



ANNUAL REPORT 2013-14



Krishi Vigyan Kendra

Indian Institute of Spices Research
(Indian Council of Agricultural Research)

Peruvannamuzhi, Kozhikode - 673528, Kerala



ANNUAL REPORT 2013-14

(FOR THE PERIOD APRIL 2013 TO MARCH 2014)

KRISHI VIGYAN KENDRA (KOZHIKODE)

PART I - GENERAL INFORMATION ABOUT THE KVK

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

KVK Address	Telephone		E mail	Web Address
	Office	Fax		
Krishi Vigyan Kendra, Peruvannamuzhi (P.O), Pin-673 528 Kozhikode, Kerala	0496-2666041	0091-496-266041	kvk@spices.res.in kvkcalicut@gmail.com	www.kvkcalicut.gov.in

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

Address	Telephone		E mail	Web Address
	Office	Fax		
Indian Institute of Spices Research, Post Bag No.1701, Marikunnu (P.O.) Kozhikode-673 012, Kerala.	0495- 2731410	0091-495- 2731187	mail@spices.res.in	www.spices.res.in

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

Name	Telephone / Contact		
	Residence	Mobile	Email
Dr. P. S Manoj	0496-2249099	9447565549	manoj@spices.res.in

1.4. Year of sanction: 1992

1.5. Staff Position (as on 31st March 2014)

Sl.No	Sanctioned post	Name of the incumbent	Designation	M/F	Discipline	Highest Quln. (for PC, SMS and Prog. Asst.)	Pay scale	Basic Pay	Date of joining KVK	Per. / Temp.	Category (SC/ST/ Others)
1.	Programme Coordinator *	Vacant	-	-	-	-	-	-	-	-	-
2.	Subject Matter Specialist	P.S. Manoj	Subject Matter Specialist	M	Horticulture	Ph.D in Horticulture	15600-39100+7600	39680	30.5.94	Per.	OBC
3.	Subject Matter Specialist	K.M. Prakash	Subject Matter Specialist	M	Agronomy	PG in Agrl. Science	15600-39100+7600	36160	10.12.96	Per.	Others
4.	Subject Matter Specialist	S. Shanmugavel	Subject Matter Specialist	M	Animal Husbandry	PG in Vet. Science	15600-39100+7600	38380	3.8.95	Per.	SC
5	Subject Matter Specialist	A. Deepthi	Subject Matter Specialist	F	Home Science	PG in Home Science	15600-39100+ 5400	22280	08/03/2010	Per.	SC
6	Subject Matter Specialist	B. Pradeep	Subject Matter Specialist	M	Fisheries	Ph.D in Fisheries	15600-39100+ 5400	22280	30/03/2010	Per.	Others
7	Subject Matter Specialist	Aiswariya K.K.	Subject Matter Specialist	F	Plant Protection	Ph.D in Agrl. Science	15600-39100+ 5400	22280	26.4.2010	Per.	OBC
8.	Programme Assistant (Lab Technician)	Vacant	-	-	-	-	5200-20200 + 2800	-	-	-	-
9	Programme Assistant (Computer)	K. Jayakumar	Programme Assistant	M	-	P G in Computer Science	5200-20200+2800	12060	01/02/2010	Per.	Others
10	Farm Manager	S. Kannan	Programme Assistant	M	-	Degree in Forestry	5200-20200+2800	12060	08/02/2010	Per.	ST
11	Accountant/ Superintendent (Assistant)	Vacant	-	M	-	-	9300-34800+4200	-	-	-	-
12	Stenographer Gr.III	K. Faisal	Stenographer Gr.III	M	-	-	9300-34800+4200	16960	1.4.02	Per.	OBC
13	Driver-cum-Mechanic	T.C. Prasad	Driver-cum-Mechanic	M	-	-	5200-20200+2800	16030	17.5.93	Per.	Others
14	Driver	P. Prakash	Driver	M	-	-	5200-20200+2800	11400	27.6.02	Per.	Others
15	Skilled Supporting staff	C.V. Ravindran	Skilled Supporting staff	M	-	-	4440-7440+1400	10570	1.7.93	Per.	SC
16	Skilled Supporting staff	C. Ravindran	Skilled Supporting staff	M	-	-	4440-7440+1400	10100	10.11.94	Per.	SC

* Dr.P.S.Manoj is holding charge of Programme Coordinator w.e.f 20.7.2013

1.6. Total land with KVK (in ha) : 20.3 ha

S. No.	Item	Area (ha)
1	Under Buildings	0.60
2.	Under Demonstration Units	1.90
3.	Under Crops	6.75
4.	Orchard/Agro-forestry	3.25
5.	Others	7.80

1.7. Infrastructural Development:

A) Buildings

SL. No.	Name of building	Source of funding	Stage					
			Complete			Incomplete		
			Completion Date	Plinth area (Sq.m)	Expenditure (Rs. in lakhs)	Starting Date	Plinth area (Sq.m)	Status of construction
1	Administrative Building	ICAR	4.12.98	552	46.44	-	-	-
2	Farmers Hostel	ICAR	4.12.98	466	39.44	-	-	-
3	Staff Quarters	-	-	-	-	-	-	-
4	Old KVK office building (Farm office)	ICAR	16.1.96	360 sq. ft.	1.83	-	-	-
	Demonstration Units					-	-	-
5	1. (Old Animal Clinic) – Mushroom unit *	ICAR SHM	16.1.96 (7.3.09)	358.31 358.31	1.00 0.84	-	-	-
6	2.Poultry	ICAR	20.9.03	43.8	0.84	-	-	-
7	3.Dairy	ICAR	25.10.06	39.32	1.83	-	-	-
8	4.Vermiculture	ICAR	3.1.08	9.00	0.11	-	-	-
9	Rainwater harvesting system	ICAR	21.09.2013	2000m ³	9.62	-	-	-
10	Nursery with shed and fencing	ICAR	16.1.96	500.0	0.50	-	-	-
11	Shade house- Anthurium	ICAR	25.3.09	144.0	1.21	-	-	-
12	Goatary	ICAR	31.3.09	64.0	2.78	-	-	-
13	Training shed	SHM	25.11.08	90.0	2.69	-	-	-
14	Temporary vehicle shelter	ICAR	18.6.04	35.0	0.48	-	-	-
15	Water tank	ICAR	2.2.99	10,000	0.22	-	-	-
16	Pond with pump, storage tank etc.	ICAR	31.3.08	15X13M	8.44	-	-	-
17.	Bore well	ICAR	2013	90 m depth	0.25	-	-	-

B) Vehicles

Type of vehicle	Year of purchase	Cost (Rs.)	Total kms. Run	Present status
Motor cycle Suzuki	2009	49,980	21448	Good
Mini bus DCM Toyota	1995	5,22,670	177888	Working with high maintenance cost
TATA Sumo Jeep	2004	4,98,642	52879	Working with high maintenance cost
Power Tiller	2011	1,50,000	-	Good

