From Last Antibiotic Infusion)</td><td>100.3625</td><td>NA</td></tr>
<tr><td>Cost Of Loss In Milk During Withholding Period</td><td>2007.25</td><td>0</td></tr>
<tr><td>Loss In Revenue Because Of Treatment For Mastitis</td><td>3164.25</td><td>141</td></tr>
<tr><td>Ave. Milk Withholidng Period In Days</td><td>10.85</td><td>0</td></tr>
<tr><td>Ave. Saving In Terms Of Money For The Treatment</td><td>NA</td><td>1016</td></tr>
<tr><td>Ave. Saving In Milk In Lit. In Terms Of Milk Withholding Period (Calculated As Ave.Of 7 Days From Last Antibiotic Infusion)</td><td>NA</td><td>59.08</td></tr>
<tr><td>Gross Cost For The Treatment</td><td>3164.25</td><td>141</td></tr>
<tr><td></td><td></td><td></td></tr>
<tr><td></td><td></td><td></td></tr>
</table></td></tr>
<tr><td>7</td><td>Feedback, matrix scoring of various technology parameters done through farmer’s participation /</td><td colspan="3">The farmers felt very nervous at the delay in starting the antibiotic treatment by the veterinarian .
Herbal therapy with aloe vera, turmeric powder and slaked lime paste is easy to prepare and locally available everywhere and at low cost , thus reduces the cost of costlier antibiotics in mastitis treatment.

But still the farmers expects the supervision of veterinarian in order to save the life of the</td></tr>
</table>

	other scoring techniques	affected cow
8	Final recommendation for micro level situation	Alternative herbal therapy with Aloe vera , turmeric and slaked lime paste topical application is equally effective in achieving clinical cure from mastitis in comparison to conventional antibiotic therapy. Besides providing cure, herbal therapy reduces the cost of treatment and minimizes the loss due to milk withholding period. This alternative treatment can be very well recommended as a first aid until the arrival of the veterinary service and latter on the course of the treatment to be decided by the treating veterinarian based on the results every day.
9	Constraints identified and feedback for research	Blanket herbal therapy alone is not effective in all the cases and it need to be corroborated further with causative agents and type of mastitis to convince its effectiveness for the farmers and practicing veterinarian. Per acute and acute mastitic cases needed supportive therapy apart from antibiotics and thus the supervision of veterinarian is very much essential .
10	Process of farmers participation and their reaction	The farmers were selected based on the request received for the treatment of affected cows. While administering the therapy the opinion of the farmer is obtained before selecting the treatment option. The farmers felt very nervous at the delay in starting treatment by the veterinarian . Herbal therapy with aloe vera, turmeric powder and slaked lime paste is easy to prepare and locally available everywhere and at low cost , thus reduces the cost of costlier antibiotics in mastitis treatment. But still the farmers expects the supervision of veterinarian in order to save the life of the affected cow.

<table>
<tr><td></td><td>OFT-4</td><td colspan="4"></td></tr>
<tr><td>1</td><td>Title of Technology Assessed</td><td colspan="4">Assessment and performance of Methylo bacterium application for drought Tolerance in pulses</td></tr>
<tr><td>2</td><td>Problem Definition</td><td colspan="4">Crop loss upto 50% due to prolonged drought during the cropping season</td></tr>
<tr><td>3</td><td>Details of technologies selected for assessment</td><td>Seed treatment with rhizophos</td><td colspan="2">Seed treatment of PPFM</td><td>Foliar application of PPFM</td></tr>
<tr><td>4</td><td>Source of technology</td><td>TNAU</td><td colspan="2">TNAU</td><td>TNAU</td></tr>
<tr><td>5</td><td>Production system and thematic area</td><td colspan="4">Dry farming, promotion of drought tolerance technologies</td></tr>
<tr><td rowspan="7">6</td><td rowspan="7">Performance of the Technology with performance indicators</td><td></td><td>TO 1</td><td>TO 2</td><td>TO 3</td></tr>
<tr><td>Plants per sq.m</td><td>22</td><td>22</td><td>22</td></tr>
<tr><td>No. of pods /plant</td><td>10</td><td>12</td><td>15</td></tr>
<tr><td>No.seeds/pod</td><td>4</td><td>4</td><td>5</td></tr>
<tr><td>1000 seed weight (g)</td><td>40gm</td><td>42gm</td><td>46gm</td></tr>
<tr><td>No. of plants alive at maturation stage</td><td>15</td><td>17</td><td>20</td></tr>
<tr><td>Yield in kg/ha</td><td>240</td><td>378</td><td>610</td></tr>
<tr><td>7</td><td>Feedback, matrix scoring of various technology parameters done through farmer’s participation / other scoring techniques</td><td colspan="4">PPFM used to reduce the flower dropping in terminal water stress condition</td></tr>
<tr><td>8</td><td>Final recommendation for micro level situation</td><td colspan="4">Seed treatment and foliar application of PPFM during pre and post flowering period of drought acqure.</td></tr>
<tr><td>9</td><td>Constraints identified and feedback for research</td><td colspan="4">Nil</td></tr>
<tr><td>10</td><td>Process of farmers participation and their reaction</td><td colspan="4">Farmers are willing to spray PPFM by observing the results of the assessment</td></tr>
</table>

	OFT-5			
1	Title of Technology Assessed	Assessment of crop rotation techniques for intensified agriculture in Tuticorin district.		
2	Problem Definition	Low profitability due to poor usage of soil, air, water and space. Poor crop rotation techniques / mono cropping system leads to low income / unit area		
3	Details of technologies selected for assessment	TO-1 Chilli /Tomato as mono crop	TO-2 Chilli with onion as intercrop	TO-3 Raddish, + amaranthus + watermelon + lablab + chilli + onion
4	Source of technology		TNAU	ICAR , TNAU
5	Production system and thematic area	Crop intensification technique under irrigated condition		
6	Performance of the Technology with performance indicators			

	TO-1	TO-2	TO-3
Cropping intensity	200	400	700
No. of crop per year	2	4	7
Gross cost for 6 months	8600	10300	16700
Gross income for 6 months	23200	34150	53630
Net return per unit area for 6 months	14600	23850	36930
CBR	2.7	3.3	3.2

7	Feedback	Crops are in rotation and could be assessed only after the harvest of all crops used in the OFT and the trial will goes up to October, 2014
8	Final recommendation for micro level situation	
9	Constraints identified and feedback for research	Will be known only after the cropping period of all crops are over.
10	Process of farmers participation and their reaction	Farmers were selected through village level meeting and trained on crop rotation techniques through on and off campus training. Farmers are showing great interest and following the guidelines carefully.

Cropping intensity chart for a calendar of year

Trial	Area	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
TO-1	0.2	C	C				T	T	T	T	T	C	C
TO-2	0.2	C+O	C	C			C+O	C+O	C+O	C	C		
TO-3	0.2	W/L	W	A	A		C+O	C+O	C+O	C	C	R/L/S	W/L

W: Water melon, R: Radish, O: Onion, C: Chilli, A: Amaranths, L-lablab, T-Tomato

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
Technology Option 1 (best performing Technology Option in assessment)					
Technology Option 2 (Modification over Technology Option 1)					
Technology Option 3 (Another Modification over Technology Option 1)					

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

PART V - FRONTLINE DEMONSTRATIONS

5.A. Summary of FLDs implemented during 2013-14

Sl. No.	Category	Farming Situation	Season and Year	Crop	Variety/ breed	Hybrid	Thematic area	Technology Demonstrated	Area (ha)		No. of farmers/ demonstration			Reasons for shortfall in achievement
									Proposed	Actual	SC/ST	Others	Total	
	Oilseeds													
1	Pulses	Dry farming	Rabi 2013	Greengram	Co-6		Promotion of mechanization in agriculture	Sowing in tractor drawn seed dril. Weeding by tractor drawn tiller mount weeder Pesticide and weedicide spray using tractor drawn mobile sprayer	4.0	4.0	0	10	10	
2	Cereals	Irrigated	2013-14 Rabi/summer	Paddy	TRY-3		Introduction of high yielding crop varieties	Seed- TRY-3 Azophos seed treatment N application using Leaf colour chart Neem oil spray Egg card Trichogramma japonicum-stem borer control Trichogramma chilonis-Leaf folder control Pheromone traps	4.0	4.0		10	10	
3	Millets	Dryland farming	Rabi 2013	Sorghum	Co(S)-30		Introduction of high yielding crop varieties	Sorghum seeds CO(S)- 10Kg/ha Seed hardening 2 % KH 2 Po 4 -	4.0	4.0	5	5	10	

								Azophos seed treatment Pseudomonas seed treatment Atrazine spray to control weed						
4	Vegetables	Irrigated	2013-14 Kharif /Rabi	Babycorn		G-5414	Introduction of high yielding crop varieties	Baby corn seed @20kg/ha Azophos – 2.5kg/ha Atrazine spray to control weed Labeling, grading, packing, marketing	2.0	2.0		10	10	
5	Vegetables	Irrigated	Rabi/summer 2013-14	Lab Lab	C0-14		Introduction of high yielding crop varieties	Seed Co-14	2.0	2.0	4	6	10	
6	Flowers													
7	Ornamental													
8	Fruit													
9	Spices and condiments													
10	Commercial													
11	Medicinal and aromatic													
12	Fodder													

13	Plantation													
14	Fibre													
15	Dairy													
16	Poultry													
17	Rabbitry													
18	Pigerry													
19	Sheep and goat	Intensive system of rearing	2013-14	Goat	Kodi Adu		Improving the livestock productivity	Broiler method of male kid rearing	10	10	0	10	10	
20	Duckery													
21	Common carps	Extensive system of rearing in village common ponds	2011-12		Catla,Rohu, Mrigal, CC		Fish production in fresh water bodies	Composite fish culturing with stunted fingerlings	1.6	1.6	1	3	4	
22		Extensive system of rearing in village common ponds	2012-13		Catla,Rohu, Mrigal, CC		Fish production in fresh water bodies	Composite fish culturing with stunted fingerlings	1.6	1.6	1	3	4	
23		Extensive system of rearing in village common ponds	2013-14		Catla,Rohu, Mrigal, CC		Fish production in fresh water bodies	Composite fish culturing with stunted fingerlings	2.0	2.0	2	2	4	
24	Mussels													

25	Ornamental fishes		2011-12		Live bearers – Molly, Guppy, Sword tail		Promotion of ornamental fish rearing in backyard	Ornamental fish rearing using small ring tanks in the backyard	3 unit	3 unit	0	3	3	
26			2012-13		Live bearers – Molly, Guppy, Sword tail		Promotion of ornamental fish rearing in backyard	Ornamental fish rearing using small ring tanks in the backyard	3 unit	3 unit	0	3	3	
			2013-14											
27	Oyster mushroom													
28	Button mushroom													
29	Vermicompost													
30	Sericulture													
31	Apiculture													
32	Implements	Dry land farming	Rabi summer 13-14	Green gram	Co-6		Mechanization in pulses	Seed drill Horizontal triplex power sprayer Tractor mount weeder	10	10		20	20	
33	Tilapia culturing	Extensive system of rearing in farm ponds	2013-14		GIFT (Genetically improved farmed Tilapia)		Fish production in fresh water bodies	GIFT culturing in farm ponds with poor water quality						
34	Integrated farming system	Irrigated and Dry land farming	2013-14	IFS				IFS				3	3	

5A. 1. Soil fertility status of FLDs plots during 2013-14

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	
	Cereals											
		Irrigated	2013-2014	paddy	Variety	TRY -3	Demonstration on ICMP in Paddy	Azophos Leaf colour chart Seed Neem oil Egg card Trichogramma japonicum-stem borer Trichogramma chilonis-Leaf folder Pheromone traps	214.2	9.3	166	Banana Paddy
		Dry land farming	2013 - 2014	sorghum	variety	Co (s) 30	Demonstration of Dual purpose Sorghum variety.	Sorghum seeds CO(S)-10Kg/ha Seed hardening 2 %KH 2 Po 4 Biofertilizers Pseudomonas Atrazine	189.2	12.6	420	Blackgram Bajra
	Pulses	Dry land farming	2013-2014	Green gram	CO 6		Demonstration on on total mechanization in green gram cultivation	HTP sprayer	182	10	362	Bajra, sorghum,
	Vegetables	Irrigated	2013 - 2014	Baby corn	hybird	G5414	Demonstration of Baby Corn cultivation and Value addition	Baby corn seed @20kg/ha Azophos – 2.5kg/ha Atrazine 1lit/ha Establishment of marketing outlet	205.3	10.4	306.6	Sorghum Bajra
		Irrigator	2013 - 2014	Lab -Lab	variety	CO (Gb)14	Introduction of New CO(Gb)14 bush type lab lab beans & ICM practices for round the year cultivation	Seed 14 kg	214.6	12.2	263.8	Brinjal
	Agro forestry	Dry farming	2011 - 2012				Demonstration on on casurina and melia dubia cultivation on cultivable waste land	Casuarinas' MTP(2)2seedling-1600ac Melia dubia seedling - 334 /ac	205.5	9.2	420.2	Waste land
	Fruit											
	Spices and condiments											
	Commercial											
	Medicinal and aromatic											
	Fodder											
	Fibre											

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																			
Cereals	Introduction of saline resistant paddy variety	TRY-3		Irrigated	10	4.0	77	39	58	36	61	22000	87000	65000	3.1	20000	54000	34000	2.1
Millets	Demonstration of dual purpose sorghum variety	Co-30		Dry farming	10	4.0	27	22	24	17	43	16000	36240	20240	2.2	13000	25050	12050	1.92
Vegetables	Demonstration of babycorn cultivation		G-5414	Irrigate	10	2.0	57	43	50	NA		32000	90000	58000	2.8	-	-	-	-
	Demonstration of bush type lab lab	Co-14		Irrigate	10	2.0	114	86	101	78	30	33680	130130	96450	3.86	30150	101400	71250	3.36
Flowers																			
Ornamental																			
Fruit																			
Spices and condiments																			
Commercial																			
Fibre crops like cotton																			
Medicinal and aromatic																			
Fodder	Babycorn		G-5414	Irrigate	10	2.0	412	254	315	NA		12000	31500	19500	2.6	New introduction so no check.			
Plantation																			
Fibre																			
Cocoa	Cocoa as intercrop in coconut plantation	Forestero cocoa		Irrigate	5	2			67.5	0		Will be assessed and reported from the 5th year onwards as the economic yield starts only from 5th year for the cocoa plant The harvested bean were sold @ Rs.350 per Kg and gave Rs.9450 per ha for the farmer in the 3rd year of plantation							

* 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**
	Variety	TRY-3	CR 1009
Paddy	Plant population per sq.m	52	52
	No.of productive tillers per hill	8	6
	No.of filled grain per productive tiller	98	60
	1000 grain weight in g	20.3	20.0
Sorghum	Variety	Co(S)-30	K-8
	No. of plant / m^2	15	15
	No of tiller / hill	2	1
	No. of seed / head	340	280
	Seed Wt (1000 Nos)	26gm	26gm
Baby corn	No. of plant / m^2	15	-
	No. of Cobs / plant	2 – 3	-
	Avg Cob Wt	95g	-
	Self life of Baby corn	2 days	
	Average length	7-11 cm	
	Average diameter	1.0 – 1.5 cm	
	Selling price of baby corn after grading and packing	Rs 2 to 3 per cob	
	Cob yield q/ha	49.6	
	Income from selling green fodder	31500	
Lablab	Variety	Co-14	Co-8
	Avg. days to flowering	42	48
	Avg.days to pod maturity	16	19
	Avg.plant height (cm)	86	92
	No.of plucking	7	
	Crop duration indays	130	
	Yield qtl./ha	114	78
Agroforestry Casurina and Melia dubia			
Casurina	Variety	MTP-2	
	Ave.height at the end of 2nd year	9.5 ft	
	Ave. Girth at the end of 2nd year	15.71cm	
Melia dubia	Ave.height at the end of 2nd year	12 ft	
	Ave. Girth at the end of 2nd year	23.57 cm	

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																	
Rabbitry																	
Pigerry																	
Sheep and goat	Broiler system of male goat kid rearing	Kodi Adu	10	10	Under observation complete final results will be available at the end of May 2014. The demo was initiated in the lean season which starts from mid February when the availability of fodder reduces and shortage starts which forces the goat rearing farmers to sell out their kids at the early age by April. However the initial observations are mentioned in the additional parameters table.												
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**
Ave.birth weight of the male kid (Kg)	**1.77**	**1.65**
Body weight of the kid at 30 days	3.8	3.2
Body weight of the kid at 60 days	5.85	4.8
Parity of the dam (Ave.)	3.3	3.5

No. of siblings born	1.6	1.7
Mortality in kids selected for the demonstration or check until 60 days	0	0
Incidence of indigestion until 60 days	0	0

5.B.3. Fisheries

Type of Breed	Name of the technology demonstrated	Breed	No. of Demo	Units/ Area (m^2)	Yield (q/ha)				% Increase	*Economics of demonstration Rs./unit) or (Rs./m2)				*Economics of check Rs./unit) or (Rs./m2)			
					Demo			Check if any		Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR
					H	L	A										
Common carps																	
2011-12	Composite fish culture with stunted fingerlings	Catla, Rohu, Mrigal, Common Carp	4	16000	25	17.8	20.57	13.9	47.98	5.52	16.7	11.2	3.03	3.0	8.34	5.34	2.8
2012-13	Composite fish culture with stunted fingerlings	Catla, Rohu, Mrigal, Common Carp	4	16000	22.4	16.4	19.4	13.25	46.41	5.52	15.52	10.0	2.8	3.0	7.95	4.95	2.7
2013-14	Composite fish culture with stunted fingerlings	Catla, Rohu, Mrigal, Common Carp	4	20000	Fishes are in growth stage and harvest is expected by the month of June-July 2014												
Mussels																	
Ornamental fishes				Area (m^2)			No.of fishes produced / m^2)										
2011-12	Ornamental fish rearing using small ring tanks in the backyard	Guppies, Molly, Sword tail	3	16			313.5	0	0	650	1254	604	1.92	0	0	0	NA
2012-13	Ornamental fish rearing using small ring tanks in the backyard	Guppies, Molly, Sword tail	3	16			328.8	0	0	675	1315	640	1.94	0	0	0	0

2013-14	Ornamental fish rearing using small ring tanks in the backyard	Gold fish, Molly, Sword tail	3	16			314	0	0	712.5	1413	700.5	1.98	0	0	0	NA
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., reduction of percentage diseases, effective use of land etc.)