C) Equipments & AV aids

Nature of the equipment	Year of purchase	Cost (Rs.)	Present Status
TV	1996	25800	“
VCP	1996	10850	“
Mixie	1996	2150	“
Juicer	1996	1505	“
Kettle	1996	1375	“
Sewing machine (2 nos.)	1996	4800	“
1.5 HP pump	1997	8100	“
Grafting machine	1998	4950	“
Public address system	1999	30656	“
Water cooler	1999	13000	“
Water purifier	1999	2745	“
3.5 Hand compression sprayer	1999	1200	“
Computer with accessories	2001	28,400	“
Computer with accessories	2001	44,700	Upgraded in 2003
UPS (1 KVA)	2002	17250	Good
Refrigerator	2002	21308	“
7.5 KVA Generator	2003	56,950	Good
Computer with accessories	2003	61,175	“
Scanner	2003	13,400	“
Overhead projector	2004	32,095	“
Pressure cooker (22 l)	2004	3,047	“
LCD Projector	2004	73,210	“
Electronic physical balance	2005	6160	“
Chemical balance	2005	42162	“
PH meter	2005	14388	“
Video camera	2005	19,000	“
Oven	2005	15476	“
Water distillation still	2005	41340	“
Digestion and distillation system	2005	1,30,802	“
Hot plate	2005	4,120	“
Spectrophotometer	2005	55,230	“
Shaker	2005	48,038	“
Conductivity meter	2005	14,960	“
Flame photometer	2005	37,026	“
Refrigerator	2005	16,890	“
Grinder	2005	1,950	“
Photocopier	2005	67,704	“
Fax machine	2006	7,500	“
PABX	2006	31,985	“
Digital Camera	2007	10,580	“
DLP Projector	2007	54,563	“
Computer	2007	37,600	“
DTH System with accessories	2007	4,165	“
Iron Box	2007	830	“
UPS	2008	27060	“
Stabilizer	2008	10920	“
Laser fax	2009	14378	“
Printer*	2009	5386	“
Computer*	2009	3770	“
Digital camera*	2009	14890	“
UPS*	2009	6500	“
Weed Cutter	2010	34930	“
Chaff Cutter	2010	23800	“
Generator	2010	100000	“
Chaff Cutter	2010	23800	“
Air conditioner 2 ton	2011	34000	“
Stabilizer 5 KVA	2011	2900	“
Computer – 2 nos.	2012	65000	“
Power Tiller	2012	150000	“
PABX system	2012	50000	“
Double distillation unit	2012	63250	“
Electronic balance	2012	6800	“
Horizontal autoclave	2012	278615	“

BOD Incubator	2012	62790	“
Motorized Sieve	2012	44737	“
Laminar air flow	2012	45070	“
Inkjet printer	2012	8,900	“
Water treatment plant	2013	59800	“
3KVA UPS	2013	27000	“
laptop	2013	54530	“

1.8. Details SAC meeting conducted in 2013-14

Sl.No.	Date	Number of Participants	No. of absentees	Salient Recommendations	Action taken
1.	23.8.2013	10	9	Strengthen the planting material production under RF programme by employing Gardener trainees.	The Gardener trainees are being employed for strengthening planting material production.
				Tissue culture plants of crops like banana may be promoted among farmers.	Tissue culture plants of crops like banana were already demonstrated as FLD by KVK
				Before initiating FLD and OFT programmes, soil analysis of the selected farmers' fields should be taken up.	The soil testing is being done before initiating FLD and OFT of selected farmers' fields.
				Regarding OFT on reflective ribbons for control of birds in paddy, Dr. Mani Chellappan, Associate Professor, KAU, may be contacted to know the time of placing the ribbons in paddy fields.	The reflective ribbons trial for managing parrot menace in rice was not effective
				Regarding the OFT programme on application of paclobutrazol to induce flowering in <i>Olour</i> mango, KAU scientists may be contacted to finalize treatments.	Expert opinion of KAU horticulturist will be taken before finalizing the treatments.
				In the OFT programme on Yard Long Bean, Vellayani Jyothika may be also be included in addition to Lola and Arka Mangala.	Vellayani Jyothika included for the trial and was found superior to all other varieties.
				To overcome the problem of parrot menace in the field, reflective ribbons/nets may be tried.	This will be followed in future trials.
				While analysing the economics of FLD and OFT programmes, average sale price for the last three years may be taken into consideration.	This is being followed.
				Panniyur – 8, IISR Thevam and IISR Sakthi varieties may be popularized to manage <i>Phytophthora</i> foot rot.	IISR Thevam, Sakthi varieties are being popularized through IISR to manage <i>Phytophthora</i> foot rot through North Kerala pepper project
				An OFT on brackish water fish <i>Lates calcarifer</i> (<i>Bhekki</i>) may be taken up.	An OFT on <i>Lates calcarifer</i> has been proposed for 2014-15 Action Plan of KVK
				New technologies developed by IISR and CPCRI may be taken as FLD programmes.	The latest technology on transplanting technique of IISR and Tanjore wilt management of CPCRI are taken up as OFT in 2014-15 by the KVK.
				A hatchery unit may be set up at KVK as early as possible to supply day old layer and broiler chicks to farmers. Establishment of piggery units may also be promoted among farmers in areas wherever it is feasible.	Financial sanction of Rs.7.00 lakhs received from NABARD for the establishment of a hatchery unit at KVK. Rs.6,30,000/- received as first installment. Incubator has already been installed.
				More programmes may be organized at Thamarassery in association with Harithavidya. The facility of KVK mobile sales unit with a Plant and Animal Clinic may also be provided on a regular basis at Thamarassery (Harithavidya).	KVK has organized 2 training programmes at Harithavidya, Thamarassery in spice production technology and mushroom production. Also provided mobile sale services.
				The possibility of availing the ATMA fund may explored to update the “Inventory of Agriculture of Kozhikode District” prepared by KVK as well was for organizing exhibitions	The ATMA fund was channelized for organizing Technology Week ‘Vithum Kaikottum’ during January 2014 at KVK.

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	Homestead based farming system with coconut as the main crop. Intercrops cultivated are spices, fruits, vegetables and other plantation crops. Most homesteads also have other enterprises like poultry and dairy in small scales. Many farmers also practice goat rearing, pisciculture, piggery etc.

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

S. No	Agro-climatic Zone	Characteristics
1	West coast Plains & Ghats Zone (12)	This region extends over the Malabar and Konkan coasts and the Sahyadris and is covered by laterite and coastal alluvials. This is a humid region with annual rainfall above 200 cm and average temperatures of 26°C-32°C in July and 19°C-28°C in January. Rice, coconut, oilseeds, sugarcane, millets, pulses and cotton are the main crops. The region is also famous for plantation crops and spices which are raised along the hill slopes of the Ghats.
(Based on Planning Commission classification of the country into 15 zones.)		
1.	Northern Mid lands V	Altitude: upto 500 m above MSL-hot humid tropical Rainfall: Poorly distributed rainfall; south west monsoon with peak in July and spread over to 3-4 months. North-east monsoon relatively weak. Topography model: Valleys less extensive hills with moderate gradients and top with egg shaped hump, steep slopes.
(Based on NARP zoning by KAU)		

S. No	Agro ecological situation	Characteristics
1.	Northern Mid lands V	Altitude: upto 500 m above (Low altitude zone-hot humid tropics, spread over the entire state) Rainfall: Poorly distributed rainfall; south west monsoon with July maximum and concentrated in 3-4 months. Northeast monsoon relatively weak (North of 11° N Latitude). Soil type: Laterite soil with well defined B horizon (Natural midlands) Topography: Valleys less extensive hills with moderate gradients and top with egg shaped hump, steep slopes.

2.3 Soil type/s

S. No	Soil type	Characteristics	Area in ha
1.	Laterite	All these soils are acidic with low water holding capacity and are poor in NPK and organic matter content. The laterite soil is generally suitable for most of the dry land crops. It is mainly cultivated with coconut, arecanut, banana, tapioca, pepper, vegetables, fruit crops etc. Liming is required for correcting soil acidity.	2,09,996

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

S. No	Crop	Area (ha)	Production (Tonnes)	Productivity (kg/ha)
1.	Coconut	127699	852 million nuts	6672 nos/ha
2.	Palmyra	149	NA	NA
3.	Rubber	21425	30800	NA
4.	Arecanut	10459	11177	1069
5.	Cocoa	659	386	586
6.	Cashew	2304	NA	305
7.	Paddy	2920	4274	1464

8.	Pulses	33	NA	NA
9.	Jack	10456	20 million nuts	1913
10.	Mango	8574	27776	NA
11.	Banana	1533	12477	8139
12.	Pineapple	197	1042	NA
13.	Papaya	1839	7628	NA
14.	Other fresh fruits	552		NA
15.	Tapioca	1846	40117	21732
16.	Elephant foot yam	200	NA	NA
17.	Colocasia	476	NA	NA
18.	Yam	32	NA	NA
19.	Sweet potato	11	NA	NA
20.	Other tubers	79	NA	NA
21.	Drumstick	1512	717	NA
22.	Amaranthus	123	NA	NA
23.	Bitter gourd	53	NA	NA
24.	Snake gourd	19	NA	NA
25.	Bhendi	22	NA	NA
26.	Brinjal	9	NA	NA
27.	Ash gourd	42	NA	NA
28.	Pumpkin	50	NA	NA
29.	Cucumber	85	NA	NA
30.	Chillies green	100	100	NA
31.	Other vegetables		NA	NA
32.	Pepper	3420	615	180
33.	Betel	9	651	NA
34.	Ginger	78	246	NA
35.	Turmeric	302	732	NA
36.	Cardamom	220	NA	NA
37.	Tamarind	886	535	NA
38.	Vanilla	12	NA	NA
39.	Cloves	37	2	NA
40.	Nutmeg	394	143	NA
41.	Cinnamon	41	NA	NA
42.	Fodder	73	NA	NA
43.	Lemon grass	6	NA	NA
44.	Medicinal plants	60	NA	NA

* Source: Farm guide 2014

2.5. Weather data

Month	Rainfall (mm)	Temperature ° C		Relative Humidity (%)
		Maximum	Minimum	
April 2013	56.7	35.3	23.4	87.06
May	376.5	34.3	24.6	88.0
June	1485.4	26.7	21.13	94.40
July	1513.2	28.3	21.5	97.93
August	777.1	28.6	21.6	96.90
September	422.4	29.8	23.93	96.13
October	350.8	30.24	24.17	92.45
November	120.6	32.54	23.3	92.26
December	17.2	33.08	21.17	89.64
January 2014	0	34.17	21.22	84.35
February	16mm	34.23	21.98	85.10
March	9	36.5	22.8	88.29

* Source: IISR, Expl. Farm, P.Muzhi.

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

Category	Population	Production	Productivity
Cattle			
<i>Crossbred</i>	100573	217ML	13 litre

<i>Indigenous</i>	62831	41.6ML	4 litre
Buffalo	1185	2.26ML	11 litre
Sheep			
<i>Crossbred</i>			
<i>Indigenous</i>			
Goats	51824	1036 tons	25 kg
Pigs			
<i>Crossbred</i>	2318	289.7 ton	125 kg
<i>Indigenous</i>			
Rabbits	5278	13.2 ton	2.5 kg
Poultry			
Hens	566103		
<i>Desi</i>	169831	11.88 M eggs.	70
<i>Improved</i>	396272	103 M Eggs	260
Ducks	12057	0.96 M eggs	80
Turkey and others	30925	278 tons kg	9 kg.

Source: Department of Animal Husbandry, Kerala, 2003.

Category	Area	Production	Productivity
Fish	317.97 ha*	268.911 tonnes*	845.7 Kg/ha
<i>Marine</i>	71 Km*	9221 tonnes **	
<i>Inland</i>	3800 ha*	2210 tonnes**	
Shrimp	46.46 ha**	50.37 tonnes**	1 ton/ha**

* Panfish book, District Fisheries Resource data – Kozhikode district, 2011 of Fisheries Department.

** Success story of “Matsyakeralam” ,2009 of Fisheries Department.

2.7 District profile has been Updated for 2013-14: Yes

2.8 Details of Operational area / Villages

Sl.No	Taluk	Name of the block	Name of the village	How long the village is covered under operational area of the KVK (specify the years)	Major crops & enterprises	Major problem identified	Identified Thrust Areas
1	Quilandy, Kozhikode, Vadakara	Perambra Ulliyeri, Kunnummal Thikkodi Tuneri	Perambra, Koorachundu, Payyoli, Purameri, Chakkittapara, Changaroth, Velom	15 years	Fruits, vegetables	Low production and productivity of vegetables and fruits, Low production of cool season vegetables, Unavailability of quality planting materials, Unavailability of quality vegetable seeds, lack of knowledge about scientific cultivation	Improving production and productivity of fruits and vegetables, quality planting material production, scientific cultivation of fruits and vegetables
2	Quilandy	Balusseri, Perambra and Kunnummal	Koorachundu, Chakkittapara, Aroor	3years	Black pepper nursery	Lack of availability and high cost of river sand	Assessing performance of nursery mixture with substitutes of sand
3	Vadakara	Balusseri and Kunnummal	Koorachundu, Chakkittapara, Aroor	3years	Ginger	Un balanced nutrient management resulting in low yield and quality of ginger	Integrated nutrient management