Data on other parameters in relation to technology demonstrated					
Parameter with unit		**Demo**			**Check if any**
Ornamental fish rearing in backyards					
2011-12	**Ave.young ones produced /female/month**	**29.3**			**NA**
	% of mortality in brooder fish due to transport shock	**26%**			
	% of mortality in fish due to anchor worm infestation	**39.1%**			
	% of mortality in young ones	**1.2 %**			
	Size of the young one at one month age	**1.25 cm**			
		Guppies	Molly	Sword tail	
2012-13	Avg.no.of young ones produced per female per annum	**101**	**86**	**76**	
	% of mortality in fish due to anchor worm infestation	**Nil**	**Nil**	**Nil**	
	Breeding season	**Round the year**	**Round the year**	**Round the year**	
	Avg. Marketing age	**3-4 months**	**3-4 months**	**3-4 months**	
	Avg.size at marketing age in cm	**3.5 cm**	**3.5 cm**	**3.5 cm**	
	% of mortality from spawn to marketing stage	**48**	**50**	**55**	
	Avg. selling cost per fish in Rs.	**3**	**6**	**7**	
2013-14		Gold fish	Molly	Sword tail	
2013-14	Avg.no.of young ones produced per female per annum	89	86	76	
	Anchor worm infestation	0	0	0	

	Breeding season	June-Aug and Nov.-Jan	**Round the year**	**Round the year**	
	Avg. Marketing age	4-5 months	**3-4 months**	**3-4 months**	
	Avg.size at marketing age in cm	4.5	3.5	3.5	
	% of mortality from spawn to marketing stage	55	45	50	
	Avg. selling cost per fish	10	6	7	
Common carp rearing with stunted yearlings					
2011-12	Age and size of the fish stocked in village pond	13.5 cm length , one year old stunted carp			5cm length, two month old advanced fries
2012-13	Age and size of the fish stocked in village pond	14.5 cm length , one year old stunted carp			5cm length, two month old advanced fries
2013-14	Age and size of the fish stocked in village pond	12.9 cm length , one year old stunted carp			5cm length, two month old advanced fries

5.B.4. Other enterprises

Enterprise	Name of the technology demonstrated	Variety/ species	No. of Demo	Units/ Area {m^2}	Yield (q/ha)				% Increase	*Economics of demonstration (Rs./unit) or (Rs./m2)				*Economics of check (Rs./unit) or (Rs./m2)			
					Demo			Check if any		Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR
					H	L	A										
Mechanisation	Demonstration on mechanization in green gram cultivation through custom hiring	Co-6	20	6	6.1	5.8	5.5	4.3		18345	50000	31655	**2.72**	26675	49500	22825	1.86
Button mushroom																	
Vermicompost																	
Sericulture																	
Apiculture																	
Others (pl.specify)																	

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

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

5.B.5. Farm implements and machinery

Name of the implement	Custom hiring Cost of the implement in Rs/ha.	Name of the technology demonstrated	No. of Demo	Area covered under demo in ha	Labour requirement in Mandays /ha		% 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
Seed drill	800	Sowing using seed drill	20	8	0		100	250	18345	50000	31655	2.72	26675	50000	23325	1.87
Manual sowing						1.25										
Horizontal triplex power sprayer	800	Spraying the chemicals 3 times during the cropping period			0.56		90.67	600								
Hand operated sprayer						6										
Tractor mount weeder	800	Weeding -2 times			10.72		78.6	5356								
Hand weeding						50										
Combined harvester	1200				0		100	4500								
Manual harvesting and threshing by hand						30										

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**
Reduction in time for sowing with seed drill	**2.5 hrs**	
Reduction in time for spraying by tractor mount triplex sprayer	1.75 hrs	
Reduction in time for harvesting and threshing	14.5 hrs	
Reduction in time for weeding	14.5 hrs	

5.B.6. Extension and Training activities under FLD

Sl.No.	Activity	No. of activities organised	Number of participants	Remarks
1	Field days	8	256	
2	Farmers Training	26	425	
3	Media coverage	4	Mass	
4	Training for extension functionaries	4	125	
5	Others (Please specify)			

5.B.7. Results of Integrated Farming system Demonstrations

Sl .no.	Name of the farmer and village	Farming situation	Existing or newly added	Crop /enterprise	Area in ha	unit size	Economics of IFS model				Remarks
							Gross expenditure in Rs.	Gross income in Rs.	Net return in Rs.	BCR	
1	Ilango, Sawyerpuram	Irrigated garden land	E	Banana	0.8 ha		108800	270000	161200	2.48	FYM, Panchakavya and vermicompost produced from the same unit is used as manure for the unit and thus minimised the cost of external fertilizer
			A	Babycorn as intercrop in banana field	0.1 ha		1250	12500	11250	9.0	
			E	Fodder Co-4	0.2 ha		11200	0	0		The fodder produced is fed to dairy cows and goats maintained in the same unit
			E	Coconut	0.1 ha		6000	12000	6000	2.0	
			E	Vegetable followed by paddy	0.1 ha		8500	14875	6375	1.75	
			E	Dairy cows	0.1ha	10	265650	420000	154350	1.58	Dairy cows are maintained under intensive system of rearing
			E	Goat rearing		5 +1	27885	50000	22115	1.79	
			A	Backyard poultry		10+2	9100	21300	12200	2.34	
			A	Mini Biogas unit		1.0 Cu.m	1500	3600	2500	2.4	Mini Biogas unit costs Rs.9000 including all costs of installation and accessories and its life is expected for 7 years under normal conditions The gas produced is utilized for the family(consist of 4 persons) cooking thus replacing the need for 9 LPG cylinders per annum which costs upto Rs.3600
			A	Vermicompost – 6 cu.m capacity		6 cu.m.	1240	4500	3260	3.63	1460 kg of vermicompost is produced per annum and of this 460 kg is sold to the market and 1000 kg is used for the banana and vegetable crops in the same unit
				Total	**1.4**		**441125**	**808775**	**379250**	**1.833**	
2	Balavesam , Thimmarajapuram	Dry land farming	E	Sorghum	1.0		19000	37500	18500	1.97	8 t of dry fodder harvested is taken for dairy cows in the same unit . only the income from the grain is calculated
			E	Fodder sorghum	1.2		58500	90000	31500	1.54	12 t of dry fodder harvested is taken for dairy cows in the same unit. Only the income from the sale of seed is calculated .
			A	Fodder sorghum Var.CoFS-29	0.4		14500	22500	8000	1.55	6t of dry fodder harvested is taken for dairy cows in the same unit. Only the income from the sale of seed is calculated .
			E	**Dairy cows**	**10**						
			E	Dairy cows	0.1ha	10	296000	620000	324000	2.09	Dairy cows are maintained under semi intensive system of rearing
			E	Goat rearing		5 +1	27885	50000	22115	1.79	
			A	Backyard poultry		10+2	2400	7200	4800	3.0	600 eggs were consumed for the family and the rest of the eggs were sold in the market at Rs.8 per egg , only that money is calculated for income
			A	Mini Biogas unit		1.0 Cu.m	1500	3600	2500	2.4	Mini Biogas unit costs Rs.9000 including all costs of installation and accessories and its life is expected for 7 years under normal conditions

											The gas produced is utilized for the family(consist of 4 persons) cooking thus replacing the need for 9 LPG cylinders per annum which costs upto Rs.3600
			A	Vermicompost – 6 cu.m capacity		6 cu.m.	1240	4500	3260	3.63	1460 kg of vermicompost is produced per annum and of this 460 kg is sold to the market and 1000 kg is used for the crops in the same unit
				Total	**2.7**	**10**	**421025**	**835300**	**414675**	**1.98**	**0**
3	Radhakrishnan, Jegaveerapandiyapuram	Dryland farming	E	Greengram	1.0		26675	50000	23325	1.87	
			E	Blackgram	1.0		26675	50400	23725	1.89	
			E	Pearl millet	1.0		18500	38900	20400	2.12	
			A	Cows	0.1	2	45800	89000	33800	1.94	The crop residues and waste grain were fed to the cattle maintained under semi intensive system of rearing
			A	Goat		20+1	132000	184000	52000	1.39	
			A	Backyard poultry		10+2	2400	7200	4800	3.0	
			A	Mini Biogas unit		1.0 Cu.m	1500	3600	2500	2.4	
			A	Vermicompost – 6 cu.m capacity		6 cu.m.	1240				The entire vermicompost is used for the same farm unit
				Total	**3.1**	**2**	**254790**	**423100**	**160550**	**1.66**	

Summary of IFS implemented during 2013-14

Sl .no.	**Name of the farmer and village**	**Farming situation**	**Crop /enterprise**	**Area in ha**	**Economics of IFS model**			
					Gross expenditure in Rs.	**Gross income in Rs.**	**Net return in Rs.**	**BCR**
1	Ilango, Sawyerpuram	Irrigated garden land	**Crop + Horticulture +Livestock + Poultry +Biogas +Vermicompost**	**1.4**	**441125**	**808775**	**379250**	**1.833**
2	Balavesam , Thimmarajapuram	Dry land farming	**Crop +Livestock + Poultry +Biogas +Vermicompost**	**2.7**	**421025**	**835300**	**414675**	**1.98**
3	Radhakrishnan, Jegaveerapandiyapuram	Dryland farming	**Crop +Livestock + Poultry +Biogas +Vermicompost**	**3.1**	**254790**	**423100**	**160550**	**1.66**
			Total	**7.2**	**1116940**	**2067175**	**950235**	**1.85074847**

PART VI – DEMONSTRATIONS ON CROP HYBRIDS

Demonstration details on crop hybrids

Type of Breed	Name of the technology demonstrated	Name of the hybrid	No. of Demo	Area (ha)	Yield (q/ha)				% Increase	*Economics of demonstration (Rs./ha)				*Economics of check (Rs./ha)			
					Demo			Check		Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR
					H	L	A										
Cereals																	
Bajra																	
Maize																	
Paddy																	
Sorghum																	
Wheat																	
Others (pl.specify)																	
Total																	
Oilseeds																	
Castor																	
Mustard																	
Safflower																	
Sesame																	
Sunflower																	
Groundnut																	
Soybean																	
Others (pl.specify)																	
Total																	
Pulses																	
Greengram																	
Blackgram																	
Bengalgram																	
Redgram																	
Others (pl.specify)																	
Total																	
Vegetable crops																	
Bottle gourd																	
Capsicum																	
Others (pl.specify)	Demonstration of babycorn cultivation	G-5414	10	2.0	57	43	50	NA		32000	90000	58000	2.8	-	-	-	-
Total																	
Cucumber																	
Tomato																	
Brinjal																	
Okra																	
Onion																	
Potato																	
Field bean																	
Others (pl.specify)																	
Total																	
Commercial crops																	
Sugarcane																	
Coconut																	
Others (pl.specify)																	
Total																	
Fodder crops																	
Maize (Fodder)																	
Sorghum (Fodder)																	
Others (pl.specify)																	
Total																	

H-High L-Low, A-Average

PART VII. TRAINING

7.A.. Training of Farmers and Farm Women including sponsored training programmes (On campus)

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Crop Production										
Micro Irrigation/Irrigation	2	60	25	85	40	20	60	100	45	145
Soil and Water Conservation	2	26	7	33	11	5	16	37	12	49
Integrated Nutrient Management	3	56	2	58	20	7	27	76	9	85
Horticulture										
a) Vegetable Crops										
Off-season vegetables	1	25	0	25	5	0	5	30	0	30
b) Fruits										
Cultivation of Fruit	2	14	0	14	2	0	2	16	0	16
Livestock Production and Management										
Animal Nutrition Management	1	5	0	5	0	0	0	5	0	5
Integrated farming system	3	43	25	68	40	20	60	83	45	128
Home Science/Women empowerment										
Design and development of low/minimum cost diet	2	46	27	73	38	26	64	84	53	137
Processing and cooking	2	13	14	27	6	10	16	19	24	43
Value addition	9	131	98	229	82	59	141	213	157	370
Plant Protection										
Integrated Pest Management	5	107	17	124	23	8	31	130	25	155
Organic bio input production	1	48	0	48	5	0	5	53	0	53
Fisheries										
Integrated fish farming	1	6	4	10	5	5	10	11	9	20
Breeding and culture of ornamental fishes	1	8	5	13	4	6	10	12	11	23
Fish processing and value addition	1	18	0	18	12	0	12	30	0	30
TOTAL	**36**	**606**	**224**	**830**	**293**	**166**	**459**	**899**	**390**	**1289**

7.B Training of Farmers and Farm Women including sponsored training programmes (Off campus)

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Crop Production										
Weed Management	1	16	0	16	0	0	0	16	0	16
Resource Conservation Technologies	9	186	8	24	19	6	25	205	14	219
Integrated Crop Management	13	379	52	431	37	23	60	416	75	491
Integrated Nutrient Management	10	192	93	285	67	43	110	259	136	395
Horticulture										
a) Vegetable Crops										

Production of low value and high volume crop	6	48	45	93	1	2	3	49	47	96
Livestock Production and Management										
Dairy Management	3	40	29	69	1	0	1	41	29	70
Poultry Management	6	58	77	135	42	57	99	100	134	234
Animal Nutrition Management	1	21	2	23	5	0	5	26	2	28
Animal Disease Management	5	41	22	63	17	12	29	58	34	92
Feed and Fodder technology	2	11	5	16	7	2	9	18	7	25
Role of livestock in integrated farming	5	63	30	93	28	23	51	91	53	144
Home Science/Women empowerment										
Household food security by kitchen gardening and nutrition gardening	4	8	79	87	20	30	50	28	109	137
Designing and development for high nutrient efficiency diet	1	24	17	41	15	6	21	39	23	62
Gender mainstreaming through SHGs	4	0	98	98	0	62	62	0	160	160
Value addition	14	105	141	246	26	80	106	131	121	252
Women empowerment	1	0	17	17	0	0	0	0	17	17
Location specific drudgery production	1	0	0	0	0	26	26	0	26	26
Rural Crafts	1	21	22	43	14	15	29	35	37	72
Plant Protection										
Integrated Pest Management	20	327	134	461	132	109	241	459	243	702
Integrated Disease Management	1	34	0	34	0	0	0	34	0	34
Bio-control of pests and diseases	1	26	0	26	0	0	0	26	0	26
Production of bio control agents and bio pesticides										
Organic cultivation of water milon	2	24	0	24	2	2	4	26	2	28
Fisheries										
Composite fish culture	3	24	16	40	8	11	19	32	27	59
Breeding and culture of ornamental fishes	2	12	13	25	0	10	10	12	23	35
Demonstration of genetically improved farmed Tilapia	2	14	13	27	7	6	13	21	19	40
Murrel culture	1	5	5	10	6	4	10	11	9	20
Agro-forestry										
Tree planting programme in waste land development	1	45	7	52	12	0	12	57	7	64
TOTAL	**120**	**1724**	**925**	**2479**	**466**	**529**	**995**	**2190**	**1354**	**3544**

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

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Integrated farming	2	11	2	13	8	1	9	19	3	22
Vermi-culture	2	41	37	78	14	15	29	55	52	107
Mushroom Production	2	44	5	49	6	0	6	50	5	55
Value addition	2	21	22	43	14	15	29	35	37	72
Post Harvest Technology	1	12	0	12	16	0	16	28	0	28
Sheep and goat rearing	3	25	7	32	6	5	11	31	12	43

Poultry production	2	38	3	41	15	0	15	53	3	56
Pest management in coconut	2	40	0	40	7	0	7	47	0	47
Tapioca disease management	2	55	7	62	12	9	21	67	16	83
TOTAL	**18**	**287**	**83**	**370**	**98**	**45**	**143**	**385**	**128**	**513**

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

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Seed production	2	31	37	68	14	15	29	45	52	97
Vermi-culture	2	60	40	100	0	0	0	60	40	100
Value addition	2	4	20	24	1	16	17	5	36	41
Small scale processing	2	0	62	62	0	4	4	0	66	66
Post Harvest Technology	6	0	87	87	0	50	50	0	137	137
Sheep and goat rearing	2	0	50	50	0	39	39	0	89	89
High efficiency diet preparation for adolescent girls	4	0	49	49	0	42	42	0	91	91
TOTAL	**20**	**95**	**345**	**440**	**15**	**166**	**181**	**110**	**511**	**621**

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

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Productivity enhancement in field crops	2	44	18	62	19	8	27	63	26	89
Low cost and nutrient efficient diet designing	3	29	38	67	16	36	52	45	74	119
Group Dynamics and farmers organization	1	22	4	26	8	2	10	30	6	36
Management in farm animals	2	31	30	61	5	8	13	36	38	74
Total	**8**	**126**	**90**	**216**	**48**	**54**	**102**	**174**	**144**	**318**

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

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Integrated Nutrient management	1	12	7	19	0	0	0	12	7	19
Low cost and nutrient efficient diet designing	2	3	52	55	10	11	21	13	63	76
Total	**3**	**15**	**59**	**74**	**10**	**11**	**21**	**25**	**70**	**95**

7.G. Sponsored training programmes conducted

S.No.	Area of training	No. of Courses	No. of Participants								
			General			SC/ST			Grand Total		
			Male	Female	Total	Male	Female	Total	Male	Female	Total
1	**Crop production and management**										
1.a.	Increasing production and productivity of crops	3	27	18	45	32	23	55	59	41	100
2	**Production and value addition**										
3.	**Soil health and fertility management**										
4	**Production of Inputs at site**										
5	**Methods of protective cultivation**										
6	**Others (pl.specify)**										
7	**Post harvest technology and value addition**	2	47	27	74	39	38	77	86	65	151
8	**Farm machinery**										
8.a.	Farm machinery, tools and implements	1	10	3	13	5	0	5	15	3	18

9.	**Livestock and fisheries**										
10	**Livestock production and management**										
10.a	Integrated Farming System	2	34	8	42	11	4	15	45	12	57
10.b	Poultry Rearing	1	27	13	40	24	22	46	51	35	86
11	**Home Science**										
12	**Agricultural Extension**										
12.a	Friends of coconut training	10	82	14	96	84	20	104	166	34	200
	Total	**19**	**227**	**83**	**310**	**195**	**107**	**302**	**422**	**190**	**612**

Details of sponsoring agencies involved

1.ATMA Tuticorin

2. Coconut Development Board

3. Department of Horticulture, Animal husbandry, Marketing, SCAD

7.H. Details of Vocational Training Programmes carried out by KVKs for rural youth

S.No.	Area of training	No. of Courses	No. of Participants								
			General			SC/ST			Grand Total		
			Male	Female	Total	Male	Female	Total	Male	Female	Total
1	**Crop production and management**										
1.a	Friends of coconut training	10	82	14	96	84	20	104	166	34	200
2	**Post harvest technology and value addition**										
3.	**Livestock and fisheries**										
4.	**Income generation activities**										
4.a.	Production of bio-agents, bio-pesticides, bio-fertilizers etc.	1	19	0	19	0	0	0	19	0	19
4.b.	Mushroom cultivation	3	26	10	36	12	12	24	38	22	60
4.c	Tailoring, stitching, embroidery, dying etc.	2	0	24	24	0	26	26	0	50	50
5	**Agricultural Extension**										
5.a.	Capacity building and group dynamics	4	0	46	46	0	38	38	0	84	84
	Grand Total	**20**	**127**	**94**	**221**	**96**	**96**	**192**	**223**	**190**	**413**

PART VIII – EXTENSION ACTIVITIES

Extension Programmes (including extension activities undertaken in FLD programmes)

Nature of Extension Programme	No. of Programmes	No. of Participants (General)			No. of Participants SC / ST			No. of extension personnel		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Field Day	5	25	14	17	40	44	48	2	6	8
Exhibition	6	1230	1456	2686	828	811	1639	24	15	39
Film Show	5	145	60	205	0	0	0	0	0	0
Method Demonstrations	4	28	22	50	18	21	39	0	0	0
Workshop	2	0	0	0	0	0	0	41	24	65
Group meetings	78	0	728	728	0	625	625	6	28	34
Lectures delivered as resource persons	8	72	173	245	32	57	89	0	0	0
Newspaper coverage	15	0	0	0	0	0	0	0	0	0
TV talks	1	0	0	0	0	0	0	0	0	0
Popular articles	8	0	0	0	0	0	0	0	0	0
Extension Literature	4	0	0	0	0	0	0	0	0	0
Advisory Services	165	354	432	786	110	112	222	0	0	0
Scientific visit to farmers field	388	86	98	184	113	91	204	0	0	0
Farmers visit to KVK	24	850	1105	1955	650	580	1230	0	0	0
Animal health camp	30	107	102	209	100	96	196	23	20	43
Self Help Group Conveners meetings	33	0	625	625	0	0	0	4	8	12
Celebration of important days (Womens day)	4	0	1025	1025	0	520	520	10	26	36
ATMA Meeting	6	0	0	0	0	0	0	0	0	0
Farm field school	3	32	47	79	28	34	62	6	12	18
Farmers meeting	168	63	26	89	35	44	79	0	0	0
PRA	2	28	19	47	26	16	42	0	0	0
Total	**959**	**3020**	**5932**	**8930**	**1980**	**3051**	**4995**	**116**	**139**	**255**

Details of Veterinary campaigns and numbers of animals and farmers benefited:

Sl. No	Name of the Village	Date(s)	No of beneficiaries (farmers / Rural youth)			No. of Extension functionaries			No. of animals treated				
			Male	Female	Total	Male	Female	Total	Cattle	Sheep and goat	Poultry	Others	Total
1	Kootampuli	9.4.13	1	0	1	0	0	0	0	60	0	0	60
2	Oosemesiapuram	14.5.13	4	7	11	1	1	2	2	159	0	0	161
3	Aathanoor	10.5.13	6	6	12	1	1	2	33	17	0	0	50
4	Sekkarakkudi	13.5.13	1	0	1	0	0	0	0	0	80	0	80
5	Vedanatham	17.5.13	7	6	13	1	2	3	3	60	0	0	63
6	K.P.Thalavaipuram	24.5.13	6	5	11	2	2	4	7	66	0	0	73
7	Varthagarediipatti	24.5.13	1	1	2	0	0	0	13	5	0	0	18
8	Kuppanapuram	15.6.13	5	0	5	0	0	0	6	12	0	0	18
9	Sevelkulam	19.6.13	6	6	12	1	2	3	11	161	0	0	172
10	Thirumalaiyapuram	21.6.13	12	14	26	2	1	3	18	84	17	0	119
11	Pudukottai	22.6.13	1	1	2	0	0	0	0	0	40	0	40
12	Sippikulam	27.7.2013	5	0	5	0	0	0	72	38	0	0	110
13	Vilvamarathupatti	30.7.2013	10	22	32	2	1	3	18	128	0	0	146
14	Marthandampatti	6.8.13	3	3	6	2	1	3	9	67	0	0	76
15	Varthagareddipatti	26.3.13	14	14	28	2	1	3	24	0	0	0	24
16	oosemesiapuram	14.9.13	4	8	12	1	2	3	0	153	0	8	161
17	Ayyanbommaiyapuram	14.9.13	3	0	3	1	0	1	14	22	0	0	36
18	Aathanoor	17.9.13	6	6	12	1	2	3	4	26	0	0	30
19	Perungulam	18.9.13	3	0	3	0	0	0	30	60	0	0	90
20	Vilvamarathupatti	28.9.13	10	12	22	1	2	3	7	140	0	0	147
21	Vedanatham	5.10.13	14	10	24	0	0	0	1	69	0	0	70
22	Kootampuli	13.10.13	1	1	2	0	0	0	0	90	0	0	90
23	Thalavaipuram	24.10.13	12	19	31	0	0	0	16	278	0	0	294
24	Thirumalayapuram	26.10.13	8	7	15	0	0	0	20	102	17	0	139
25	Sevalkulam	9.11.13	16	10	26	0	0	0	12	270	0	0	282
26	Patchaiperumalpuram	20.11.13	12	6	18	0	0	0	16	30	0	0	46
27	Vilvamarathupatti	22.2.14	6	6	12	2	0	2	0	110	0	0	110
28	Marthandampatti	25.2.14	12	8	20	2	1	3	10	128	0	0	138
29	Thirumalayapuram	19.4.14	12	17	29	1	1	2	0	122	17	0	139
30	oosemesiapuram	26.3.14	6	3	9	0	0	0	0	149	0	0	149
TOTAL			**207**	**198**	**405**	**23**	**20**	**43**	**346**	**2606**	**171**	**8**	**3131**

PART IX – PRODUCTION OF SEED, PLANT AND LIVESTOCK MATERIALS

9.A. Production of seeds by the KVKs

Crop category	Name of the crop	Variety	Hybrid	Quantity of seed (qtl)	Value (Rs)	Unit Cost Rs.	Number of farmers to whom provided
Cereals (crop wise)							
	Bajra	(CO Cu 9) g		15	45000	50	240
	Sorghum	Co-30		3.5	14000	40	20
Oilseeds							
Pulses	Black gram	VBN-5		2.5	22400	90	14
	Green gram	Co-6		2.7	21600	80	15
Commercial crops							
Vegetables	Kitchen garden seed kit			3.0	60000	20	3000
Flower crops							
Spices							
Fodder crop seeds	Fodder sorghum	Co -29		1.85	55500	300	10
	Hedge lucerne			0.05	2000	40	10
	Napier hybrid		Co-4	4500 slips	4500	1	4
Fiber crops							
Forest Species							
Others (specify)							
Tuber	Cassava	Sri Vijaya		2500 no.s	5000	2	4
Total				28.6	230000	623	3317

9.B. Production of planting materials by the KVKs

Crop category	Name of the crop	Variety	Hybrid	Number	Value (Rs.)	Number of farmers to whom provided
Vegetable seedlings	Drumstick		Air layer	150	4500	78
Fruits	Mango	Bangalora		198	6930	
		Neelam		125	4375	
	Anola			100	2000	75
	Guava			150	6000	85
Ornamental plants						
	Thuja					
	Bougainvillea			650	6500	25
	Clerodendran			500	5000	15
	Hibiscus ordinary			50	500	17
	Hibiscus adduku			64	640	54
	Hibiscus rose			50	500	27

	Crotons (acalipa –brown)			350	3500	15
	Duranta green			470	4700	26
Forest Species						
	Vagai			25	500	20
	Neem			2500	25000	650
	Casuarina			2800	10000	18
	Tamarind			250	2500	146
	Gliricidia			40	200	8
Total				8472	83345	1259

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	Azospirillum	195.6 kg	7335	104
	Azophos	157.6 kg	5910	86
	Phosphobacteria	8 kg	300	10
	Rhizopos	30.8 kg	1155	18
Bio-fungicide	Pseudomonas	47.3 kg	5676	42
	T.viridi	20 kg	2400	31
Others (specify)	EMA	406 lit	24360	356
	EMB	10 lit	600	10
	Mushroom spawn	35 pkts	1400	28
			0	0
Total		910.3	49136	**685**

9.D. Production of livestock materials

Particulars of Live stock	**Name of the breed**	**Number**	**Value (Rs.)**	**Number of farmers to whom provided**
Dairy animals				
Cows				
Buffaloes				
Calves				
Others (Pl. specify)				
Poultry				
Broilers				
Layers				
Duals (broiler and layer)	Vanaraja Namakkal-1	1255	94125	96
Japanese Quail	J.quail, Namakkal-1	625	11250	45
Turkey				
Emu				
Ducks				
Others (Pl. specify)				
Piggery				
Piglet				
Others (Pl.specify)				
Fisheries				
Fingerlings	Carp	10000	30000	5
Others (Pl. specify)				
Total		**11880**	**135375**	**146**

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

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

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

(B) Literature developed/published

Item	Title	Authors name	Number
Research papers	**"Helping small Ruminant Keepers for Enhancing their livelihood"** Lead Paper in international conference on current concepts in Small ruminants production system and disease management for profitable sheep and goat husbandry practices in Tamilandu held at VCRI.Tirunelveli on 25th June 2013	Dr.V.Srinivasan	1
Technical reports			
News letters			
Technical bulletins			
Popular articles	Usage of coconut tree climbers to the unemployed youths	Dr.G.Alagukannan M.Ashokkumar A.Murugan	1000
	Babycorn cultivation a boon to the small farmers	Mrs Sumathi Dr,G.Alagu kannan	500
Extension literature	Integrated nematode management in Banana	M.Ashokkumar Dr.G.Alagukannan	1500
	Successful goat rearing technology	Dr.V.Srinivasan Dr.G.Alagukannan	1500
	New paddy variety introduction for saline and alkaline soil-Try-3	A.Murugan Dr.G.Alagukannan	1500
Others (Pl. specify)	6		
TOTAL			

10.B. Details of Electronic Media Produced

S. No.	Type of media (CD / VCD / DVD/ Audio-Cassette)	Title of the programme	Number
1	**DVD Cassette**	**Integrated farming System**	**50**
		Mushroom production	**50**
		Bio fertilizer usage	**50**
		Panchakavya, plant based pest repellent production	**50**

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).

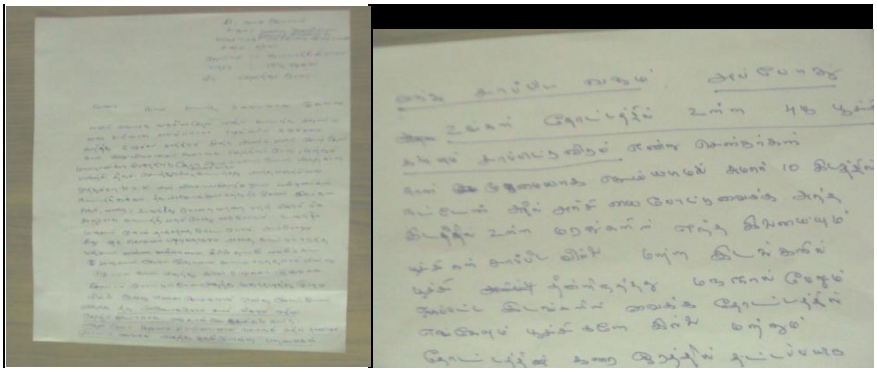
10.c.1 **Documentary evidence for controlling Drumstick pests by attracting birds**

Mr.C.Rajagopal of Nattahti villages has expressed his success in controlling of Moringa (Drumstick) pest (leaf webber and fruitfly) using a technique of attracting birds to hid Moringa field. He is having 19.5 acres of land, of which 5 acres under Moringa cultivation. Three years back he has sprayed lot of chemicals to control pests in Moringa. He has attended 'off campus' training at Tiruchendur conducted by our Kendra during 2011. In that meeting Mr. M.Ashokumar, SMS (PP) of our SCAD KVK explained about the technique of attracting birds to eat away the pupa and larva of Moringa pests.

As per this simple technique, five feet height stick is installed at about 10-12 places per acre and on which the lower portion of coconut shell is to be placed and filled with grains like rice for attracting small birds. After few days of attracting birds, the quantity of rice has to be reduced, so that the birds are diverted to search some other food like larva and pupa of insect pests. He has practiced this technique on his drumstick field and succeeded in a greater way that he is not at all spraying any pesticides and he has the "Title" as only man who maintains Moringa fields without chemical spray in that area.

He is also proudly telling his success to others in every meeting and others are surprised of this technique because he is maintaining proper records of expenditure and income from his Moringa. Now neighboring farmers has started doing this practice even for others crops like gourds. Our Kendra is taking sincere efforts to upscale this kind of 'no cost' or low cost techniques to contain crop pests.

Thanks letter written to SCAD KVK is furnished below



10.C.2. Value addition – paving the way for secondary agriculture

Realizing the importance of primary processing and value addition, SCAD KVK is continuously insisting upon the value addition of banana, Aonla, acid lime and millets. Our Kendra is conducting at least one training either 'on' or 'off' campus in a month but we are facing several hurdles in excelling in this area. Even then we are not discouraged in promoting secondary agriculture. A few case studies are explained here.

1. Mr .R. Venkatasamy of Srivilliputher had attended our training programme on value addition in minor millets during 2011-12 and he has inspired upon this aspect. He approached us and we have imparted intensive practical training on minor millets value addition. Under our guidance, he has established a pilot unit during the same year and came up with minor millets based products such as dosa mix, puttu mix, laddu etc. and he struggled to markets those products initially. We have given constant encouragements to him by guiding and helping in marketing aspect. We are displaying his product in our sales counter, we are supplying those product to the student hostels belongings to our SCAD group of Institution for aid him in sales. We have guided him on improved packing and his product is being introducing in super markets- Anantha, Arasan And Aryas located at Thirunelvelli. Now his business is becoming profitable and earns Rs 12,000 -18,000 as net income. We are trying to bring him as a an entrepreneur in this area.

2.Tmt. Thevanai from Alankulam village (Thirunelvelli Dist) attended our training programme or pickles making. She has already tried in preparation of pickles from acid lime, mango and narthai (citron). She failed in her attempts because of the poor technical know –how on pickle making. After attending our training programme and our periodical technical guidance, now she overcome those contamination (spoilage) problems and now her pickles products as **"AC PICKLES"**. She is earning an income of Rs. 10,000 -12,000 pm by selling pickles. She has wrote a thanks letter for our SMS (H.Sc) Tmt. Sumathi through e-mail and same is enclosed here.

SCAD KVK has got a license under Food Safety and Standards Authority of India (FSSAI) for promoting value added products in Mushroom and also planned to facilitate the entrepreneurs in value addition field to get this license for easy marketing.

Copy of the License obtained to market the KVK value added products

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

Sl.no.	Innovative methodology	Uses	Photograph of the innovation
1	**Tractor drawn tiller mount weeder**	Weeding the pulses field sown in line using seed drill in 30 cm spacing. Very efficiently Removes the weed in between lines One hectare pulses cultivated field Weeding is done in 45 min. using this innovative technology Very useful technology to overcome the labour shortage and minimizes or avoid the usage of chemical weedicide.	
2	**Tractor mount horizontal triplex power sprayer**	Very efficient in application of spray fluid at a faster speed and able to cover one hectare area of pulses field in 45 min. thus reduces the labour and cost	

10.D.2.. Involving Village Level Volunteers, Community based organizations and Cluster Level Animators in Technology Transfer Process

SCAD-KVK disseminated all the recent Agricultural and allied technologies through Innovative methodology in order to reach the farming communities.

Area spread through this Innovative Methodology Introduced through Volunteers system:

S.No	Block Name	No of Villages	No of volunteers	No of Animators
1.	Thoothukudi	102	96	8
2.	Ottapidaram	163	112	10
3.	Vilathikulam	180	154	12
4.	Tiruchendoor	52	52	6
	Total	497	414	36

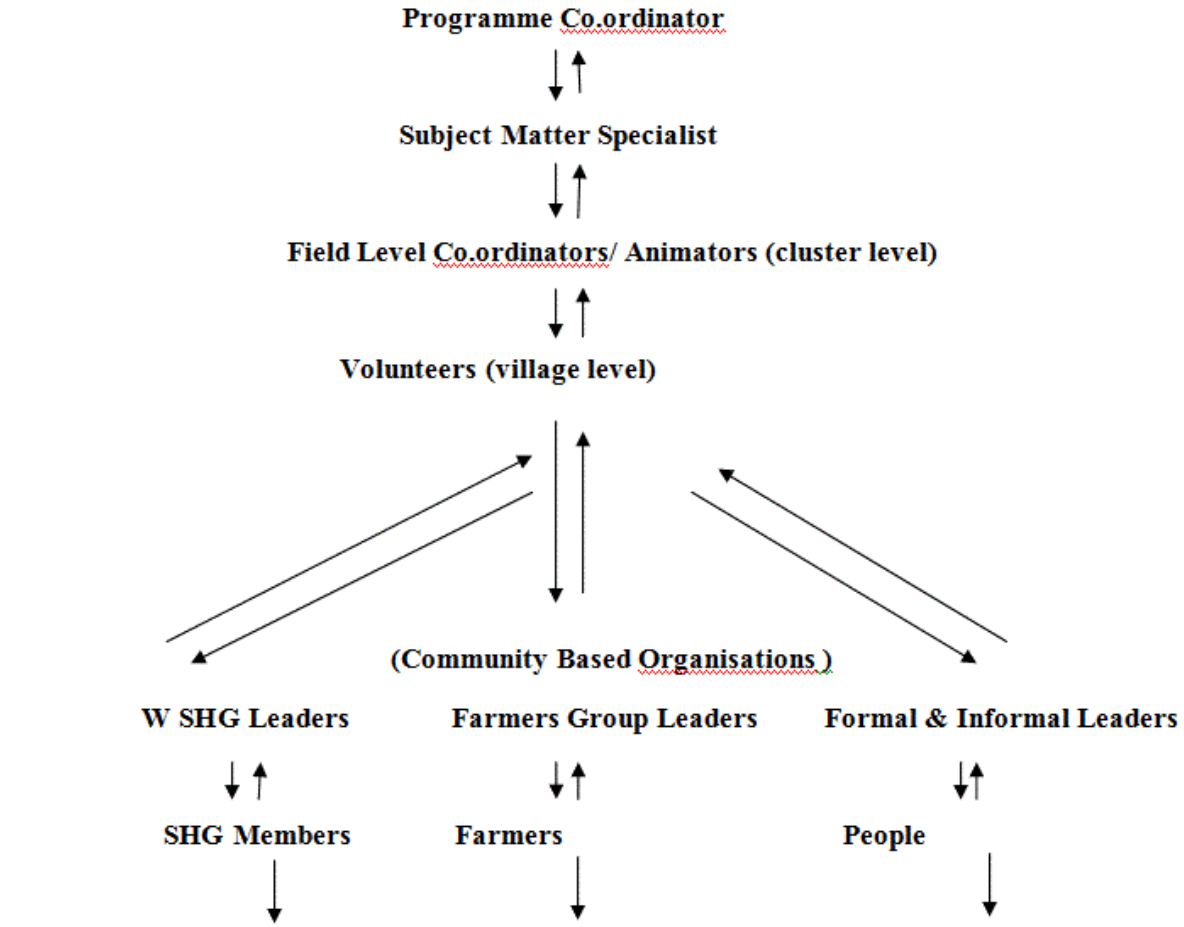
SCAD-KVK intensively worked in four blocks namely Thoothukudi, Ottapidaram, Vilathikulam and Tiruchendoor block of Tuticorin district for the past five years. SCAD-KVK could reach 414 villages of four blocks with the help of village volunteers. The volunteers are identified with the help of Community leaders, School teachers, Panchayat leaders etc. They were mostly women volunteers. In every block there are about 100 to 150 volunteers to disseminate our recent technologies.

After identifying the volunteers SCAD team motivated them to go for house visit and organize Self Help Groups (SHG) in their village itself along with the support of field level co-ordinators. SCAD-KVK trains these volunteers in need based technologies which are suitable to their locality. It trains them frequently and also conduct review meetings in order to share their success and challenges faced in their own villages. These volunteers in turn have good rapport with the SHG leaders and members of their own village. They also gave good contact with the farmers group members, School teachers, formal & informal leaders with in their village. These volunteers are trained to identify their own village problems and in turn they share all their village problems in monthly meetings. These volunteers are monitored by field level co-coordinators.