4	Quilandy	Balusseri and Perambra	Chakkittapara, Koorachundu	4years	Black Pepper	Lack of High yielding and shade tolerant varieties in homesteads	Popularization of new varieties
5	Kozhikode	Olavanna	Pantheerankavu	2 years	Bush pepper	Lack of space for conventional field planting of pepper in cities and flats.	Introduction of new production technique
6	Quilandy	Balusseri and Perambra	Koorachundu, Chakkittapara, Chembanoda and Poozhithodu	4years	Rice	Lack of adoption of suitable varieties and technologies for upland cultivation.	Introduction of new varieties/ technologies
7.	Kozhikode	Perambra	Koorachundu, Chempanoda	Since the inception of KVK	Paddy, vegetables, Banana	Bird menace in paddy fields	Use of bird repellent metallic ribbons
8.	Kozhikode, Koyilandy	Perambra	Edavarad, Paleri	Since the inception of KVK	Paddy, Coconut, vegetables, Banana	Over dependency on chemical pesticides in vegetables for pest and disease management	Use of organics for pest and disease management
9	Koyilandy	Perambra, Balussery	Chakkittapara Koorachundu Poozhithode	Since the inception of KVK	Spices, Rubber, Coconut, Areca nut, Apiculture	Severe incidence of <i>Phytophthora</i> foot rot of black pepper	Integrated Disease Management
10	Vatakara and Koyilandy	Kunnummel	Palliyath	3 years	Dairy, goatary, paddy, tapioca etc.	High cost of feeding	Feeding management in livestock
11	Quilandy Vada kara	Perambra Balussery Kunnummal Vada kara	Changaroth, Ulliyeri, Kuttiyadi, Kunnumal	2 years 2012-14	Fresh water aquaculture	1. Increase in cost of feed ingredients and poor food conversion ratio for freshwater food fishes 2. Submerged aquatic weed infestation in ponds. 3. Poor water quality, survival in freshwater ornamental fish culture tanks	Freshwater food fish culture and ornamental fish culture

2.9 Priority thrust areas

S. No	Thrust area
1	Improving vegetable production – Introducing HYVs of vegetables
2	Quality planting material production of horticultural crops
3	High production technology of major horticultural crops
4	Improving productivity of crops through integrated nutrient management
5	Demonstration of High Yielding Varieties suitable to specific situations
6	Demonstration of new production technologies
7	Assessing the performance of alternate nursery mixture with substitution of sand
8	Integrated Pest and Disease Management
9	Feeding management in livestock
10	Breeding management in live stock
11	Disease control measures
12	Freshwater aquaculture (Edible and ornamental fishes)

PART III - TECHNICAL ACHIEVEMENTS

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

OFT				FLD			
1				2			
Number of OFTs		Number of farmers		Number of FLDs		Number of farmers	
Targets	Achievement	Targets	Achievement	Targets	Achievement	Targets	Achievement
6	6	33	33	13	13	122	114

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
119	139	3245	4803	340	756	2190	3027

Seed Production (Qtl.)		Planting materials (Nos.)	
5		6	
Target	Achievement	Target	Achievement
Ginger- 1Qtl	2 Qtl	35000	32224
Turmeric-1Qtl	2 Qtl		

Livestock, poultry strains and fingerlings (No.)		Bio-products (Kg)	
7		8	
Target	Achievement	Target	Achievement
Broiler chicks: 3000	3550	Vermicompost: 2000 kg	2500 kg
Layer chicks: 7500	8958	<i>Trichoderma</i> - 1 Tonne	577 kg
Goats: 10	14	<i>Pseudomonas</i> - 1 Tonne	576 kg
Ornamental fishes 1000	1263	MET- 50 Nos.	94 Nos.
Fish fingerlings 1000	1300	Cuelure- 75 Nos.	128 Nos.

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

S. No	Thrust area	Crop/ Enterprise	Identified Problem	Interventions										
				Title of OFT if any	Title of FLD if any	Number of Training (farmers)	Number of Training (Youths)	Number of Training (extension personnel)	Extension activities (No.)	Supply of seeds (Qtl.)	Supply of planting materials (No.)	Supply of livestock (No.)	Supply of bio products	
													No	Kg
1.	Improving production of vegetables	Yard Long Bean	Low production of vegetables	Assessing the performance of Yard Long Bean varieties Lola, Vellayani Jyothika and Arka Mangala in Kozhikode district		1	-	-	2	7 kg	-	-	-	70 Kg
2	Improving production of vegetables	Onion	Less area under cool season vegetables in the district	Assessing the performance of Arka Kalyan and Agrifound Dark Red onion under Kozhikode condition		1	-	-	2	10 kg	-	-	-	45 kg

3.	Improving production of vegetables	Amaranthus	Low production of vegetables	-	Introduction of a high yielding variety of amaranthus viz. Rensusree	1	-	-	-	2 kg	-	-	-	27 kg
4	Quality planting material production	All horticultural crops	Unavailability of quality planting materials	-	-	2	4	1	-	-	-	-	-	-
5.	Improvement of productivity of crops	Ginger	Low yield and quality of ginger	Nil	Effectiveness of IISR Nutrient Mixture for yield and quality of ginger	4	2	1	2	2	2	-	-	-
6.	Demonstration of High Yielding varieties of crops.	Rice	Lack of knowledge on High yielding short duration variety of upland rice and lack of knowhow on upland rice technology	Nil	Introduction of High yielding, short duration upland rice variety Vaisakh	3	1	1	2	3	1	-	-	-
7.	-do-	Black pepper	Lack of knowledge on high yielding and foot rot tolerant pepper variety	Nil	Introduction of High yielding foot rot tolerant Black pepper variety IISR Thevam	3	3	1	2	-	-	28000	-	-
8.	-do-	-do-	Lack of knowledge on high yielding shade tolerant variety and its performance	Demonstration of shade tolerant pepper variety Panniyur-5	Demonstration of shade tolerant pepper variety Panniyur-5	2	2	1	2	-	-	10000	-	-
9.	Demonstration of new production technologies suited to specific situation	Bush pepper	Lack of facilities for growing of pepper in flat system due to unavailability of space for field planting.	Nil	Demonstration of Bush pepper in pot for flats.	2	2	1	2	-	-	3500	-	-

10.	Pest and Disease Management	Vegetables	Pest and disease incidence in bitter gourd	Assessment of organics for pest and disease management of bitter gourd	-	1	2	-	-	-	-	-	-	-
11.	Integrated Disease Management	Black Pepper	Foot rot/ Quick wilt	Management of foot rot of black pepper	-	2	-	-	-	-	-	-	-	Trichoderma -18 kg, Pseudomonas fluorescens – 18kg
12.	Integrated Disease Management	Black Pepper	Foot rot/ Quick wilt	-	Integrated Disease Management of <i>Phytophthora</i> Foot Rot of Black Pepper	2	-	-	-	-	-	-	-	Trichoderma - 10kg
13.	Pest management using ribbons	Paddy	Yield loss due to bird damage in paddy	-	Demonstration of reflective ribbons for repelling birds from paddy fields	1	-	-	-	-	-	-	-	-
14.	Laying performance in layer chicks	Poultry	Poor production, lack of scientific management of layer chicks	-	Demonstration of Gramasree layer chicks	2	1	-	2	-	-	-	Gramasree layer chicks, 100 nos	-
15.	Feeding management	Milch cow	Poor quality feed, high cost	-	Formulation of homemade ration for livestock and fishery	2	1	-	2	-	-	-	-	-
16.	Fisheries: freshwater aquaculture	Ornamental fish culture	Poor water quality and disease outbreaks in ornamental fish culture tanks	-	Popularization of bucket filter for maintaining water quality of ornamental fish culture tanks	2	7	-	28	-	-	-	-	-