Through these volunteers system SCAD KVK implemented some of the key programme like

- Promotion of Tree plantation in garden, waste and community utility areas
- Promotion of Kitchen garden in homes and schools
- Promotion of Bio fertilizers usage
- Quality seed production and supply
- Preventive Health care for animals
- Preventive health care for women and children
- Improved cultivation practices
- Soil testing
- Technologies for increasing the productivity
- Development of group dynamism, leadership qualities
- Group financial linkages to avail credit facilities for agriculture and allied activities.
- Entrepreneurial development skills and vocational trainings like tailoring, home care products, goat rearing, milch animals & poultry rearing
- Providing marketing linkages etc.

Flow Chart depicting the involvement of all stake holders and two way communications



Better transfer of technologies and holistic development of community at grass root level

A case study on this approach in a village

Sevalkulam village is situated in Ottapidarm block of Tuticorin district. It is a small hamlet having only 110 families in which 60% of people depend on agriculture and animal husbandry activities for their livelihood. About 25 families come under land less category. They are mostly farm laborers and during off season they go for NREGS or other industrial labour work in harbour, factory etc. The total cultivable land in this village is about 200 acres. Out of this they cultivate paddy in 80 acres with the help of irrigation tank, vegetables and flowers in 20 acres. As a dry land crop they cultivate pulses in 100 acres. They had 350 goats, 80 sheep, 40 cattle, 240 backyard poultry during the year 2008.In the year 2008 December, more than 70% of the goat population was affected by a disease called Petites- petits- Ruminantia (PPR) resulting in death of about 170 goats . SCADKVK conducted a PRA exercise and found the following problems.

The problems encountered by the targeted peoples of this village are as follows

- Low yield in paddy due to pest and disease attack
- Less awareness about latest variety.
- Lack of awareness about the usage of biofertilizer and seed treatment.

- Lack of awareness about bio pesticides and fungicides
- Poor knowledge about pheramon traps and cultural methods of pest control.
- Lack of awareness about proper storage methods
- Poor access to veterinary dispensary as it is very far away from their village.
- Lack of awareness and fear on comprehensive disease control methods
- No wages for three months. At that time they depend on moneylenders for heavy interest.
- No proper saving habits.
- Labour scarcity during peak agriculture season.
- Lack of alternative employment
- Lack of awareness about nutritious food preparation

SCAD KVK organized five women self help groups namely Roja, Ohm Sakthi, Thamarai, Kaliamman and Annai Therasa covering 85 women during and linked with the Tamilnadu Wowen Development Corporation(TNWDC) and organized a farmers club by covering 16 men farmers with an objective to empower them through group approach . Throgh KVK Series of on and off campus trainings and demonstrations were organized to the people of Sevalkulam village.

For the members of the men and women SCAD KVK organized capacity building trainings like group dynamics, book keeping, leadership, gender,lagal training, entrepreneurial development trainings and technical skill trainings like tailoring, vermicompost, biofertilizers, enviro fit stove for drudgery reduction, integrated crop & nutrient management practices for paddy and vegetables, pest and disease management in flowers vegetables, pulses etc. seed treatment, SRI techniques, paddy nursery management, live stock disease prevention, backyard poultry rearing, organic farming were conducted to farmers.

Demonstrations were also conducted on

- Low cost and high efficiency nutritious diet preparation
- Enviro fit stove
- Seed treatment along with biofertilizers
- Usage of bio fertilizers in different methods
- Usage of Trichogramma egg cards and pheramone traps
- Introduction of high yielding variety seed in bhendi
- Wood vinegar spray
- Vermi compost and
- Kitchen garden
- Comprehensive disease control method in livestock and poultry

Because of these interventions they were able to save the sum of Rs 9,86,000 through their monthly savings & availed credit linkages to the tune of Rs 21,00,000 as direct credit linkage and Rs

3,00,000 as revolving fund and economic activity fund to the amount of Rs 12,50,000.The people utilized this amount for simple income generation activities like goat and milch animal rearing. To start the IGP activities SCAD, the host organization of SCAD KVK offered them a loan through its SURABI scheme. Ten SHG members started Milch animal rearing as an alternative employment and additional income to the family They are earning around Rs3500 month/member. Other 45 WSHG members have started goat rearing and they are earning around Rs 2800/month/member.

Through continuous periodical Veterinary camp organized by SCAD KVK, able to contain the diseases to the live stock under control. These rural veterinary camps helped the villagers immensely and created very good impact in the health status of the goats and kids as reported by the farmers themselves and the number of goat population also increased steadily. There was not any major disease outbreak at all during the entire year 2009 to till June 2010 . The farmers are now very happy and appreciated the importance of vaccination and health cover procedures in goat rearing and promised to continue to get their animals vaccinated in the future by their initiative with the help of local veterinary surgeon.

The success achieved by the beneficiaries through the interventions of SCAD KVK is furnished in the following Table.

Table : Output and outcome of the interventions in some of the targeted beneficiaries:

S.N	Beneficiary Name	Trainings §	Technology adopted ¥	Credit loans availed in last 5 years	Purpose of credit loans availed
1.	S.Veradha	1,2,3,4,5,6,8,9,10,11,12,13,14	1,2,3,5,7,8,10	25,000	Petti shop, goat rearing back yard poultry &Agriculture
2.	K.Sakkammal	1,2,3,4,5,6,8,10,12,	1,2,3,4,5,7	20,000	Goat rearing, milch animal & Agriculture
3.	M.Veeralakshmi	1,2,3,4,5,6,8,10,12,	1,2,3,4,5,7,9,10	20,000	Goat rearing, milch animal & Agriculture
4.	T.Santhanamariyammal	1,2,3,4,5,6,8,10,12,	1,2,3,4,5,7	20,000	Goat rearing, milch animal & Agriculture
5.	S.Ramu	1,2,3,4,5,8,9,14	1,2,3,5,6,10	15,000	Agriculture
6.	R.Petchiammal	1,2,3,4,5,6,8,10,12,	1,2,3,4,5,7	25,000	Goat rearing, milch animal & Agriculture
7.	P.Deivanai	1,2,3,4,5,8,9,14	1,2,3,5,6,10	15,000	Agriculture
8.	S.Kaliammal	1,2,3,4,5,6,8,10,12,	1,2,3,4,5,7	30,000	Goat rearing, milch animal & Agriculture
9.	U.Valliammal	1,2,3,4,5,8,9,14	1,2,3,5,6,10	20,000	Agriculture
10.	S.Valliammal	1,2,3,4,5,8,9,15	1,2,3,5,6,7,9	25,000	Goat rearing & agriculture

11.	M.Dhanalakshmi	1,2,3,4,5,8,9, 15	1,2,3,5,6,7,9	25,000	Goat rearing & agriculture
12.	S.Seethalakshmi	1,2,3,4,5,6,8, 10,12,	1,2,3,4,5,7	25,000	Goat rearing, milch animal & Agriculture
13.	G.Velammal	1,2,3,4,5,8,9, 14	1,2,3,5,6,10	20,000	Agriculture
14.	S.Saroja	1,2,3,4,5,8,9, 15	1,2,3,5,6,7,9	15,000	Goat rearing
15.	M.Samuthrakani	1,2,3,4,5,8,9, 15	1,2,3,5,6,7,9	25,000	Goat rearing
16.	P.Veerammal	1,2,3,4,5,8,9, 15	1,2,3,5,6,7,9	10,000	Goat rearing
17.	K.Mariammal	1,2,3,4,5,8,9, 14	1,2,3,5,6,10	20,000	Agriculture
18.	K.Selvakani	1,2,3,4,5,8,9, 14	1,2,3,5,6	20,000	Agriculture
19.	C.Selvi	1,4,8,11,12	1,3,5,8	30,000	Tailoring
20.	S.Veeralakshmi	1,4,5,6,8,10, 12,	1,3,4,5,7	18500	Milch animal & goat rearing
21.	S.Mariammal	1,4,5,6,8,10, 12,	1,3,4,5,7	18500	Milch animal & goat rearing
22.	S.Jothilakshmi	1,4,5,6,8,10, 12,	1,3,4,5,7	18500	Milch animal
23.	V.Parameshwari	1,4,5,6,8,10, 12,	1,3,4,5,7	18500	Milch animal & goat rearing
24.	V.Lakshmi	1,4,5,6,8,10, 12,	1,3,4,5,7	18,000	Goat rearing
25.	E.Mariammal	1,4,5,6,8,10, 12,	1,3,4,5,7	18000	Milch animal & goat rearing
26.	G.Saravanaselvi	2,3,5,8,10,13 14	2,5,7,10	18000	Agriculture & backyard poultry
27.	S.Kaliammal	1,4,10	1,3,5,7	18000	Goat rearing
28.	S.Sumathi	1,2,3,4,5,8	1,2,3,5,7	18000	Goat rearing
29.	S.Vasantha	1,2,3,4,5,8,9, 14	1,2,3,5,6,10	18000	Agriculture
30.	S.Petchikani	1,4,5,6,8,10, 12,	1,3,4,5,7	18000	Milch animal & goat rearing
31.	P.Puniyavathi	1,4,10	1,3,5,7	20,000	Backyard poultry rearing
32.	S.Muthumariammal	1,4,10	1,3,5,7	20,000	Backyard poultry rearing
33.	R.Santhanamari	1,2,3,4,5,8	1,2,3,5,7	20,000	Goat rearing
34.	S.Mariammal	1,2,3,4,5,8,9, 15	1,2,3,5,6,7,9	20,000	Goat rearing & agriculture
35.	M.Selvam	1,2,3,4,5,8	1,2,3,5,7	20,000	Goat rearing
36.	S.Sucila	1,2,3,4,5,8	1,2,3,5,7	20,000	Goat rearing
37.	S.Shunmugalakshmi	1,2,3,4,5,8,9, 15	1,2,3,5,6,7,9	20,000	Goat rearing & agriculture
38.	P.Ramalakshmi	1,2,3,4,5,8,9,	1,2,3,5,6,7,9	20,000	Goat rearing & agriculture

		15			
39.	S.Banumathi	1,2,3,4,5,8,9,14	1,2,3,5,6,10	20,000	Agriculture
40	A.Arumugathai	1,2,3,4,5,8,9,15	1,2,3,5,6,7,9	20,000	Goat rearing & agriculture
41.	V.Jeyalakshmi			15,000	
42.	V.Parameshwari	1,2,3,4,5,8,9,15	1,2,3,5,6,7,9	20,000	Goat rearing & agriculture
43.	U.Amutha	1,2,3,4,5,8,9,15	1,2,3,5,6,7,9	20,000	Goat rearing & agriculture
44.	P.Yamuna			15,000	
45.	M.Pathirakali	1,2,3,4,5,8,9,15	1,2,3,5,6,7,9	30,000	Goat rearing & agriculture
46.	R.Muthumari	1,2,3,4,5,8,9,15	1,2,3,5,6,7,9	20,000	Goat rearing & agriculture
47.	T.Seethammal	1,2,3,4,5,8,9,15	1,2,3,5,6,7,9	20,000	Goat rearing & agriculture
48.	M.Pushpam	2,3,5,8,10,13 14	2,5,7,10	15,000	Agriculture & backyard poultry
49.	T.Shanthi			15,000	
50.	S.Gomathi	1,2,3,4,5,8	1,2,3,5,7	20,000	Goat rearing
51.	S.Petchiammal	1,2,3,4,5,8	1,2,3,5,7	20,000	Goat rearing
52.	P.Sudalaimadi	1,2,3,4,5,8,9,14	1,2,3,5,6,10	20,000	Agriculture
53.	U.Dhanam	1,2,3,4,5,8	1,2,3,5,7	20,000	Goat rearing
54.	T.Mahalakshmi	1,2,3,4,5,8	1,2,3,5,7	20,000	Goat rearing
55.	M.Parameshwari	1,2,3,4,5,8,9,15	1,2,3,5,6,7,9	20,000	Goat rearing & agriculture
56.	J.Kanniammal	1,2,3,4,5,8,9,15	1,2,3,5,6,7,9	20,000	Goat rearing & agriculture
57.	M.Thamayanthi			15,000	
58.	V.Indra	1,2,3,4,5,8	1,2,3,5,7	20,000	Goat rearing
59.	K.Vellaiyammal	1,2,3,4,5,6,8,10,12,	1,2,3,4,5,7	25,000	Milch animal rearing
60.	G.Valliammal			10,000	Agriculture
61.	R.Avudaiyammal	2,3,5,8,10,13 14	2,5,7,10	10,000	Agriculture & backyard poultry
62.	P.Ramu			10,000	Agriculture
63.	S.Jeyaramu	1,2,3,4,5,8	1,2,3,5,7	30,000	Goat rearing
64.	G.Manimekalai			10,000	Agriculture
65.	P.Perumal			10,000	Agriculture
66.	K.Amirthakani	1,2,3,4,5,8,9,15	1,2,3,5,6,7,9	20,000	Goat rearing & agriculture
67.	M.Ramlalitha	1,2,3,4,5,8,9,15	1,2,3,5,6,7,9	20,000	Goat rearing & agriculture
68.	S.Santhanapushpam	1,2,3,4,5,8,9,15	1,2,3,5,6,7,9	20,000	Goat rearing & agriculture

69.	M.Sudalaikani	1,2,3,4,5,8,9, 15	1,2,3,5,6,7,9	20,000	Goat rearing & agriculture
70.	S.Ramalakshmi	1,2,3,4,5,8,9, 15	1,2,3,5,6,7,9	10,000	Goat rearing
71.	P.Mariammal	1,2,3,4,5,8,9, 15	1,2,3,5,6,7,9	20,000	Goat rearing & agriculture
72.	U.Avudaiselvam	1,2,3,4,5,6,8, 10,12,	1,2,3,4,5,7	20,000	Milchanimal & agriculture
73.	P.Amsakani			10,000	Agriculture
74.	R.Pasupathi	1,2,3,4,5,8,9, 14	1,2,3,5,6,10	20,000	Agriculture
75.	R.Ambika	1,2,3,4,5,8,9, 14	1,2,3,5,6,10	20,000	Agriculture
76.	M.Annalakshmi	1,2,3,4,5,8,9, 15	1,2,3,5,6,7,9	20,000	Goat rearing & agriculture
77.	N.Arumugathai			10,000	
78.	N.Parvathi			10,000	
79.	G.Gomathi	1,2,3,4,5,6,8, 10,12,	1,2,3,4,5,7	20,000	Goat rearing, milch animal & agriculture
80.	K.Shanthi			10,000	Agriculture
81.	P.Perinbakani			10,000	Agriculture
82.	I.Senthoorkani	1,2,3,4,5,8,9, 14	1,2,3,5,6	20,000	Agriculture
83.	S.Lakshmi	1,2,3,4,5,8,9,	1,2,3,5,6,10	20,000	Agriculture
84.	L.Shunmugalakshmi			10,000	Agriculture

Note: The training titles and the corresponding numbers are given below

1. **Trainings offered through SCAD KVK are:**
    1. Low cost and high efficiency nutritious food preparation
    2. Improved cultivation technique for paddy and pulses.
    3. Importance of bio fertilizers and its usage for crop production.
    4. Promotion of energy saving devices through enviro fit stove.
    5. Usage of bio pesticide
    6. Vermi composting technique.
    7. Panchakaviya and pest repelent production .
    8. Promotion of kitchen garden.
    9. SRI techniques.
    10. Goat and Milch animals & backyard poultry rearing.
    11. Tailoring
    12. EDP Training
    13. Composite fish culture
    14. Integrated pest management in vegetables.
    15. Integrated pest management in paddy.

2. Through these trainings, the beneficiaries have benefitted by adopting the following technologies

1. Adoption of nutritious food preparation
2. Application of biofertilizers for paddy, vegetables and pulses
3. Adoption of Enviro fit stove
4. Establishment of vermin compost unit
5. Establishment of kitchen garden and tree plantation.
6. Adoption of SRI techniques.
7. Goat milch animal and backyard poultry rearing.
8. Tailoring
9. Production of panchakavya organic plant based pest repellent.
10. Adaptation of pest control measures like usage of Trichograma egg card, neem extract, pheromone traps and light traps to minimise the pest.

The initiatives undertaken to the farmers club and women SHG members of Sevalkulam Village have started giving the expected results. They are

- The villagers were encouraged to adopt the IPM pest control measures like usage of Trichograma egg card, neem extract, pheromone traps and light traps helps to minimise the pest in order to reduce the cost of cultivation. Now many of the villagers are following IPM practices with special emphasis on organic farming practices.
- Five of the WSHG members have started vermicompost units and preparing Panchakavya (organic growth promoting solution) and plant based bio pest repellents
- Ten farm women were encouraged to use enviro fit stoves (release very amount of smoke) regularly and now they were able to save fuel cost remarkably.
- All the farm women and farmers club members are utilizing bio fertilizers in their fields. By seeing the success of these farmers other farmers are also started adopting the technologies from these farmers.
- After seeing the success group approach, farmers are now able to demand and get quality inputs like quality paddy seeds, power sprayers, bio fertilizers, drinking water pipe lines, street lights, free colony houses etc.

Individual effort can only yield 50% of the result .But when unite all the members under one link and work with a common objective; the result will be full and bountiful. Now the people of Sevalkulam have learned the secret of group approach and reaping the benefits continuously.

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

S. No.	Crop / Enterprise	ITK Practiced	Purpose of ITK
1	**Banana**	**Paddy hull ash biochar soil application to banana field around the stem @ 5kg per tree every second year**	• Keeps the heavy clay soil in loose condition and improves the water holding capacity of the sandy soil • Biochar applied in the top 15 cm of the soil help in reducing the leaching of nutrients applied to the crop • Improvement in soil physical properties in terms of reduced compactness enhances the root growth

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 -18
ii. No. of farm families selected -680
iii. No. of survey/PRA conducted -8

10. H. Activities of Soil and Water Testing Laboratory

Status of establishment of Lab : Functioning well

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 photo meter	1	48000
5	Precision balance	1	99500
6	Top pan balance	1	98000
7	Water distillation unit	2	98000
8	Shaker	2	49000
9	Hot air Owen	1	14000
10	Hot plate with stirrer	1	22000
11	Kjeldhal digestion and distillation unit	2	59000
12	Nitrogen auto analyzer with Digestion block	1	202932
13	Willie mill	1	26000
	Total		

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	1379	1162	379	68950
Water Samples	575	571	296	28750
Plant samples	14	14	14	14000
Others (specify)	96	96	33	5100
Total	2034	1843	722	1,16,800

Details of samples analyzed during 2013-14:

Details	No. of Samples analyzed	No. of Farmers benefited	No. of Villages	Amount realized (Rs.)
Soil Samples	75	54	41	3750
Water Samples	26	17	15	260
Plant samples	0	0	0	0
Manure samples	0	0	0	0
Others (specify)	21	12	9	1050
Total	122	83	65	5060

10.I. Technology Week celebration during 2013-14 : No

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

Not included in this special programme

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	1255	75300	94125	
					Egg	1913	9565	11478	
				J.quail, Namakkal-1	Quails	625	10000	11250	
					Egg	2545	2927	5090	
2	Vermicompost	2006	20sq.m	compost		1585	3200	12680	
3	Mushroom	2011	20sq.m	mushroom		30kg	1565	3000	

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									
Pulses									
Oilseeds									
Coconut		Round the year	0.8 3.0	Tall TxD	Nuts Tender Coconut	4300 2810	9500 9800	16292 14976	

Fibers									
Spices & Plantation crops									
Floriculture									
Fruits									
Mango		April-July	1ha	Banglora	Fruits	1300	13000	19000	
				Neelam	Fruits	550		10500	
Sapota		June-August	0.4	PKM-1	Fruits	185	2500	3620	
Co-4		April-march	0.01	Co-4	Slips	4500	1500	4500	
Tree Seedlings			1.0	Tree Seedlings	Seedlings	8472	45800	83345	
Vegetables		April-March	0.01		Vegetables	650 kg	4850	6500	
Others (specify)									

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

Sl. No.	Name of the Product	Qty	Amount (Rs.)		Remarks
			Cost of inputs	Gross income	
1	Azospirillum	195.6 kg	3912	7335	
2	Azophos	157.6 kg	3940	5910	
3	Phosphobacteria	8 kg	160	300	
4	Rhizopos	30.8 kg	770	1155	
5	Pseudomonas	47.3 kg	3784	5676	
6	T.viridi	20 kg	1600	2400	
7	EMA	406 lit	14210	24360	
8	EMB	10 lit	350	600	
9	Mushroom spawn	35 pkts	875	1400	

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

Sl. No	Name of the animal / bird / aquatics	Details of production			Amount (Rs.)		Remarks
		Breed	Type of Produce	Qty.	Cost of inputs	Gross income	
1	Goat	Kodi adu and Pallai adu cross	Male kids	421 kg	62250	84800	
2	fingerlings	corps	fingerlings	10000	15500	25000	

13.E. Utilization of hostel facilities

Accommodation available (No. of beds)

Months	No. of trainees stayed	Trainee days (days stayed)	Reason for short fall (if any)
December 2013	80	6 Days	
January 2014	20	6 Days	

13.F. Database management

S. No	Database target	Database created
1	Training data base	Created for the year of 2011-12
2	Trainees data base	Created for the year of 2012-13
3	FLD&OFT Data base	Created for the year of 2012-13

13.G. Details on Rain Water Harvesting Structure and micro-irrigation system

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

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	360	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	265	85%	600/annum	1200/annum
Deworming the goats	360	90%	1850/annum	3800/annum
Biofertilizer application for crops	152	50%	10000/ha	12000/ha
Kitchen gardening during rainy season	1520	85%	250	900
Mineral mixture feeding to the milch animals to avoid production diseases and delayed fertility in cows	235	85%	7000/annum	10000/annum
Tailoring	56	65%	00	1250/month
Foliar application of IIHR mineral mixture to banana	65	80%	40000/acre	45000/acre
Composite fish culture in village ponds	50	80%	3000/annum	8000/annum
Use of certified seeds and importance of quality seeds in improving the yield in blackgram	180	90%	32000/ha	40000/ha
Cultivation of green fodder CoFS 29	65	18	18000/unit	25000/unit
Cultivation of Co(CN)-4 fodder	62	45	18000/unit	25000/unit
Cultivation of baby corn	28	14	00	600/cent
Cultivation of millets	62	90%	8000/acre	16000/acre
Value addition on fruits and vegetables	25	15	00	3000/month
Value addition on millets	24	7	00	2500/month

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

11.B. Cases of large scale adoption

Not documented for this year

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

11.C.1. Productivity Enhancement in Banana

Banana is the only cash crop of Tuticorin District under cultivation in 8350 Ha. Srivaikundam, Tuticorin taluks holds major area under Banana. Tuticorin is the major banana exporting district in Tamilnadu

Problem encountered by the farmers in banana cultivation

- Mostly banana is grown under canal irrigation systems which flow from Manimutharu dam. Due to the water shortage or less rain fall sometimes they hardly get water for irrigation that too even at crop

critical growth stages viz., bunch formation and development stages. So the crop severely suffered due to the non-availability of water.

- Low bunch weight, uneven fruit filling, fruit crinkling, Fruit cracking - the effects of improper nutrient management and physiological phenomenon
- Pest and disesses problem espesilsy banana stem borers, Corm weevil, Pananma wilt of banana, banana bract mosaic virus, sigatoka leafs spot etc.,
- Low to medium price for the banana bunches at farm gate.

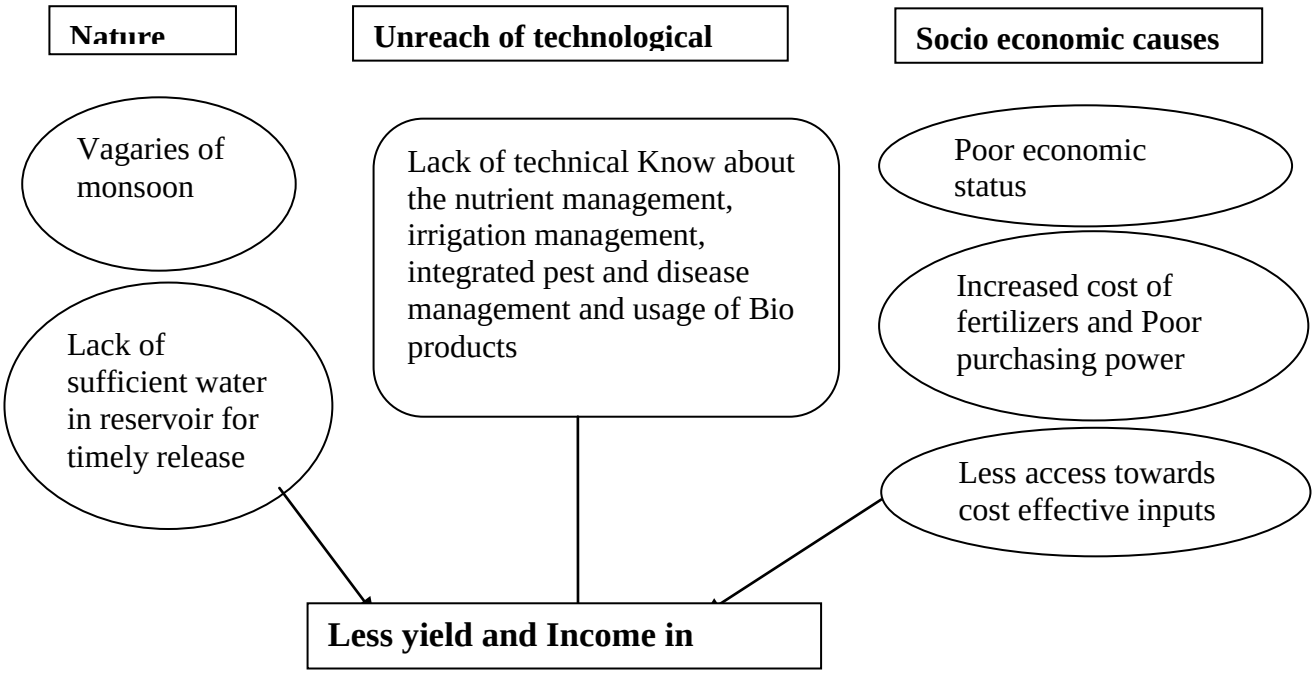


Fig: Problem cause diagram of Less Yield and income in Banana

SCAD KVK Intervention

Regular diagnostic visit, Group discussions, Interviews with individual farmers indicated that there was a lot to do for the betterment of banana growers by giving suitable technological backup on various aspects. The following are not the exhaustive list of interventions made by SCAD KVK for productivity and marketing improvement in Banana

- A complete book on " Improved cultivation techniques in Banana" was prepared and distributed to the banana growers
- A seminar on "Banana cultivation" was conducted to the banana growers of Tuticorin district, with technical experts from Department of Horticulture, Agricultural College and research Institute, Killikulam, Joint Director of Agriculture, Tuticorin, Deputy Director of Horticulture, Tuticorin, Subject Matter specialist (Horticulture), SCAD KVK during the year 2004-05. The key information of this seminar was broadcasted through All India Radio (AIR) for the benefit of banana growers.
- An Exposure visit to Tamilnadu Agricultural University was arranged to 10 farmers to know the technical information on Post harvest management and marketing of banana on 22.3.2013
- Six On Farm Trials (OFT) and one Front Line Demonstration (FLD) were conducted on Banana and the details are furnished below
    - ✓ OFT on "Standardization of planting techniques" was conducted in 2 ha area with 5 beneficiaries during 2006-07
    - ✓ OFT on " Improving the Banana bunch quality through Bunch cover techniques" in 2 ha with 5 beneficiaries during 2009-10
    - ✓ TWO OFT on " assessing the utility of enriched biochar soil burying for improving the soil fertility and yield in Banana" were conducted during in 8 ha with 20 farmers during 2010-11 and 2011-12
    - ✓ OFT on "High Density Planting techniques in Banana was conducted in2 ha with 5 farmers during 2007-08. The message on HDP in banana was broadcasted through All India Radio (AIR) two times for the benefit of banana growers.
    - ✓ OFT on" Integrated Crop Management Practices(ICMP) in Banana" was conducted in 4 ha with 10 farmers during 2012-13
    - ✓ A Front line demonstration on " Sigatoka Leaf spot management" was conducted in 4 ha land with 10 farmers during 2011-12
    - ✓ Besides 4 trainings were given to rural youth and Women self Help Group members on value addition to banana to facilitate them to start their own income generation activities

All the interventions made were quite effective in achieving the desired goal of improving the productivity. OFT on enriched Biochar soil burying @ 5kg per plant was successful in water saving and yield enhancement and it attracted the majority of the farmers in the areas of Tuticorin and Udankudi blocks. The reasons for preference and large scale adoption are the water holding capacity of biochar when it is applied alone or enriched with vermicompost. They realized its practical usefulness as the biochar applied fields required irrigation at longer intervals (once in 10-11 days) than the non-applied fields (once in 6-7 days).

This techniques of applying biochar saved lot of water and man power required for irrigation as it is regularly practiced in 800 ha in Srivaigundam, Udankudi and Tuticorin Blocks.

The second technology which attracted the farmers was foliar application of IIHR Banana Special. Banana special is a complex mixture of required micro nutrients at right proportion (Zn,B,Mn,Fe) which has to be sprayed on leaves from 5^{th} month to 10^{th} month at monthly intervals even on bunches.

It has the following advantages:

- Fast correction of nutrient deficiencies.
- Less fertilizer consumption
- Increased bunch weight and uniform well filled fingers
- Better bunch appearance leading to good marketability.

The success of foliar nutrition technique to Banana was documented for a period of five years and furnished below.The IIHR banana special has really come as a boon to the banana growers of the Tuticorin District.

Year	Banana Variety	No. of farmers	Area (ha)	Average yield (q/ha)			Economics of demonstration (Rs./ha)				Economics of check (Rs./ha)			
				Demo	Check	% increase	Gross Cost	Gross Return	Net Return	BCR	Gross Cost	Gross Return	Net Return	BCR
05-06	Poovan	5	2	420.27	360.70	15.10	140000	241500	101500	1.7	137500	178500	41000	1.4
06-07	Nendran	10	2	610	542	18	45500	111150	65650	2.44	57000	90250	33250	1.58
07-08	Resa kathalai	15	5	351.5	285	23.33	140000	241500	101500	1.7	137500	178500	41000	1.4
	Nenthran	10	5	294.5	228	29.1	137500	231000	93500	1.68	162500	189000	26500	1.4
08-09	Robusta	10	5	394.5	328	20.3	127500	201000	73500	1.58	127500	189000	61500	1.48
09-10	Nendran	10	2	259.0	208.0	13.69	70250	171000	99750	2.42	61250	132800	71250	2.15
Total		60	21											
Average				388.3	325.3	19.37	110125	199525	89400	1.81	113875	159675	45750	1.4

To popularize this technology, field days were conducted in FLD villages like Athimarapatty and Kalvilai. The farmers those who participated in field days were much convinced and the horizontal spread of this technology was very high. At one point we are not able to supply by getting from IIHR, Bangalore and currently we are purchasing from some other sources and distributing to the farmers. By this intervention, now atleast the banana grown in about 450 – 500 ha receives micro nutrient spray and there is a much scope to upscale the technology further.

The equal importance was given to the technology of using bunch cover by the farmers due to our intervention in the form of OFT on " Improving the Banana bunch quality through bunch power" conducted during 2009-10. Now this practice is widely practiced in an area of 300 ha. at Srivaikundam and Tiruchendur blocks. We are regularly guiding the farmers on availability of bunch covers and its usage etc. over phone, in person and in meetings.

Likewise, ICMP in banana has also got wide adoption after our intervention.

SCAD – KVK has a proud of improving the banana productivity to the tune of 18 – 29 % by the series of intervention during the last 5 – 6 yrs.

OFT On Biochar application

OFT on Banana Bunch Cover techniques

Field visit

Impact of Interventions

1. Water savage was achieved to a greater extent. It can be assessed with the following simple calculation.
   Assumption: Water requirement/plant – 100 lit/irrigation. (By surface irrigation)

S.No	Details	Check/No biochar applied fields	Biochar applied fields
1	Irrigation frequency	10-11 Days	Once in 7 days
2	Crop duration(approximately)	12 Month	12 Month
3	No. of irrigation required the total crop period	52	36
4	Quantity of water required/Ha/Irrigation	2.0 Lakhs Lit	2.0 Lakhs lit
5	Quantam of water required for total crop period	104 lakhs Lit	73 lakhs Lit

6	water saving over check	-	30 %

Water saving / ha by applying biochar was 31 lakhs lit per ha for once crop due to our intervention. Now biochar application is practiced in about 800 ha. in our service villages of Tuticorin, Tiruchendur and Srivaigundam blcocks.

So total water savage is 800 ha x31 lakh lit =24800 Lakhs lit per year which is adequate to irrigate an additional area of 340Ha banana with biochar technique or this water may be diverted for growing some other crops.

SCAD KVK is continuously working in this line to upscale this useful technology in the entire banana growing area of Tuticorin district. We are expecting a huge reduction in water consumption form the reservoir (Manimutharu Dam) for banana cultivation. By upscaling this technology 30 percent of water being used for banana cultivation will be saved and it paves the way for expansion of area under irrigation in Tuticorin district.

2. The usage of micro nutrient spray enhanced the economy of Banana growers as certainly there is an increased price upto Rs. 20-25 /bunch (minimum) due to the improved quality of bunches. The per Ha income has been increased to the tune of Rs. 50,000-62,500 when compared to the unsprayed plots. Now it is practiced in about 450 Ha and hence the rural economy is improved by this intervention to the tune of Rs.225 Lakhs.

3. The banana bunch cover technology is gaining importance and it also improve the socio economical status of banana growers

4. In nutshell, by our series of intervention in banana socio economical status and technological backup improved to a greater extent among the banana growers of our district

11.C.2. .Socio economic impact of backyard poultry promotion as an enterprising activity

Problem identified

1. Desi chickens are poor layers (lay only 60-90 eggs/annum)
2. Heavy mortality in chickens upto 75% due to predator attack or ranikhet disease outbreak
3. Growth rate and body weight gain is less in desi chicken
4. Non availability of improved or crossbred chicken for rearing
5. Though there is good market demand for desi chicken meat and eggs , there is very poor supply from the villages due to very less chicken population, poor reproductive performance, predator attack and disease problems.

Solutions given

1. Rearing cross bred chickens which give more number of eggs and attain better body weight gain at a faster rate than pure desi chickens

2. Rearing chickens under protected environment for upto 2 months in cages before being released for free ranging
3. Hatching the eggs in homestead incubator to ensure constant re supply of chicks
4. Proper vaccination against ranikhet disease starting from 1st week of its age

Methodology /intervention

1. Conducting training programmes on poultry rearing to village volunteers, WSHG members, farmers and Rural youth
2. Selection of interested farmer , rural youth and SHG women for improved poultry rearing under protected environment
3. Supply of grown up chicks from KVK, the initial stock were brought from PRS Chennai and VCRI Namakkal. There after the eggs were collected and hatched in the small scale homestead incubators maintained at KVK.

Out put of FLD programme

Year	Name of the village	No.of farmers	No.of chicken supplied
2009-10	Muthukumarapuram	5	100
2009	Mangalagiri	1	20
2009	Sevelkulam	1	20
2009	Kootampuli	1	20
2009	Kollamparambu	2	40
2010-11	Sindalakattai	10	200
2011-12	Kakkarampatti	10	200
2012-13	Kalvilai	5	100
2012	Vilathikulam	2	40
2012	Varthagareddipatti	1	20
2012	Thimmarajapuram	1	20
2012	Kalankarai	1	20

Economic outcome of FLD programme

Enterprising units started

Sl.no.	Village	Number of units	Name of the entrepreneur	Unit size	Type of rearing	Net income per annum
1.	Kottampuli	1	Murugan	400	Intensive	60000
2.	Kottampuli	1	P.S.Sekar	150	Intensive	24000
3.	Peroorani	1	Pathirakalimuthu	300	Intensive	42000
4.	Arumuganeri	1	Yogaraj Fdo	50	Intensive	19500
5.	Maniyachi	1	Venkatasubramanian	400	Intensive	60000
6.	Thoothukudi	1	Ilayaraja	50	Intensive	10000
7.	Thoothukudi	1	Jegathesan	250	Intensive	35000
8.	Ramachandrapuram	1	Shanmugam	50	semi intensive	36000
9.	Ramachandrapuram	1	Sankaran	30	semi intensive	22600
10.	Sekkarakudi	1	Shanmugam	25	semi intensive	17500
11.	Mangalagiri	1	G.D.Kingsly	30	semi intensive	22600
12.	Kulasekarapattinam	1	Sankar	30	semi intensive	22600
13.	Pasuvanthanai	1	Balagurunathan	250	semi intensive	38000
14.	Vilathikulam	1	Sundar	40	semi intensive	25000
15.	Vilathikulam	1	Kanagaraj	20	semi intensive	15000
16.	Vilathikulam	1	Madasamy	100	semi intensive	35000
17.	M.Pudur	1	Sankar	50	semi intensive	35000
18.	Mudivai	1	Muthusamy	50	semi intensive	36000
19.	Sawyerpuram	1	Ilango	30	semi intensive	36000
20.	Perungulam	1	Isakkiraja	20	semi intensive	24000
21.	Vedanatham	1	Anand	25	semi intensive	30000
22.	Thoothukudi	1	David	25	semi intensive	30000
23.	Vadakkusilukkanpatti	1	Selvamurugan	20	semi intensive	24000
24.	Kalankarai	1	Jeyabal	25	semi intensive	30000
25.	Mudalur	1	Dinesh	20	semi intensive	24000

26.	Mudalur	1	Jawahar	20	semi intensive	24000
27.	Pannamparai	1	Selvam	20	semi intensive	24000
28.	Nazereth	1	Joyal	20	semi intensive	24000

By rearing improved cross bred desi chicken, the egg production per hen has increased to 155 per annum from 75 per annum. The average body weight at 3rd month is 1.5kg with improved cross bred desi chicken where as it is only 650g with pure desi chickens. Thus the economic output increased by 81% by rearing improved desi chickens over pure bred desi chicken. Semi intensive system of rearing where in the birds are allowed for free ranging along with minimal supplementary feeding fetches maximum return to the entrepreneurs rather than intensive system of rearing where in the feeding cost is more and reduces the net return for the entrepreneurs. When backyard poultry is integrated along with garden land it was reported that the pest incidence had come down because of the feeding habits of these birds. When it is integrated along with dairy unit it brings down the problem of external parasites especially the ticks as reported by the farmers.