17	Fisheries: freshwater aquaculture	Food fish culture	Submerged aquatic weed infestation in ponds and water logged areas		Popularization of grass carp for controlling submerged aquatic weeds	-	4	-	17	-	-	-	-	-
18	Fisheries: freshwater aquaculture	Food fish culture	Increase in cost of feed ingredients and poor food conversion ratio feeds	Evaluating the growth performance of fishes using formulated feed		1	4	-	15	-	-	-	-	-
19	Value addition	Spices	Lack of knowledge in post harvest technology		Value added products of spices including coconut inflorescence products with branding and marketing	19	10	-	-	-	-	-	-	-

3.B2. Details of technology used during reporting period

S.No	Title of Technology	Source of technology	Crop/enterprise	No. of programmes conducted			
				OFT	FLD	Training	Others (Specify)
1	2	3	4	5	6	7	8
1	Introduction of a high yielding variety of amaranthus viz. Renusree	KAU, Thrissur	Amaranthus	-	1	1	Field day - 1
2	Assessing the performance of Yard Long Bean varieties Lola, Vellayani Jyothika and Arka Mangala in Kozhikode district	KAU, Thrissur, IIHR, Bangalore	Yard Long Bean	1	-	-	Field day - 1
3	Assessing the performance of Arka Kalyan and Agrifound Dark Red onion under Kozhikode condition	IIHR, Bangalore, NHRDF and KVK, Thrissur	Onion	1	-	-	Method demonstration - 2
4.	Effectiveness of IISR Nutrient Mixture for yield and quality of ginger	IISR, Calicut	Ginger	-	10	3	Field day -1,soiltesting campaign-1method demonstration-1,seminar-2
5.	Introduction of High yielding, short duration upland rice variety Vaisakh	KAU	Rice	-	10	5	Method demonstration,-2,Field day-1,Popular article-2
6.	Introduction of High yielding foot rot tolerant Black pepper variety IISR Thevam	IISR, Calicut	Black pepper	-	5	2	Supply of saplings-4000,Method demonstration-2seminar-1
7.	Demonstration of shade tolerant pepper variety Panniyur-5	KAU	-do-	-	5	2	Supply of planting material,methoddemonstration-2,Seminar-2
8.	Demonstration of Bush pepper in pot for flats.	IISR, Calicut	Bush pepper	-	20	4	Method demonstration-3,Seminar-2,Field day-1,radiotalk-1
9.	Performance evaluation of sandless nursery mixture for serpentine nursery of black pepper	IISR, Calicut	Black pepper	5	-	2	Method demonstrations -2 Field day-1
10.	Integrated Disease Management of <i>Phytophthora</i> Foot Rot of Black Pepper	IISR	Black pepper	-	1	2	Seminar
11.	Demonstration of reflective ribbons for repelling birds from paddy fields	NIPHM	Paddy	-	1	1	Method Demonstration
12.	Assessment of organics for pest and disease management of bitter gourd	KAU, TNAU	Bitter gourd	1	-	3	Method Demonstration, Field day
13.	Management of foot rot of black pepper	KAU, IISR	Black pepper	1	-	2	Seminar

14	Demonstration of Gramasree layer chicks	KAU	Poultry	-	10	3	2
15	Formulation of homemade ration for livestock and fishery	KAU	Milch cow	-	2	2	-
16	Popularization of bucket filter for maintaining water quality of ornamental fish culture tanks	Kerala Agricultural University (KAU)	Fresh water ornamental fish	-	1	9	-
17	Popularization of grass carp for controlling submerged aquatic weeds	Central Institute of Freshwater aquaculture (CIFA)	Freshwater food fish culture	-	1	4	-
18	Evaluating the growth performance of fishes using formulated feed	Kerala Agricultural University and Central Institute of Fisheries Education (CIFE)	Freshwater food fish culture	1	-	5	-
19	Value added products of spices including coconut inflorescence products with branding and marketing	-	spices	-	1	29	-

3.B2 contd..

No. of farmers covered															
OFT				FLD				Training				Others (Specify)			
General		SC/ST		General		SC/ST		General		SC/ST		General		SC/ST	
M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
-	9	-	1	2	6	-	2	8	20	1	4	15	12	4	3
4	-	-	1	-	-	-	-	16	8	2	1	18	12	1	1
-	-	-	-	9	1	-	-	24	25	1	1	22	28	2	2
-	-	-	-	10	-	-	-	92	7	-	-	18	5	1	2
-	-	-	-	5	-	-	-	48	25	1	-	25	16	1	1
-	-	-	-	5	-	-	-	28	11	1	-	12	14	2	1
-	-	-	-	14	6	-	-	32	16	2	1	75	53	5	4
5	-	-	-	-	-	-	-	28	25	6	1	12	11	6	1
0	0	0	0	10	0	0	0	20	5	0	0	44	32	4	2
0	0	0	0	10	0	0	0	12	4	2	1	16	6	0	0
5	0	0	0	0	0	0	0	8	15	1	2	10	12	1	2
5	0	0	0	0	0	0	0	8	2	0	0	44	32	4	2
-	-	-	-	-	5	-	10	25	88	22	49	4	28	5	11
-	-	-	-	2	10	2	2	26	32	8	12	6	8	2	2
-	-	-	-	5	0	0	0	26	32	8	12	2	4	1	1
-	-	-	-	10	1	1	0	31	19	3	2	2	2	1	1
2	0	1	0	0	0	0	0	8	0	0	0	2	2	0	0
-	-	-	-	-	5	-	-	98	443	38	65	-	-	-	-

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
Varietal Evaluation	-	-	-	-	2	-	-	-	-	2
Integrated Disease Management	-	-	-	1	-	-	-	-	-	1
Resource Conservation Technology	-	-	-	1	-	-	-	-	-	1
Integrated Pest and Disease Management	-	-	-	-	1	-	-	-	-	1
Total	-	-	-	2	3	-	-	-	-	5