Average Net Return Per Improved Backyard Poultry Maintained Under Semi Intensive System Of Rearing Is Rs.639

Average Net Return Per Improved Backyard Poultry Maintained Under Intensive System Of Rearing Is Rs.157

11.C.3. Promotion of Inland Fish culture in Thoothukudi District Village seasonal ponds: Through Water Committee Participation

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 maintenance of village ponds and 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 in correct time 4. Inadequate financial support.

Materials and methods

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.

Fish farming

Fish farming creates gainful employment to the villagers. The composite fish culture introduced through SCAD KVK to thevillage community, helped them to get maximum fish production from the village pond which was unutilized or underutilized earlier. Started with 2 villages in vilathikulam block of tuticorin district,now the technology has spread over to 52 villages which tells the success of the technology.

Selection of ponds

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

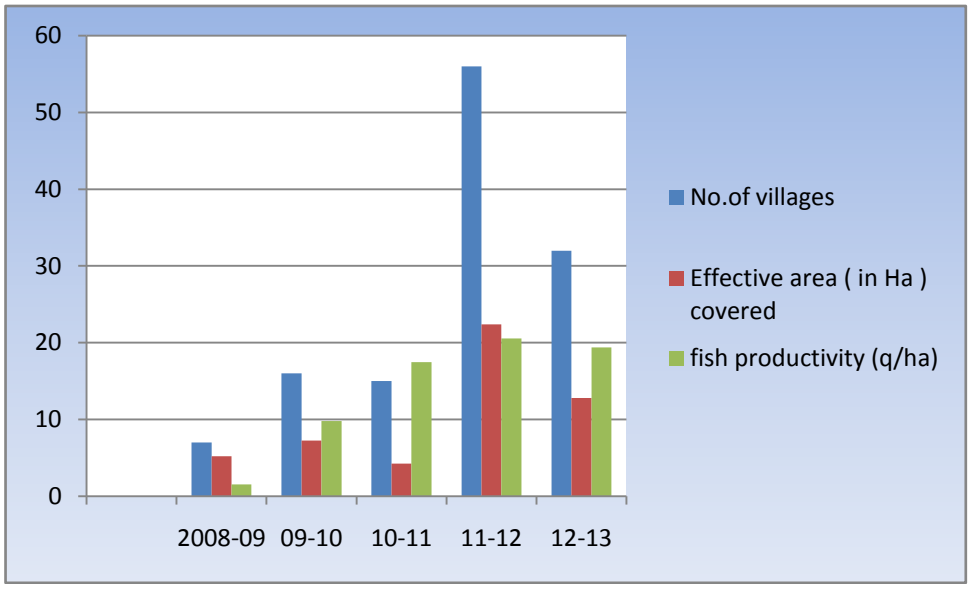
Pond Management

At least 15-20 days waiting period was observed to reduce the water turbidity. 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 the pond. The fish seeds were stocked at the rate of 7500 numbers per hectare. Occasionally villagers used to 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 composite fish culturing in village common pond 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 2010-11period we conducted demonstration in fifteen village ponds and produced 7400 kg of fishes in 4.26 hectare of area. During 2011-12 period, demonstration was conducted in 56 villages and produced 23677 kg. of fishes in 22.4 ha. and in 2012 -13 period in 32 villages produced 12633.6 kg. of fishes in 12.8 ha. of effective water spread area. Based on the observation in the demonstration, fish productivity were 156.7 kg/ha, 981.4 kg/ha, and 1745.2 kg/ha, 1057 kg/ha., 987 kg./ha.during 2008-09, 2009-10, 2010-11. 2011-12 and 2012-13 respectively.

Spread of the composite fish culture over the last 5 years



Conclusion

This inland fish culture demonstration programme has played significant role in improving the economic status of villages and ensures protein supplement to village community people at low cost. Now the inland fish culture has slowly spreading to the other villages as an entrepreneurial activity and 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 and we came to know that due to hot weather in Tuticorin district water retention are very less in common ponds. In order to overcome this problem, making baby fish ponds in each pond ensures retain water for longer period, promotes proper growth to achieve marketable size and easy harvest of fish.

11.C.4. Baby corn cultivation - A new initiative succeeded

Baby corn plays a significant role in ensuring livelihood security and augmenting income level of farmers. Its cultivation is gaining momentum in nearby areas of Tuticorin city. It is a young maize cob plucked at early stage before fertilization and used as vegetable. It has an attractive cream to light yellow colour with desirable size of 6 to 10cm in long and 1 to 1.4cm in diameter. It is highly nutritive, sweet and crispy in taste. Three to four pickings can be taken and plants remain green even after picking of baby corn. The green plant stalks also provide quality fodder to the live stocks. Additional income is also obtained through intercropping with other vegetable, pulse, flower crops etc.

Problem Identified:

Despite of its better economic returns and increasing demand in the international market, the cultivation of baby corn has not become popular in India due to the following reasons.

- Less availability of quality seed
- Unawareness among common people about its use and taste
- Lack of processing facilities
- Lack of marketing facilities in rural areas.

Awareness about baby corn cultivation, its uses, value addition on baby corn was given to farmers through both on campus & off campus training programmes, Demonstrations and through exhibitions, marketing tie up through packing material, market outlet etc. SCAD-KVK linked the baby corn growing farmers into a commodity group and it is functioning informally. This group helps for regular marketing at super market, vegetable shops, restaurants, uzhavar santhai etc.

Intervention:

Baby corn was introduces in sawyerpuram, athimarapatti, sakammalpuram of Tuticorin district during the period from 2010 to 2013. Presently, the farmers are using the hybrid seed of syngenta 5414 costing Rs 300 -350/- Kg. farmers had to invest heavily on seed inputs due to higher seed rate (20 Kg /acre)

and costly seed. In spite of this fact the farmers continued cultivation of baby corn due to commercial value and high income in short period. In the beginning farmers invested Rs 15000 per acre and earned more than Rs 58000 per acre. Baby corn cultivation proved to be a treasure trove for the farmers because it is a source of daily income round the year besides providing nutritious green fodder to their cattle's which increased their milk production and generated additional income for them. Hence it has improved the economy of farmer many fold by providing employment opportunity to rural youth and women and also promoted the cattle industry. Further its cultivation is free of pesticides and help to sustain the better soil health. It provides organic nutritious food containing fibrous protein which is easily digestible and rich in vitamins and minerals like calcium, iron, phosphorus etc. so, it is quite safe for human and livestock. Some progressive farmers of villagers nearby Tuticorin are now cultivating baby corn and realized the advantages of cultivating this crop. Socio-economic condition of the farmers has significantly improved.

Training programmes on cultivation and preparation of value added products of baby corn were organized at SCAD-KVK Tuticorin. Farm women are keenly interested in recipes of baby corn trained farm women learnt various value added products like soup, cutlet, pakora, pickle, Manchurian, burfy, halwa etc. baby corn is marketed as fresh husked / dehusked young cobs. We initially faced lots of problem in marketing baby corn as there is no awareness about the baby corn consumption. Only about 30 to 50 kg of baby corn sold in Tuticorin market daily. We supported him to market in uzhavar santhai, vegetable market, hotels, super market etc. He is more convenient to sell baby corn at restaurant and supermarket. The transport cost is high for him to come and sell his product in various spot of Tuticorin. Sawyerpuram farmer Mr. Ilango is producing organic Baby corn and he is selling his produce for high profit. At present the quality baby corn is packed in the printed cover through proper sealing along with recipe card which helps to enhance the marketing of baby corn as it include general interest information as well as preparation information. In general, the first and second ears are of good quality. The third ear is of very poor quality and is unmarketable. Therefore marketable yield may be more directly impacted by the number of plants per acre rather than the number of ears per plant.

Out put:

Year	Name of the Village	Name of the Farmer	Area of Baby corn cultivated in staggered sowing
2011 -2012	Keezha eral	S.Saravana kumar	¼ ac
	Rajavin koil	C.Paneer selvam	¼ ac
	Puthiyamputhoor	M.Velraj	¼ ac
	Puthiyamputhoor	M.Albert	¼ ac
	Keezha poovani	K.Hari	¼ ac

	Kuppanapuram	S.Vetrivel pandiyan	¼ ac
	Sawyerpuram	N.Daniel	¼ ac
	Athimarapatti	S.Muthamil	¼ ac
	Puliyanagar	S.Ghanaraj	¼ ac
	Alwarthirunagari	D.Kalaiselvan	¼ ac
	Cheranmahadevi	Ganeshan	1/2 ac
	Ponnakudi	Mohan	1/2 ac
	Kuzhasekaranaloor	S.Mazhaialagu	1/2 ac
	Sayerpuram	J.Rajkumar	1/2 ac
	Peroorani	S.Sendhoor pandi	1/2 ac
	Sakkammalpuram	L.Paramasundaram	1/2 ac
	Kulaiyankarisal	R.Yabase	1/2 ac
	Peroorani	Uthraseethalakshmi	1/2 ac
	Athmarapatti	V.Murugesan	1/2 ac
2012 – 2013	Kootampuli	G.Pattumurugesan	¼ ac
	Sawyerpuram	R.Ilango	¼ ac
	Ramanathapuram	V.Vanniyarajan	¼ ac
	Ramanathapuram	P.Shunmugasundaram	¼ ac
	Sakkammalpuram	M.Annasundari	¼ ac
	Kulaiyankarisal	V.Muthulakshmi	¼ ac
	Vagaikulam	M.Vasantha	¼ ac
	Amuthanagar	K.Packiyalakshmi	¼ ac
	Thiraviyapuram	I.Leela	¼ ac
	Melakootudankadu	S.Sriselvam	¼ ac
	Kamarajnagar	S.Kanagaleela	¼ ac
	Servaikaranmadam	G.Ghanadeepam	¼ ac
	Athimarapatti	K.Issac	¼ ac
	Athimarapatti	P.Balamurugan	¼ ac
	Kalankarai	P.Lingam	¼ ac
	Kalankarai	L.Ponlingam	¼ ac
	Kulaiyankarisal	Gunasekar	¼ ac
	Kulaiyankarisal	R.Askar	¼ ac
	Kulaiyankarisal	P.Gunadurai	¼ ac

	Deivasayalpuram	P.Murugan	¼ ac
	Jegaveerapandiyapuram	Radhakrishnan	¼ ac
	Sebathaiyapuram	K.Ezhilrani	¼ ac
	Sebathaiyapuram	C.Gunaseeli charu	¼ ac
	Peroorani	M.Partheeban	¼ ac
	Kalankarai	S.Mohan kumar	¼ ac
	Kalankarai	V.Karupasami	¼ ac
	Madathupatti	K.Sudhakar	¼ ac
	Sakkammalpuram	D.Jeya krishnan	¼ ac
	Ramachandrapuram	P.Shunmugam	¼ ac
	Mangalagiri	Kingsley	¼ ac

During the past two years 50 farmers tried baby corn cultivation as a trial and they faced no problem in cultivation aspect. But initially they fully depended on SCAD-KVK for marketing as there is no awareness about baby corn uses and its importance. Out of this some twelve farmers cultivated baby corn round the year as they were able to market for better price.

Out come/ Impact:

Through the impact of baby corn cultivation and marketing many farmers approached SCAD-KVK for Quality seeds of baby corn. On seeing the several advantages of baby corn cultivation such as nutritive vegetable, crop diversification, employment generation, animal feed, promotion of industry and value addition etc other nearby progressive farmers in neighborhood villages also adopted the baby corn cultivation.

11.C.4. Production and supply of fodder seeds and creation of fodder seed banks in villages in augmenting the livestock wealth in the district.

From the year 2008-09 KVK is very much involved in the production and supply of fodder seeds. It all started with a vocational programme on green fodder cultivation, we procured CO FS -29 multi cut fodder seeds from TNAU Coimbatore and supplied 3kg seeds to Mr.Ramabubbu of Vedapatti village in vilathikulam block. He was encouraged to produce the seeds. He cultivated about an acre of land with this fodder and left 25 cent area for seed production and he produces about 30kg of seeds per annum , and the same was supplied by him to his peers in the same village and near by villages to about 70 farmers till date besides supplying the excess to KVK for sales. Now we can see in his village almost all the garden land farmers with livestock are cultivating a minimum of 5 cent area with this fodder.

During the year 2008-09 we implemented one FLD programme on Fodder cultivation with Cumbu napier hybrid (CO-4) with 10 farmers in Kottanatham village of Vilathikulam block, In this village this technology has spread to other farmers and almost all the garden land farmers with livestock numbering about 35 are started growing this fodder in their land with a minimum area of about 3-5 cents . Because of this green fodder cultivation they could easily maintain 3-4 goats or one or two cattle unit round the year. This fodder yields about 350 tonnes/ha per annum. This technology has spread to near by villages also from these farmers.

Mean while KVK continued to supply the rooted slips of this CO-4 fodder at the rate of 50000 slips per annum in the last 5 years to about 65 farmers to the farmers from different villages of the district , who come to know about it by our training programme and farmer to farmer contact and recommendation from district level extension officials.

The following fodder seed production banks were created by KVK in the district

Sl.no.	Name of the village	Number of farmers	Name of the farmers	Spp.grown	Area of seed bank	Annual seed production in quintals per annum	number of slips per annum
1.	Vedapatti	01	Ramasubbu	CoFS-29	20 cents	0.3	
2.	Velidupatti	05	Sekar	CO(CN)-4	20 cents		2000
3.			Durairaj	CO(CN)-4	20 cents		2000
4.			Gnanaraj	CO(CN)-4 Hedgelucerne	20 cents	0.01	2000
5.			Gurumoorthi	CO(CN)-4	20 cents		2000
6.			Sankaralingam	CO(CN)-4	20 cents		2000
7.	Kottanatham	01	Mayakrishnan	CO(CN)-4	20 cents		2000
8.	Sawyerpuram	1	Ilango	CO(CN)-4	20 cents		2000
9.	Pandarampatti	1	Paul	CO(CN)-4	20 cents		2000
10.	Poovani	1	Hari	CoFS-29	20 cents	0.3	
11.	Nazerath	1	Udaiyar	CO(CN)-4	20 cents		2000
12.	Muthaloor	1	Dinesh	CoFS-29, CO(CN)-4	20 cents	0.3	2000
13.	Paramankurichi	1	Krishnakumar	CoFS-29, CO(CN)-4,subabul	20 cents	0.01	2000
14.	Kayathar	1	Panimathu	Subabul, CO(CN)-4	20 cents	0.3	2000
15.	Vallanadu	1	David	CO(CN)-4, subabul,	20 cents	0.3	2000
16.	Sekkarakkudi	1	Balraj Mottaiyan	CO(CN)-4, Hedge lucerne	20 cents	0.01	2000
17.	Peroorani	1	Chithiraivel	CO(CN)-4	20 cents		2000
18.	Vilathikulam Kathalampatti	1	Ganesan	CO(CN)-4, Hedge	20 cents	0.01	2000

				lucerne			
19.	Karisalkulam	1	Jegatheesan	CO(CN)-4, Hedge Lucerne, subabul,	20 cents	0.01	2000
20.	Kalkumi	1	Sakkaiya	CO(CN)-4, Hedge Lucerne, subabul,	20 cents	0.01	2000
21.	Kalvilai	1	Viji	CO(CN)-4,	20 cents		2000
22.		1	Subbaiya	CoFS-29, CO(CN)-4	20 cents	0.3	2000
23.	M.Pudur	1	Sankar	CO(CN)-4, Hedge Lucerne, subabul	20 cents	0.01	2000
24.	Pasuvanthanai	1	Balagurunathan	CO(CN)-4, Hedge Lucerne, subabul,	20 cents	0.01	2000
25.	Puthiyamuthur	1	Raja	CO(CN)-4, Hedge Lucerne, subabul,	20 cents	0.01	2000
26.	Mangalagiri	1	GDKingsly	CO(CN)-4, Hedge Lucerne, subabul, Glyricidia, Albezia lebek	20 cents	0.01	2000
27.	Kalvai	1	Durai	CoFS-29, CO(CN)-4, Hedge lucerne	20 cents	0.3	2000
28.	Perungulam	1	Raja	CO(CN)-4	20 cents		2000
29.	Keelakaranthai	1	Janarthanan	CO(CN)-4, Hedge Lucerne, subabul,	20 cents	0.3	2000
30.	Keelapoovani	1	Jeyachandran	CO(CN)-4, Hedge Lucerne, subabul,	20 cents	0.3	2000

11.C.5. Impact of Rural veterinary camp for comprehensive disease control promotion in livestock
Problem identified

Over the last ten years we conducted PRA with livestock owners in 35 villages in Thoothukudi, Ottapidaram, Vilathikulam, Udankudi blocks revealed that majority of livestock farmers face severe loss from livestock rearing due to the following problems.

1. Upto 50% mortality in goat kids below six months of age due to reasons like chillness, worm burden, enterotoxemia, joint ill, haemorrhagic septicaemia, PPR, enteritis ,etc..
2. Upto 40% mortality in adult goats due to infectious diseases like enterotoxemia , haemorrhagic septicaemia, Peste des petites ruminantia, anthrax, babesiosis, endo and ecto parasitism.
3. Upto 30% mortality in cattle population suffering from tick borne diseases, infectious diseases like foot and mouth disease and haemorrhagic septicaemia, endo and ecto parasitism
4. Upto 50% mortality in calves due to poor feeding, worm burden and calf scours.
5. Infertility in 25% of cows , cows suffering with mastitis 33% , sub acute ruminal acidosis 25%, pneumonia 20% and low yield 15%.
6. No awareness on the use of vaccinations and fear on reduction in milk yield or accidents of pregnancy due to vaccination holds them against the adoption of the vaccination and deworming practices.

Solutions provided

1. Adopting for regular vaccination and deworming schedule to the livestock once in every 3 months
2. Adopting for medicated bath whenever warranted
3. Adoption of balanced feeding method

Methodology/Intervention

1. Appraised the solutions to the village informal leaders and livestock owners and they were inturn asked to have dialogue with other livestock owners in their respective villages.
2. Upon the willing /responsive villages , initially village level meeting with women SHG members who have livestock were conducted by the KVK technical team.
3. Their willingness is requested to adopt the solutions provided. While providing the service they were encouraged to contribute the cost of medications involved in the programme.
4. Selected the following villages for comprehensive disease control promotion programme during the year 2009-10 to 2012-13 in a phased manner

Sl.No.	**Block**	**Village**	**Number of livestock farmers**	**No of livestock covered**				
				Cattle	Sheep and goat	Poultry	Others	Total
1.	Tuticorin	Thirumalayapuram	26	28	70	42	13	153
2.		K.P.Thalavaipuram	20	20	165	6	1	192
3.		Kallanparambu	15	14	103	3	0	120
4.	Vilathikulam	Oosemesiapuram	17	9	156	8	4	177
5.		Sippikulam	11	54	56	12	0	122

6.		Velidupatti	31	44	160	2	3	209
7.	Ottapidaram	Sevelkulam	19	14	189	2	0	205
8.		Kuppanapuram	20	26	100	3	2	131
9.		Vedanatham	25	4	109	0	1	114
10.		Aathanoor	22	8	155	33	2	220
11.	Udankudi	Kalvilai	20	63	37	13	1	114
12.		**Total**	**226**	**284**	**1300**	**124**	**27**	**1757**

Output and Economic gain

There is no disease incidence among the vaccinated animals against the vaccinated disease like HS, ET, FMD, PPR and Anthrax in any of the intervention village.