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

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

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

4.B. Achievements on technologies Assessed and Refined

4.B.1. Technologies Assessed under various Crops

Thematic areas	Crop	Name of the technology assessed	No. of trials	Number of farmers	Area in ha (Per trail covering all the Technological Options)
Varietal Evaluation	Yard Long Bean	Assessing the performance of Yard Long Bean varieties Lola, Vellayani Jyothika and Arka Mangala in Kozhikode district	10	10	1.5
	Onion	Assessing the performance of Arka Kalyan and Agrifound Dark Red onion under Kozhikode condition	5	5	0.5
Integrated Pest Management	Bitter gourd	Assessment of organics for pest and disease management of bitter gourd	5	5	0.24 ha
Integrated Disease Management	Black pepper	Management of foot rot of black pepper	5	5	0.027 ha
Resource Conservation Technology	Black pepper	Assessment of sandless nursery mixture for Black pepper serpentine nursery	5	5	0.015
Total			30	30	-

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

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

Thematic areas	Name of the livestock enterprise	Name of the technology assessed	No. of trials	No. of farmers
Fresh water aquaculture	Fresh water fishes	Evaluating the growth performance of fishes using formulated feed	3	3
Total			3	3

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

4.C1. Results of Technologies Assessed

Results of On Farm Trial

Crop/enterprise	Farming situation	Problem definition	Title of OFT	No. of trials	Technology Assessed	Parameters of assessment	Data on the parameter	Results of assessment	Feedback from the farmer	Any refinement needed	Justification for refinement
1	2	3	4	5	6	7	8	9	10	11	12
Yard Long Bean	Irrigated	Low production of vegetables	Assessing the performance of Yard Long Bean varieties Lola, Vellayani Jyothika and Arka Mangala in Kozhik	10	Assessment of Yard Long Bean varieties Lola, Vellayani Jyothika and Arka Mangala in Kozhikode district	Yield and pod length	Yield was highest for Vellayani Jyothika followed by Arka Mangala and Lola. Pod length was	Performance of Vellayani Jyothika was better compared to other varieties. Pods were more fleshy and palatable	Local preference was more for Vellayani Jyothika compared to other varieties tested.	--	--

			ode district				more in Arka Mangala (70.5 cm), followed by Vellayani Jyothika (58 cm) and Lola(51.2 cm).	e in this variety.			
Onion	Irrigated	Low production of cool season vegetables	Assessing the performance of Arka Kalyan and Agrifound Dark Red onion under Kozhikode condition	5	Assessment of Arka Kalyan and Agrifound Dark Red onion under Kozhikode condition	Adaptability, yield	Not suitable for the locality where the trials were conducted.	Due to unexpected and incessant rains during the nursery stage, all the seeds germinate did not survive in all the farmers' fields except in one plot having sandy soil texture. In the same plot itself, only very few plants survived till harvest.	The farmers opined that the crop is not suitable for areas having very high rainfall in September – October period when the nursery is to be raised.	New varieties suitable for high rainfall areas need to be evolved..	Onion price is soaring high in the local markets due to lack of varieties suitable for local production.
Black pepper	Rainfed homestead system in which pepper is a component crop	Due to scarcity and high cost of sand planting material (rooted pepper cuttings) production by farmers	Assessment of sandless nursery mixture for Black pepper serpentine nursery	5	To-1-use of 5:1:1 soil:coirpith:FYM nursery mixture	Avg. No.of nodes produced after 3months Cost/sampling B:C	8 Rs.5.23 1.92	The trial is progressing	Use of 4 (soil) :1 (coir pith) compost based nursery mixture fortified with FYM@200g/cft is best performing	Yes	The disease incidence that may arise during rainy season has to be evaluated

	different standards	as per the recommended 2:1:1 nursery mixture is very costly resulting in failure to adopt.			(To-2)-Use of 2:1:1(Rock powder substituted for sand)nursery mixture	Avg. No.of nodes produced after 3months	9		g compared to other technology options.		ed as there is a chance of more water retention by the medium using coir pith compost-
					(To-3)-Use of 4:1: soil:,coirpith fortified with fym@200g/cft nursery mixture.	Avg. No.of nodes produced after 3months	12				
						Cost/sa pling	6.4				
						B:C	1.4				
						Cost/sa pling	5.1				
						B:C	1.96				
Bitter gourd	Pure crop	Incidence of pests and diseases	Assessment of organics for pest and disease management of bitter gourd	5	Organics for pest and disease management of bitter gourd	Yield	Yield : 9 t/ha in T2, 9.5 T/ha in T3	B: C ratio: 2.04 in T2, 2.13 in T3			
Black pepper	intercrop	Incidence of foot rot disease	Management of foot rot of black pepper	5	Management of foot rot of black pepper	%disease incidence , yield	Trial in progress. The vines have not started yielding	%disease incidence in T1 – 34 %, in T2-16 %, in T3 18%	No much difference noticed		
Fisheries: aquaculture	Extensive	Increase in cost of feed ingredients and poor food conversion ratio feeds	Evaluating the growth performance of fishes using formulated feed	3	Kerala Agricultural University and Central Institute of Fisheries Education (CIFE)	Growth (Yield) & Survival	OFT progressing	Growth and survival of fishes with formulated feed found better presently			

Contd..

Technology Assessed	Source of Technology	Production	Please give the unit (kg/ha, t/ha, lit/animal, nuts/palm, nuts/palm/year)	Net Return (Profit) in Rs. / unit	BC Ratio
13	14	15	16	17	18

Technology option 1 (Farmer's practice) . Farmers traditionally grow local types such as Manjeri Local and Kurutholapayar mainly during summer season	Farmers practice	15.12	t/ha	103514	1.74
Technology option 2: Cultivation of a HYV viz. Lola	KAU, Thrissur	18.19	t/ha	152634	2.10
Technology option 3: Cultivation of a HYV viz. Vellayani Jyothika	KAU, Thrissur	20.75	t/ha	193694	2.40
Technology option 4: Cultivation of a HYV of YLB viz. Arka Mangala	IIHR, Bangalore	19.12	t/ha	167514	2.21
Technology option 1 (Farmer's practice) new crop	Farmers practice	--	--	--	--
Technology option 2: Cultivation of Arka Kalyan onion during winter in the plains	KAU, Thrissur, IIHR, Bangalore	--	--	--	--
Technology option 3: Cultivation of Agrifound Dark Red onion during winter in the plains	KAU, Thrissur, NHRDF	--	--	--	--
Technology option 1 (Farmer's practice) use of 5:1:1 soil:FYM:Coirpith compost	Farmers practice	32	nodes/sapling/year	1526.4	1.7
Technology option 2 Use of 2:1:1 soil: sand: FYM (Rock powder substituted for sand)	IISR, Calicut	36	nodes/sapling/year	1296	1.4
Technology option 3 Use of 4:1 Soil: Coir pith compost fortified with FYM@200g/cft	IISR, Calicut	48	nodes/saplings/year	2352	1.96
T.O.1: Farmer's practice - Indiscriminate use of chemical pesticides	-	5.4	t/ha	1058	1.13
T.O.2 : Use of <i>Pseudomonas fluorescens</i> and entomopathogenic fungus	KAU	9	t/ha	11,033	2.04
T.O.3: Use of chitin enriched <i>Pseudomonas fluorescens</i> and botanicals	TNAU	9.5	t/ha	12133	2.13
T.O.1:Farmer's practice- Drenching of Bordeaux mixture	-	-	-	-	-
T.O.2: Prophylactic spray of 0.3% potassium phosphonate @ 5 litre per plant, twice a year (pre southwest monsoon and pre northeast monsoon)	IISR	-	-	-	--