Mortality in young kids, calves came down gradually to less than 5% upto weaning age. The productive life of 284 cattle worth Rs.28.4 lakhs, 1300 sheep and goats worth Rs.26.0 lakhs and 124 poultry worth Rs.0.37 lakhs were protected for these 226 livestock farmers by this comprehensive veterinary disease control campaign extension activity over the last four years by our KVK.

Initially there was lot of reluctance among the livestock owners to vaccinate their pregnant and lactating animals fearing that it will result in damage to foetus and reduction in milk yield. To overcome their fear they were given personal assurance by the KVK team about the safety index of vaccines and deworming agents used and they were also encouraged to adopt it in trial basis in one or two of their livestock to overcome their fear. Once they saw the safety aspects they freely took part in the following camps and adopted the vaccination schedule as prescribed.



PART XII - LINKAGES

12.A. Functional linkage with different organizations

Type of institute	Name of organization	Nature of linkage
SAU	AC & RI, Killikulam	• Participated in the SAC meetings, and workshop organized by KVK and advised us in selecting suitable technologies for demonstration
SAU	Veterinary college and Res.Inst.Tirunelveli	• Participated in the SAC meetings and extension functionaries training programme and guided us in formulating the OFT and FLD programmes • Helped us in joint diagnostic disease survey • Deputed experts for conducting training to extension functionaries
SAU	Fisheries college, Thoothukudi	• Participated in the SAC meetings and extension functionaries training programme and guided us in formulating the OFT and FLD programmes
SAU	Home science College and Research Institute, Madurai	Received technologies for value addition on millets
SAU	Veterinary College and Research Institute (TANUVAS), Namakkal	Received the parent stock for NDC1- chicken OF 1000 Nos. we received 200 eggs of Japanese Quail Namakkal Gold and 20 eggs of Kadaknath eggs from veterinary college.
Central	Central institute for fodder production	• Supplied 50 fodder mini kits for demonstration of

institutes	and demonstration, Alamati Chennai	stylo crop
Central govt.boards	Coconut Development Board, Cochin . Regional office, Chennai	We conducted friends of coconut training for 10 batches covering 200 farmers. We distributed 200 coconut climbers to the farmers.
ICAR Institutes	Central Institute of Agriculture Engineering, Bhopal	Received women friendly technologies for crop production, processing, value addition, technologies based on biomass and solar energy. We also received technologies regarding Value addition on soya beans.
ICAR Institutes	CMFRI	• Collaborated in training programmes, workshop and national conference
ICAR institutes	National Research centre for Banana	• sharing of inputs for FLD & OFT • sharing of inputs for value addition
KVK	KVK Namakkal	Received Lab Lab seed 40 kg for our FLD Programme We also received the technology for mineral block preparation for the livestock .
Line department	AH Dept, Tuticorin	• Supported to conduct animal health campaigns in 30 villages • Collaborated in training the free goat scheme beneficiaries
Line department	Dept.of Horticulture, Tuticorin	• Brought 295 farmers to visit KVK demo units
Line department	Dept. of Agriculture, Tuticorin	• Brought 480 farmers to visit KVK demo units
Line department	Dept of Agri business and marketing	• Collaborated in training post harvest technology and value addition • 320 farmers visited the demo units • Proposal sent for EDP training
Line department	ICDS	Collaborated in training programmes,workshop and national conference
Line departments	ATMA, Thoothukudi	• We conducted 24 trainings about recent technologies the field of Agriculture, Horticulture, Animal science, Home Science etc. • organised 2 Farm Field Schools covering 50 farmers. • 5 technologies C.D made with the support of ATMA.Contingenses • Annual planning meeting was organised at SCAD-KVK. • Extension official meeting held at KVK. 60 officials participated in the meeting. • Exposure visit to KVK from ATMA About 320 farmers visited our KVK demo unit.
NGO	NGO –Chavalior Roach Society	• Collaborated in training the farmers • Brought 200 farmers to visit the demo units
NGO	Reliance foundation, Thoothukudi	• Knowledge debate plant protection techniques among banana farmers • Orientation training for KVK Staffs regarding farmer's user profile data collection • Expertise sharing on Knowledge on wheel programme with Banana cultivation villages of karunkulam block • participation in district level knowledge fair at Thoothukudi

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 Externally Funded Projects / schemes undertaken by the KVK and operational now, which have been financed by State Govt./Other Agencies

Name of the scheme	Role of KVK	Date/ Month of initiation	Funding agency	Amount (Rs.)

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? KVK was not consulted in preparation of SREP at a meeting conducted in Ramanathapuram.

Coordination activities between KVK and ATMA during 2013-14

S. No.	Programme	Particulars	No. of programmes attended by KVK staff	No. of programmes Organized by KVK	Other remarks (if any)
01	Meetings	12	24	12	
02	Research projects				
03	Training programmes	Participated as Resource persons in the training programme	35	15	
04	Demonstrations				
05	Extension Programmes				
	Kisan Mela				
	Technology Week				
	Exposure visit	ATMA Farmers brought to the KVK for visiting the demo units and to know about the latest technologies	28	28	
	Exhibition	Technology exhibition	32	2	
	Soil health camps				
	Animal Health Campaigns				
	Others (Pl. specify)				
06	Publications				
	Video Films				
	Books				
	Extension Literature				
	Pamphlets				
	C.D making	Vermi compost Organic farming Integrated Farming System Mushroom production	40	4	
07	Other Activities (Pl. specify)				
	Watershed approach				
	Integrated Farm Development				

	Agri-preneurs development				
	Farmers Field School		12	2	

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

Month	No. of SMS sent	No. of farmers to which SMS was sent	No. of feedback / query on SMS sent
April 2013			
May	5	50	8
June			
July			
August			
September			
October	5	50	12
November	5	50	9
December	4	50	15
January 2014	5	50	10
February			
March 2014	5	50	14
Total for the year 2013-14	29	300	68

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	1255	75300	94125	
					Egg	1913	9565	11478	
				J.quail, Namakkal-1	Quails	625	10000	11250	
					Egg	2545	2927	5090	
2	Vermicompost	2006	20sq.m	compost		1585	3200	12680	
3	Mushroom	2011	20sq.m	mushroom		30kg	1565	3000	

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									
Pulses									
Oilseeds									
Coconut		Round the year	0.8 3.0	Tall TxD	Nuts Tender Coconut	4300 2810	9500 9800	16292 14976	
Fibers									
Spices & Plantation crops									
Floriculture									
Fruits									
Mango		April-July	1ha	Banglora	Fruits	1300	13000	19000	
				Neelam	Fruits	550		10500	
Sapota		June-August	0.4	PKM-1	Fruits	185	2500	3620	
Co-4		April-march	0.01	Co-4	Slips	4500	1500	4500	
Tree Seedlings			1.0	Tree Seedlings	Seedlings	8800	105600	176000	
Vegetables		April-March	0.01						
Others (specify)									

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

Sl. No.	Name of the Product	Qty	Amount (Rs.)		Remarks
			Cost of inputs	Gross income	
1	Azospirillum	195.6 kg	3912	7335	
2	Azophos	157.6 kg	3940	5910	
3	Phosphobacteria	8 kg	160	300	
4	Rhizopos	30.8 kg	770	1155	
5	Pseudomonas	47.3 kg	3784	5676	
6	T.viridi	20 kg	1600	2400	
7	EMA	406 lit	14210	24360	
8	EMB	10 lit	350	600	
9	Mushroom spawn	35 pkts	875	1400	

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

Sl. No	Name of the animal / bird / aquatics	Details of production			Amount (Rs.)		Remarks
		Breed	Type of Produce	Qty.	Cost of inputs	Gross income	
1	Goat	Kodi adu and Pallai adu cross	Male kids	421 kg	62250	84800	
2	fingerlings	corps	fingerlings	10000	15500	25000	

13.E. Utilization of hostel facilities

Accommodation available (No. of beds)

Months	No. of trainees stayed	Trainee days (days stayed)	Reason for short fall (if any)
December 2013	80	6 Days	
January 2014	20	6 Days	

13.F. Database management

S. No	Database target	Database created
1	Training data base	Created for the year of 2011-12
2	Trainees data base	Created for the year of 2012-13
3	FLD&OFT Data base	Created for the year of 2012-13

13.G. Details on Rain Water Harvesting Structure and micro-irrigation system

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

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	Central bank of India	Tirunelveli	Tirunelveli Junction	SCAD KVK	3117090470		CBIN 0280924
	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		
With KVK							

14.B. Utilization of KVK funds during the year 2013-14 (Rs. in lakh)

S. No.	Particulars	Sanctioned	Released	Expenditure
A. Recurring Contingencies				
1	**Pay & Allowances**	75.0	75.0	75.99
2	**Traveling allowances**	1.0	1.0	1.35
3	**Contingencies**			
A	Stationery, telephone, postage and other expenditure on office running, publication of Newsletter and library maintenance (Purchase of News Paper & Magazines)	2.26	2.26	2.25
B	POL, repair of vehicles, tractor and equipments	1.9	1.9	1.89
C	Meals/refreshment for trainees (ceiling upto Rs.40/day/trainee be maintained)	0.78	0.78	0.78
D	Training material (posters, charts, demonstration material including chemicals etc. required for conducting the training)	0.70	0.70	0.70
E	Frontline demonstration except oilseeds and pulses (minimum of 30 demonstration in a year)	3.0	3.0	3.0
F	On farm testing (on need based, location specific and newly generated information in the major production systems of the area)	0.5	0.5	0.5
G	Training of extension functionaries	0.25	0.25	0.25
H	Maintenance of buildings	1.0	1.0	1.0
I	Farmers field School	0.18	0.18	0.18
J	Library	0.05	0.05	0.049
	TOTAL (A)	87.1	86.99	88.37
B. Non-Recurring Contingencies				
1	**Works**			
2	**Equipments including SWTL & Furniture**			
3	**Vehicle** (Four wheeler/Two wheeler, please specify)			
4	**Library** (Purchase of assets like books & journals)			
TOTAL (B)				
C. REVOLVING FUND				
GRAND TOTAL (A+B+C)		87.1	86.99	88.37

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

Year	Opening balance as on 1st April	Income during the year	Expenditure during the year	Net balance in hand as on 1st April of each year
April 2011 to March 2012	**6.14**	**4.26**	**5.16**	**5.23**
April 2012 to March 2013	**5.23**	**2.47**	**5.13**	**2.58**
April 2013 to March 2014	**2.58**	**9.6**	**8.9**	**3.2**

15. Details of HRD activities attended by KVK staff during 2013-14

Name of the staff	Designation	Title of the training programme	Institute where attended	Dates
Dr.G.Alagukannan	PC	KVKs National Conference	SAU, Bangalore	23-25th Oct.2013
Dr.V.Srinivasan	SMS (Animal Science) and PC i/c	Current concepts in small ruminant production and husbandry practices in Tamil nadu	Veterinary college and Research Institute, Tirunelveli	25.06.2013
Dr.V.Srinivasan	PC i/c,	KVK Annual review workshop	Pathanamthita - KVK	8 - 12.07.2013
Dr.V.Srinivasan	PC i/c	Fine tuning of KVK action plan and developing monitoring mechanism for KVK activities	TNAU Coimbatore	22 - 23.7.13
Dr.V.Srinivasan	SMS (Animal Science)	Sensitization work shop on FMD	IVRI, Bangalore	1.2.2014
Mr.P.Velmurugan	Horticulture	KVK Annual review workshop	Pathanamthita - KVK	8 - 12.07.2013
Mrs. S. Sumathi	SMS (Home Science)	Faculty development programme in entrepreneurship	NITTTR, Bhopal	3 to 14th March 2014
Mrs. S. Sumathi	SMS (Home Science)	Leadership and art of management	DMI Chennai	23 to 25th Sep 2013
M.Ashok kumar	SMS	Fine tuning of KVK action plan and developing monitoring mechanism for KVK activities	TNAU Coimbatore	22 - 23.7.13
M.Ashok kumar	SMS	Training programme on War on Nematodes	IIHR, Bangalore	26.10.13
Damodharan	Farm Manager	Transfer on Tree cultivation Technology	IFGTBRI, Coimbatore	21.3.14

All Staffs	SMS	India Southern Tamilnadu Food System Research and Food Security For the future	Francis Xavier Eng. College, Tirunelveli	16th April 2013
All Staffs	SMS	Converge work shop on system thinking	Fx Eng.College , Tirunelvlei	20.7.2013
All Staffs	SMS	Exposure visit	Pathanamthita - KVK	13.8.13
All Staffs	SMS	Motivation for SCAD –KVK staffs	SCAD, Tirunelveli	21.8.13

SUMMARY FOR 2013-14

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	Drumstick	Assessment of high yielding Moringa varieties	10
Integrated Pest Management			
Integrated Crop Management	Red gram	Assessing the transplanting techniques in Red gram	7
Integrated Disease Management			
Small Scale Income Generation Enterprises			
Weed Management			
Resource Conservation Technology	Black gram	Assessment and performance of *Methylo bacterium application* for drought Tolerance in pulses	10
Farm Machineries			
Integrated Farming System			
Seed / Plant production			
Value addition			
Drudgery Reduction			
Storage Technique			
Cropping system and crop intensification	Vegetables and spices	Assessment of cropping system for crop intensification suitable for Thoothukudi district	5
Total			

Summary of technologies assessed under livestock

Thematic areas	Name of the livestock enterprise	Name of the technology assessed	No. of trials
Disease Management	Dairy cows	Herbal therapy for the management of clinical Mastitis	18
Evaluation of Breeds			
Feed and Fodder management			
Nutrition Management			
Production and Management			
Others (Pl. specify)			
Total			18

Summary of technologies assessed under various enterprises

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

Summary of technologies assessed under home science

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

II. TECHNOLOGY REFINEMENT

Summary of technologies refined under various crops

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

Summary of technologies assessed under refinement of various livestock

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

Summary of technologies refined under various enterprises

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

Summary of technologies refined under home science

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

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																			
Cereals	Introduction of saline resistant paddy variety	TRY-3		Irrigated	10	4.0	77	39	58	36	61	42000	87000	45000	2.07	42000	64000	22000	1.52
Millets	Demonstration of dual purpose sorghum variety	Co-30		Dry farming	10	4.0	27	22	24	17	43	16000	36240	20240	2.2	13000	25050	12050	1.92
Vegetables	Demonstration of babycorn cultivation		G-5414	Irrigate	10	2.0	57	43	50	NA		32000	90000	58000	2.8	-	-	-	-
	Demonstration of bush type lab lab	Co-14		Irrigate	10	2.0	114	86	101	78	30	33680	130130	96450	3.86	30150	101400	71250	3.36
Flowers																			
Ornamental																			
Fruit																			
Spices and condiments																			
Commercial																			
Fibre crops like cotton																			
Medicinal and aromatic																			
Fodder	Babycorn		G-5414	Irrigate	10	2.0	412	254	315	NA		12000	31500	19500	2.6				
Plantation																			
Fibre																			
Cocoa	Cocoa as intercrop in coconut plantation	Forestero cocoa		Irrigate	5	2			67.5	0		Will be assessed and reported from the 5th year onwards as the economic yield starts only from 5th year for the cocoa plant The harvested bean were sold @ Rs.350 per Kg and gave Rs.9450 per ha for the farmer in the 3rd year of plantation							

* 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**
	Variety	TRY-3	ASD-16
Paddy	Plant population per sq.m	50	50
	No.of productive tillers per hill	8	6
	No.of filled grain per productive tiller	98	60
	1000 grain weight in g	20.3	20.0
		Co(S)-30	K-8
Sorghum	No. of plant / m^2	15	15
	No of tiller / hill	2	1
	No. of seed / head	340	280
	Seed Wt (1000 Nos)	26gm	26gm
Baby corn	No. of plant / m^2	15	-
	No. of Cobs / plant	3 – 4	-
	Avg Cob Wt	95g	-
	Self life of Baby corn	2 days	
	Size of Baby corn		
	Average length	7-11 cm	
	Average diameter	1.0 – 1.5 cm	
	Selling price of baby corn after grading and packing	Rs 2 to 3 per cob	
	Green Fodder yield	315 q/ha	
	Income from selling green fodder	31500	
Lablab	Variety	Co-14	Co-8
	Avg. days to flowering	42	48
	Avg.days to pod maturity	16	19
	Avg.plant height (cm)	86	92
	No.of plucking	7	
	Crop duration indays	130	
	Yield qtl./ha	114	78
Agroforestry Casurina and Melia dubia			
Casurina	Variety	MTP-2	
	Ave.height at the end of 2nd year	9.5 ft	
	Ave. Girth at the end of 2nd year	15.71cm	
Melia dubia	Ave.height at the end of 2nd year	12 ft	
	Ave. Girth at the end of 2nd year	23.57 cm	

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																	
Rabbitry																	
Pigerry																	
Sheep and goat	Broiler system of male goat kid rearing	Kodi Adu	10	10	Under observation complete final results will be available at the end of May 2014. The demo was initiated in the lean season which starts from mid February when the availability of fodder reduces and shortage starts which forces the goat rearing farmers to sell out their kids at the early age by April. However the initial observations are mentioned in the additional parameters table.												
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**
Ave.birth weight of the male kid (Kg)	**1.77**	**1.65**
Body weight of the kid at 30 days	3.8	3.2
Body weight of the kid at 60 days	5.85	4.8
Parity of the dam (Ave.)	3.3	3.5
No. of siblings born	1.6	1.7
Mortality in kids selected for the demonstration or check until 60 days	0	0
Incidence of indigestion until 60 days	0	0

.B.3. Fisheries

Type of Breed	Name of the technology demonstrated	Breed	No. of Demo	Units/ Area (m^2)	Yield (q/ha)				% Increase	*Economics of demonstration Rs./unit) or (Rs./m2)				*Economics of check Rs./unit) or (Rs./m2)			
					Demo			Check if any		Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR
					H	L	A										
Common carps																	
2011-12	Composite fish culture with stunted fingerlings	Catla, Rohu, Mrigal, Common Carp	4	16000	25	17.8	20.57	13.9	47.98	5.52	16.7	11.2	3.03	3.0	8.34	5.34	2.8
2012-13	Composite fish culture with stunted fingerlings	Catla, Rohu, Mrigal, Common Carp	4	16000	22.4	16.4	19.4	13.25	46.41	5.52	15.52	10.0	2.8	3.0	7.95	4.95	2.7
2013-14	Composite fish culture with stunted fingerlings	Catla, Rohu, Mrigal, Common Carp	4	20000	Fishes are in growth stage and harvest is expected by the month of June-July 2014												
Mussels																	
Ornamental fishes				Area (m^2)			No.of fishes produced / m^2)										
2011-12	Ornamental fish rearing using small ring tanks in the backyard	Guppies, Molly, Sword tail	3	16			313.5	0	0	650	1254	604	1.92	0	0	0	NA

2012-13	Ornamental fish rearing using small ring tanks in the backyard	Guppies, Molly, Sword tail	3	16			328.8	0	0	675	1315	640	1.94	0	0	0	0
2013-14	Ornamental fish rearing using small ring tanks in the backyard	Gold fish, Molly, Sword tail	3	16			314	0	0	712.5	1413	700.5	1.98	0	0	0	NA
Others (pl.specify)																	