+ <i>Pseudomonas</i> 50 g incubated in FYM (2 kg) , twice a year and <i>Trichoderma</i> 50g incubated in neem cake (0.5 kg) and FYM (1kg) twice a year (pre southwest monsoon and pre northeast monsoon)					
T.O.3 : <i>Pseudomonas</i> drenching (2%)- 5 litre per vine twice a year (pre southwest monsoon and pre northeast monsoon) and <i>Trichoderma</i> enriched organic manure 5 kg twice a year (10 days after <i>Pseudomonas</i> application)+ foliar spray of <i>Pseudomonas</i> (2%) twice a year	KAU	-	-	-	-
Technology option 1 (Farmer's practice) Feeding fishes with cattle feed and kitchen refuses	Farmers practice	-	-	-	-
Technology option 2 Feeding fishes with rice bran and ground nut oil cake (1:1) @5% body weight	Kerala Agricultural University	-	-	-	-
Technology option 3 Feeding fishes with formulated floating feeds for carps @ 5% body weight	Central Institute of Fisheries Education (CIFE)	-	-	-	-

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

OFT-1

- 1 Title of Technology Assessed : Assessing the performance of Yard Long Bean varieties Lola, Vellayani Jyothika and Arka Mangala in Kozhikode district
- 2 Problem Definition : Low production of vegetables
- 3 Details of technologies selected for assessment: Performance of three varieties of YLB namely Lola, Vellayani Jyothika and Arka Mangala were assessed.
- 4 Source of technology: KAU, Thrissur, IIHR, Bangalore
- 5 Production system and thematic area: Irrigated crop, improving production of vegetables
- 6 Performance of the Technology with performance indicators: Of the three varieties tested, Vellayani Jyothika outperformed other varieties in terms of yield and local acceptance.

7. Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques: Local preference was more for Vellayani Jyothika compared to other varieties tested due to fleshy nature of pods and palatability.
8. Final recommendation for micro level situation: Vellayani Jyothika is more suitable for the locality.
9. Constraints identified and feedback for research: Lack of availability of seeds of Vellayani Jyothika and Arka Mangala is a constraint.
10. Process of farmers' participation and their reaction: The local vegetable farmers were very eager to test these improved varieties in their field and actively participated in the trial.

OFT-2

1. Title of Technology Assessed : Assessing the performance of Arka Kalyan and Agrifound Dark Red onion under Kozhikode condition
2. Problem Definition : Low production of cool season vegetables
3. Details of technologies selected for assessment: Two varieties of onion namely Arka Kalyan and Agrifound Dark Red were assessed.
4. Source of technology: KAU, Thrissur, IIHR, Bangalore and NHRDF
5. Production system and thematic area: Irrigated crop, improving production of cool season vegetables
6. Performance of the Technology with performance indicators: Due to unexpected and incessant rains during the nursery stage, seedlings did not survive in all the farmers' fields except in one plot having sandy soil texture. In this plot itself, only very few plants survived till harvest.
7. Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques: Farmers are of the opinion that onion crop is not suitable for areas having very high rainfall in September – October period when the nursery is to be raised.
8. Final recommendation for micro level situation: Seedling may have to be raised under protective structures preferably in pro-trays for better survival of the seedlings.
9. Constraints identified and feedback for research: New varieties suitable for high rainfall areas need to be evolved.
10. Process of farmers' participation and their reaction: Farmers were very eager to test the onion varieties for the first time in the locality.

OFT-3

1. Title of Technology Assessed :Assessment of sandless nursery mixture for Black pepper serpentine nursery
2. Problem Definition :Due to acute scarcity of sand and high price farmers are not able to adopt quick multiplication of high yielding varieties of Black pepper using the recommended nursery mixture of 2:1:1 (Soil:Sand:FYM)
3. Details of technologies selected for assessment
 - TO-1-use of 5:1:1 soil: Coir pith compost: FYM nursery mixture
 - (TO-2)-Use of 2:1:1(Rock powder substituted for sand) nursery mixture
 - (TO-3)- Use of 4:1 Soil: Coir pith compost fortified with FYM@200g/cft nursery mixture
4. Source of technology : IISR, Calicut
5. Production system and thematic area: Pepper is grown as a mixed cop in homestead system of cultivation on various standards available under rainfed mixed crop in homestead. Resource conservation technology

- 6 Performance of the Technology with performance indicators: The technology option TO-3 was the most superior in terms of total production of nodes, cost of production and B:C
7. Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques .Farmers opined that use of coir pith compost ensured better growth of vines. The average score given by farmers was 6/10 for TO-2 and 9/10 for TO-3
- 8 Final recommendation for micro level situation: Use of coir pith compost in nursery mixture@4soil:1 coir pith compost: +fortified with fym@200g/cft proportion with utilization of *Trichoderma harzianum* may be advocated for small-scale nurseries of pepper under serpentine multiplication method so as to address the problem of high cost and unavailability of sand for planting material production of high yielding varieties of pepper.
- 9 Constraints identified and feedback for research: A cheaper substitute for coir pith compost is required as the cost of coir pith compost is Rs.7/kg. The cost of production of saplings has to be reduced further.
- 10 Process of farmers' participation and their reaction: The farmers were selected from SHGs for pepper nurseries. They were satisfied about the trial result.

OFT-4

- 1 Title of Technology Assessed : Assessment of organics for pest and disease management of bitter gourd
- 2 Problem Definition: Incidence of pests and diseases
- 3 Details of technologies selected for assessment:
T.O.1: Farmer's practice - Indiscriminate use of chemical pesticides
T.O.2: Use of *Pseudomonas fluorescens* and entomopathogenic fungus (KAU)
T.O.3: Use of chitin enriched *Pseudomonas fluorescens* and botanicals (TNAU)
- 4 Source of technology: TO2: KAU, TO3: TNAU
- 5 Production system and thematic area: Pure crop, Integrated Pest and Disease Management
- 6 Performance of the Technology with performance indicators:

Technology options	Yield (t/ha)	B:C ratio
T.O.1	6.8	0.21
T.O.2	9	2.04
T.O.3	9.5	2.13

- Metarahizium drenching was effective in controlling the pumpkin beetles attacking the crop
7. Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring Techniques: the farmers rated T.O.3 performing better than T.O.2
- 8 Final recommendation for micro level situation: The use of entomopathogens will be effective only under humid conditions, which is favourable for the growth of the fungus. Adoption of management methods to be undertaken considering the season of cultivation.
- 9 Constraints identified and feedback for research: -
- 10 Process of farmers' participation and their reaction: The farmers were convinced about the efficiency of *Pseudomonas fluorescens* for the management of diseases of crops.