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

Data on other parameters in relation to technology demonstrated					
Parameter with unit		**Demo**			**Check if any**
Ornamental fish rearing in backyards					
2011-12	**Ave.young ones produced /female/month**	**29.3**			**NA**
	% of mortality in brooder fish due to transport shock	**26%**			
	% of mortality in fish due to anchor worm infestation	**39.1%**			
	% of mortality in young ones	**1.2 %**			
	Size of the young one at one month age	**1.25 cm**			
		Guppies	Molly	Sword tail	
2012-13	Avg.no.of young ones produced per female per annum	**101**	**86**	**76**	
	% of mortality in fish due to anchor worm infestation	**Nil**	**Nil**	**Nil**	
	Breeding season	**Round the year**	**Round the year**	**Round the year**	
	Avg. Marketing age	**3-4 months**	**3-4 months**	**3-4 months**	
	Avg.size at marketing age in cm	**3.5 cm**	**3.5 cm**	**3.5 cm**	
	% of mortality from spawn to marketing stage	**48**	**50**	**55**	
	Avg. selling cost per fish in Rs.	**3**	**6**	**7**	
2013-14		Gold fish	Molly	Sword tail	

2013-14	Avg.no.of young ones produced per female per annum	89	86	76	
	Anchor worm infestation	0	0	0	
	Breeding season	June-Aug and Nov.-Jan	**Round the year**	**Round the year**	
	Avg. Marketing age	4-5 months	**3-4 months**	**3-4 months**	
	Avg.size at marketing age in cm	4.5	3.5	3.5	
	% of mortality from spawn to marketing stage	55	45	50	
	Avg. selling cost per fish	10	6	7	
Common carp rearing with stunted yearlings					
2011-12	Age and size of the fish stocked in village pond	13.5 cm length , one year old stunted carp			5cm length, two month old advanced fries
2012-13	Age and size of the fish stocked in village pond	14.5 cm length , one year old stunted carp			5cm length, two month old advanced fries
2013-14	Age and size of the fish stocked in village pond	12.9 cm length , one year old stunted carp			5cm length, two month old advanced fries

5.B.4. Other enterprises

Enterprise	Name of the technology demonstrated	Variety/ species	No. of Demo	Units/ Area {m^2}	Yield (q/ha)				% Increase	*Economics of demonstration (Rs./unit) or (Rs./m2)				*Economics of check (Rs./unit) or (Rs./m2)			
					Demo			Check if any		Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR
					H	L	A										
Mechanisation	Demonstration on mechanization in green gram cultivation through custom hiring	Co-6	20	6	6.1	5.8	5.5	4.3		13800	30800	17000	**2.2**	10200	24080	13880	1.7
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

Women empowerment

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

5.B.5. Farm implements and machinery

Name of the implement	Custom hiring Cost of the implement in Rs/ha.	Name of the technology demonstrated	No. of Demo	Area covered under demo in ha	Labour requirement in Mandays /ha		% 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
Seed drill	800	Sowing using seed drill	20	8	0		100	250	18345	50000	31655	2.72	26675	50000	23325	1.87
Manual sowing						1.25										
Horizontal triplex power sprayer	800	Spraying the chemicals 3 times during the cropping period			0.56		90.67	600								
Hand operated sprayer						6										
Tractor mount weeder	800	Weeding -2 times			10.72		78.6	5356								
Hand weeding						50										
Combined harvester	1200				0		100	4500								
Manual harvesting and threshing by hand						30										

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**
Reduction in time for sowing with seed drill	**2.5 hrs**	
Reduction in time for spraying by tractor mount triplex sprayer	1.75 hrs	
Reduction in time for harvesting and threshing	14.5 hrs	
Reduction in time for weeding	14.5 hrs	

Other enterprises

Demonstration details on crop hybrids

Type of Breed	Name of the technology demonstrated	Name of the hybrid	No. of Demo	Area (ha)	Yield (q/ha)				% Increase	*Economics of demonstration (Rs./ha)				*Economics of check (Rs./ha)			
					Demo			Check		Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR
					H	L	A										
Cereals																	
Bajra																	
Maize																	
Paddy																	
Sorghum																	
Wheat																	
Others (pl.specify)																	
Total																	
Oilseeds																	
Castor																	
Mustard																	
Safflower																	
Sesame																	
Sunflower																	
Groundnut																	
Soybean																	
Others (pl.specify)																	
Total																	
Pulses																	
Greengram																	
Blackgram																	
Bengalgram																	
Redgram																	
Others (pl.specify)																	
Total																	
Vegetable crops																	
Bottle gourd																	
Capsicum																	
Others (pl.specify)	Demonstration of babycorn cultivation	G-5414	10	2.0	57	43	50	NA		32000	90000	58000	2.8	-	-	-	-
Total																	
Cucumber																	
Tomato																	
Brinjal																	
Okra																	
Onion																	
Potato																	
Field bean																	
Others (pl.specify)																	
Total																	
Commercial crops																	

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

H-High L-Low, A-Average

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

Summary of IFS implemented during 2013-14

Sl .no.	**Name of the farmer and village**	**Farming situation**	**Crop /enterprise**	**Area in ha**	**Economics of IFS model**			
					Gross expenditure in Rs.	**Gross income in Rs.**	**Net return in Rs.**	**BCR**
1	Ilango, Sawyerpuram	Irrigated garden land	**Crop + Horticulture +Livestock + Poultry +Biogas +Vermicompost**	**1.4**	**441125**	**808775**	**379250**	**1.833**
2	Balavesam , Thimmarajapuram	Dry land farming	**Crop +Livestock + Poultry +Biogas +Vermicompost**	**2.7**	**421025**	**835300**	**414675**	**1.98**
3	Radhakrishnan, Jegaveerapandiyapuram	Dryland farming	**Crop +Livestock + Poultry +Biogas +Vermicompost**	**3.1**	**254790**	**423100**	**160550**	**1.66**
			Total	**7.2**	**1116940**	**2067175**	**950235**	**1.85074847**

IV. Training Programme

Training for Farmers and Farm Women including sponsored training programmes (On campus)

Area of training	**No. of Courses**	**No. of Participants**								
		General			**SC/ST**			**Grand Total**		
		Male	**Female**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**	**Total**
Crop Production										
Micro Irrigation/Irrigation	2	60	25	85	40	20	60	100	45	145
Soil and Water Conservation	2	26	7	33	11	5	16	37	12	49
Integrated Nutrient Management	3	56	2	58	20	7	27	76	9	85
Horticulture										
a) Vegetable Crops										
Off-season vegetables	1	25	0	25	5	0	5	30	0	30
b) Fruits										
Cultivation of Fruit	2	14	0	14	2	0	2	16	0	16
Livestock Production and Management										
Animal Nutrition Management	1	5	0	5	0	0	0	5	0	5
Integrated farming system	3	43	25	68	40	20	60	83	45	128

Home Science/Women empowerment										
Design and development of low/minimum cost diet	2	46	27	73	38	26	64	84	53	137
Processing and cooking	2	13	14	27	6	10	16	19	24	43
Value addition	9	131	98	229	82	59	141	213	157	370
Plant Protection										
Integrated Pest Management	5	107	17	124	23	8	31	130	25	155
Organic bio input production	1	48	0	48	5	0	5	53	0	53
Fisheries										
Integrated fish farming	1	6	4	10	5	5	10	11	9	20
Breeding and culture of ornamental fishes	1	8	5	13	4	6	10	12	11	23
Fish processing and value addition	1	18	0	18	12	0	12	30	0	30
TOTAL	**36**	**606**	**224**	**830**	**293**	**166**	**459**	**899**	**390**	**1289**

Training for Farmers and Farm Women including sponsored training programmes (Off campus)

Area of training	**No. of Courses**	**No. of Participants**								
		General			**SC/ST**			**Grand Total**		
		Male	**Female**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**	**Total**
Crop Production										
Weed Management	1	16	0	16	0	0	0	16	0	16
Resource Conservation Technologies	9	186	8	24	19	6	25	205	14	219
Integrated Crop Management	13	379	52	431	37	23	60	416	75	491
Integrated Nutrient Management	10	192	93	285	67	43	110	259	136	395
Horticulture										
a) Vegetable Crops										
Production of low value and high volume crop	6	48	45	93	1	2	3	49	47	96
Livestock Production and Management										
Dairy Management	3	40	29	69	1	0	1	41	29	70
Poultry Management	6	58	77	135	42	57	99	100	134	234
Animal Nutrition Management	1	21	2	23	5	0	5	26	2	28
Animal Disease Management	5	41	22	63	17	12	29	58	34	92
Feed and Fodder technology	2	11	5	16	7	2	9	18	7	25
Role of livestock in integrated farming	5	63	30	93	28	23	51	91	53	144
Home Science/Women empowerment										
Household food security by kitchen gardening and nutrition gardening	4	8	79	87	20	30	50	28	109	137
Designing and development for high nutrient efficiency diet	1	24	17	41	15	6	21	39	23	62
Gender mainstreaming through SHGs	4	0	98	98	0	62	62	0	160	160
Value addition	14	105	141	246	26	80	106	131	121	252
Women empowerment	1	0	17	17	0	0	0	0	17	17
Location specific drudgery production	1	0	0	0	0	26	26	0	26	26
Rural Crafts	1	21	22	43	14	15	29	35	37	72
Plant Protection										
Integrated Pest Management	20	327	134	461	132	109	241	459	243	702

Integrated Disease Management	1	34	0	34	0	0	0	34	0	34
Bio-control of pests and diseases	1	26	0	26	0	0	0	26	0	26
Production of bio control agents and bio pesticides										
Organic cultivation of water milon	2	24	0	24	2	2	4	26	2	28
Fisheries										
Composite fish culture	3	24	16	40	8	11	19	32	27	59
Breeding and culture of ornamental fishes	2	12	13	25	0	10	10	12	23	35
Demonstration of genetically improved farmed Tilapia	2	14	13	27	7	6	13	21	19	40
Murrel culture	1	5	5	10	6	4	10	11	9	20
Agro-forestry										
Tree planting programme in waste land development	1	45	7	52	12	0	12	57	7	64
TOTAL	**120**	**1724**	**925**	**2479**	**466**	**529**	**995**	**2190**	**1354**	**3544**

Training for Rural Youths including sponsored training programmes (on campus)

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Integrated farming	2	11	2	13	8	1	9	19	3	22
Vermi-culture	2	41	37	78	14	15	29	55	52	107
Mushroom Production	2	44	5	49	6	0	6	50	5	55
Value addition	2	21	22	43	14	15	29	35	37	72
Post Harvest Technology	1	12	0	12	16	0	16	28	0	28
Sheep and goat rearing	3	25	7	32	6	5	11	31	12	43
Poultry production	2	38	3	41	15	0	15	53	3	56
Pest management in coconut	2	40	0	40	7	0	7	47	0	47
Tapioca disease management	2	55	7	62	12	9	21	67	16	83
TOTAL	**18**	**287**	**83**	**370**	**98**	**45**	**143**	**385**	**128**	**513**

Training for Rural Youths including sponsored training programmes (off campus)

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Seed production	2	31	37	68	14	15	29	45	52	97
Vermi-culture	2	60	40	100	0	0	0	60	40	100
Value addition	2	4	20	24	1	16	17	5	36	41
Small scale processing	2	0	62	62	0	4	4	0	66	66
Post Harvest Technology	6	0	87	87	0	50	50	0	137	137
Sheep and goat rearing	2	0	50	50	0	39	39	0	89	89
High efficiency diet preparation for adolescent girls	4	0	49	49	0	42	42	0	91	91
TOTAL	**20**	**95**	**345**	**440**	**15**	**166**	**181**	**110**	**511**	**621**

Training programmes for Extension Personnel including sponsored training programmes (on campus)

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Productivity enhancement in field crops	2	44	18	62	19	8	27	63	26	89
Low cost and nutrient efficient diet designing	3	29	38	67	16	36	52	45	74	119
Group Dynamics and farmers organization	1	22	4	26	8	2	10	30	6	36
Management in farm animals	2	31	30	61	5	8	13	36	38	74
Total	**8**	**126**	**90**	**216**	**48**	**54**	**102**	**174**	**144**	**318**

Training programmes for Extension Personnel including sponsored training programmes (off campus)

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Integrated Nutrient management	1	12	7	19	0	0	0	12	7	19
Low cost and nutrient efficient diet designing	2	3	52	55	10	11	21	13	63	76
Total	**3**	**15**	**59**	**74**	**10**	**11**	**21**	**25**	**70**	**95**

Sponsored training programmes

S.No.	Area of training	No. of Courses	No. of Participants								
			General			SC/ST			Grand Total		
			Male	Female	Total	Male	Female	Total	Male	Female	Total
1	**Crop production and management**										
1.a.	Increasing production and productivity of crops	3	27	18	45	32	23	55	59	41	100
2	**Production and value addition**										
3.	**Soil health and fertility management**										
4	**Production of Inputs at site**										
5	**Methods of protective cultivation**										
6	**Others (pl.specify)**										
7	**Post harvest technology and value addition**	2	47	27	74	39	38	77	86	65	151
8	**Farm machinery**										
8.a.	Farm machinery, tools and implements	1	10	3	13	5	0	5	15	3	18
9.	**Livestock and fisheries**										
10	**Livestock production and management**										
10.a	Integrated Farming System	2	34	8	42	11	4	15	45	12	57
10.b	Poultry Rearing	1	27	13	40	24	22	46	51	35	86
11	**Home Science**										
12	**Agricultural Extension**										
12.a	Friends of coconut training	10	82	14	96	84	20	104	166	34	200
	Total	**19**	**227**	**83**	**310**	**195**	**107**	**302**	**422**	**190**	**612**

Details of Vocational Training Programmes carried out for rural youth

S.No.	Area of training	No. of Courses	No. of Participants								
			General			SC/ST			Grand Total		
			Male	Female	Total	Male	Female	Total	Male	Female	Total
1	**Crop production and management**										
1.a	Friends of coconut training	10	82	14	96	84	20	104	166	34	200
2	**Post harvest technology and value addition**										
3.	**Livestock and fisheries**										
4.	**Income generation activities**										
4.a.	Production of bio-agents, bio-pesticides, bio-fertilizers etc.	1	19	0	19	0	0	0	19	0	19
4.b.	Mushroom cultivation	3	26	10	36	12	12	24	38	22	60
4.c	Tailoring, stitching, embroidery, dying etc.	2	0	24	24	0	26	26	0	50	50
5	**Agricultural Extension**										
5.a.	Capacity building and group dynamics	4	0	46	46	0	38	38	0	84	84
	Grand Total	**20**	**127**	**94**	**221**	**96**	**96**	**192**	**223**	**190**	**413**

V. Extension Programmes

Activities	No. of programmes	No. of farmers	No. of Extension Personnel	TOTAL
Field Day	5	65	8	73
Exhibition	6	4325	39	4364
Film Show	5	205	0	205
Method Demonstrations	4	89	0	89
Workshop	2	0	65	65
Group meetings	78	1353	34	1387
Lectures delivered as resource persons	8	334	0	334
Popular articles	8	0	0	0
Advisory Services	165	1008	0	1008
Scientific visit to farmers field	388	388	0	388
Farmers visit to KVK	24	3185	0	3185
Animal health camp	30	405	43	448
Self Help Group Conveners meetings	33	625	12	637
Celebration of important days (Womens day)	4	1545	36	1581
ATMA Meeting	6	0	0	0
Farm field school	3	141	18	159
Farmers meeting	168	168	0	168
PRA	2	89	0	89
Total	**959**	**13925**	**255**	14180

Details of other extension programmes

Particulars	Number
Electronic Media	0
Extension Literature	4
News Letter	0
News paper coverage	15
Technical Articles	0
Technical Bulletins	0
Technical Reports	0
Radio Talks	0
TV Talks	1
Animal health amps (Number of animals treated)	30
Others (pl.specify)	0
Total	**50**

VI. PRODUCTION OF SEED/PLANTING MATERIAL

9.A. Production of seeds by the KVKs

Crop category	Name of the crop	Variety	Hybrid	Number	Value (Rs.)	Number of farmers to whom provided
Vegetable seedlings	Drumstick		Air layer	150	4500	78
Fruits	Mango	Bangalora		198	6930	
		Neelam		125	4375	
	Anola			100	2000	75
	Guava			150	6000	85
Ornamental plants						
	Thuja					
	Bougainvillea			650	6500	25
	Clerodendran			500	5000	15
	Hibiscus ordinary			50	500	17
	Hibiscus adduku			64	640	54
	Hibiscus rose			50	500	27
	Crotons (acalipa –brown)			350	3500	15
	Duranta green			470	4700	26
Forest Species						
	Vagai			25	500	20
	Neem			2500	25000	650
	Casuarina			2800	10000	18
	Tamarind			250	2500	146
	Gliricidia			40	200	8
Total				8472	83345	1259

9.B. Production of planting materials by the KVKs

Crop category	Name of the crop	Variety	Hybrid	Quantity of seed (qtl)	Value (Rs)	Unit Cost Rs.	Number of farmers to whom provided
Cereals (crop wise)							
	Bajra	(CO Cu 9) g		15	45000	50	240
	Sorghum	Co-30		3.5	14000	40	20
Oilseeds							
Pulses	Black gram	VBN-5		2.5	22400	90	14
	Green gram	Co-6		2.7	21600	80	15
Commercial crops							
Vegetables	Kitchen garden seed kit			3.0	60000	20	3000
Flower crops							
Spices							
Fodder crop seeds	Fodder sorghum	Co -29		1.85	55500	300	10

	Hedge lucerne			0.05	2000	40	10
	Napier hybrid		Co-4	4500 slips	4500	1	4
Fiber crops							
Forest Species							
Others (specify)							
Tuber	Cassava	Sri Vijaya		2500 no.s	5000	2	4
Total				28.6	230000	623	3317

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	Azospirillum	195.6 kg	7335	104
	Azophos	157.6 kg	5910	86
	Phosphobacteria	8 kg	300	10
	Rhizopos	30.8 kg	1155	18
Bio-fungicide	Pseudomonas	47.3 kg	5676	42
	T.viridi	20 kg	2400	31
Others (specify)	EMA	406 lit	24360	356
	EMB	10 lit	600	10
	Mushroom spawn	35 pkts	1400	28
			0	0
Total		910.3	49136	**685**

9.D. Production of livestock materials

Particulars of Live stock	**Name of the breed**	**Number**	**Value (Rs.)**	**Number of farmers to whom provided**
Dairy animals				
Cows				
Buffaloes				
Calves				
Others (Pl. specify)				
Poultry				
Broilers				
Layers				
Duals (broiler and layer)	Vanaraja Namakkal-1	1255	94125	96
Japanese Quail	J.quail, Namakkal-1	625	11250	45
Turkey				
Emu				
Ducks				
Others (Pl. specify)				
Piggery				
Piglet				
Others (Pl.specify)				
Fisheries				
Fingerlings	Carp	10000	30000	5
Others (Pl. specify)				
Total				

VII. DETAILS OF SOIL, WATER AND PLANT ANALYSIS 2013-14

Details	No. of Samples analyzed	No. of Farmers benefited	No. of Villages	Amount realized (Rs.)
Soil Samples	75	54	41	3750
Water Samples	26	17	15	260
Plant samples	0	0	0	0
Manure samples	0	0	0	0
Others (specify)	21	12	9	1050
Total	122	83	65	5060

VIII. SCIENTIFIC ADVISORY COMMITTEE

Number of SACs conducted

IX. NEWSLETTER

Number of issues of newsletter published

X. RESEARCH PAPER PUBLISHED

Number of research paper published

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

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

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