OFT-5

- 1 Title of Technology Assessed : Management of foot rot of black pepper
- 2 Problem Definition: Incidence of foot rot disease
- 3 Details of technologies selected for assessment:
T.O.1: Farmer's practice

														achievement
									Proposed	Actual	SC/ST	Others	Total	
1	Cereals-Paddy	Upland	Khari f 2013	Rice	Vaisakh	-	Varietal evaluation	Demonstration of High Yielding short duration upland rice variety Vaisakh	1	1		10	10	-
2	Cereals-Paddy	Rainfed, upland paddy		Upland rice	Vaishak	-	Pest management	Use of reflective ribbons for repelling birds from paddy fields	1	1	0	10	10	-
3	Vegetables	Irrigated	Summer season 2013-14	Amaranthus	Renusree	--	Improving production of vegetables	Introduction of a high yielding variety of amaranthus viz. Renusree	10	10	2	80	10	--
4	Spices and condiments	Rainfed	Khari f	Ginger	Varada	-	Integrated nutrient management	Demonstration of IISR Nutrient mixture for Higher yield and quality in ginger	0.04	0.04		10	10	-
5	“	Rainfed homes tead	Khari f	Black pepper	Panniyur-5	-	Varietal evaluation	Demonstration of shade tolerant variety of black pepper	0.4	0.4		5	5	-
6	“	Rainfed homes tead	Rainfed	Black pepper	IISR Thevam	-	Varietal evaluation	Demonstration of HYV, IISR Thevam	0.4	0.4		5	5	-
7	“	Flats/cities	Khari f	Black pepper	Bush pepper	-	Integrated farming system	Demonstration of bush pepper in pots	20 families	20		20	20	-
8	“	Intercrop	Perennial	Black Pepper	Karimunda, Kalluvally, Aimpiriyam		Integrated Disease Management	Integrated Disease Management of <i>Phytophthora</i> Foot Rot of Black	250 vines (0.22 ha)	250 vines (0.22 ha)	-	10	10	

Cereals	Demonstration of short duration high yielding upland rice variety	Vaisakh	-	Rainfed upland situation	10	1	59	28	43	32	34.8	59500	172700	113200	2.90	54900	133600	78700	2.43
	Demonstration of reflective ribbons for repelling birds from paddy fields	Vaisakh	-	Rainfed upland situation	10	1	59	28	43	32	34.8	63100	172700	109600	2.74	54900	133600	78700	2.43
Vegetables	Introduction of a high yielding variety of amaranthus viz. Renusree	Renusree	--	Irrigated	10	1	138.6	110.4	124.5	102.4	21.58	109310	186000	76690	1.70	106820	153600	46780	1.44
Spices and condiments	Effectiveness of IISR Nutrient mixture for higher yield in Ginger	Varada	-	Rainfed garden land	10	0.04	195	127.5	147	142.5	3.15	39000	132300	93300	3.39	38200	128250	90050	3.35
“	Demonstration of High yielding shade tolerant variety of Pepper	Panniyur-5	-	Rainfed homestead	5	0.4	Demonstration just begun	-	-	-	-	-	-	-	-	-	-	-	-
“	Demonstration of foot rot tolerant High yielding variety	IISR Thevam	-	Rainfed homestead	5	0.4	Demonstration progressing in second year	-	-	-	-	-	-	-	-	-	-	-	-
“	Demonstration of bush pepper	Karimunda	-	In pots for flats/city	20	100	Demonstration progressing in second year	-	-	-	-	-	-	-	-	-	-	-	-
“	Black pepper	Karimunda, Kalluvally, Aimpiryan	-	Intercrop	10	.22	28.50	6.50	17.50	2.18	87.54	2,76,500	6,82,500	4,06,000	2.46	71,500	85,020	13,520	1.19

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
FLD on amaranthus - Disease incidence	Leaf spot disease more in Renusree	Leaf spot comparatively less in check variety Arun
IISR nutrient mixture for ginger Ginger soft rot incidence	8.5%	16%
Upland rice Avg.straw yield	130q/ha	85q/ha
Casualty of black pepper vines	8.9 %	46 %

5.B.2. Livestock and related enterprises

Type of livestock	Name of the technology demonstrated	Breed	No. of Demos	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	Formulation of homemade ration for livestock and fishery	Crossbreed	2	2	500kg	125kg	312.5kg	90	555.5	12500	17500	5000	1:4	2250	3150	900	1:4
Poultry	Demonstration of Gramasree layer chicks	Gramasree	25	25	192 egg	154 egg	173 egg	98 eggs	135.15	1250	5160	3910	4:1	787	2940	2157	3:7

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
Production performance	500kg/day	90kg/day
Age at sexual maturity, egg size	169 days, 48 ams	186 days, 43 ams

5.B.3. Fisheries

Type of Breed	Name of the technology demonstrated	Breed	No. of Demos	Units / Area (m ²)	Yield (q/ha)				% Increase	*Economics of demonstration Rs./unit) or (Rs./m2)				*Economics of check Rs./unit) or (Rs./m2)			
					Demo			Check if any		Gross Cost	Gross Return	Net Return	**BCR	Gross Cost	Gross Return	Net Return	**BCR
					H	L	A										
Common carps	Popularization of grass carp for controlling submerged aquatic weeds	Grass carp	12	400m ²	30Kg after 7 months	10Kg after 7 months	10Kg after 7 months			300	800	500	2.6				
Ornamental fishes	Popularization of bucket biofilter for maintaining water quality of ornamental fish culture tanks	Live bearer fishes (Guppy, platy, swordtail)	5	2 m ³	546 fishes (Survival 91%) Crop duration :4 months	482 fishes (survival 80%) Crop duration :4 months	504 (Survival 87%) Crop duration :4 months	Survival 75%) Crop duration :4 months	16%	728	1671	943	2.29	326	603	277	1.85

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
Submerged weed infestation after 7 months	60% weed consumed in large ponds>0.04 ha and 20% in small ponds< 0.04 ha	100 % weed infested

5.B.4. Other enterprises

Enterprise	Name of the technology demonstrated	Variety/species	No. of Demos	Units / Area {m ² }	Yield (q/ha)			% Increase	*Economics of demonstration (Rs./unit) or (Rs./m ²)				*Economics of check (Rs./unit) or (Rs./m ²)			
					Demo	Check if any			Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR
Others	Value added products of spices including coconut inflorescence products with branding	Spices	8		H	L	A		256.00/kg	560/kg	304/kg	2.18	386/kg	560.00/kg	174.00/kg	1.45
IFS	Fresh water fish culture Fodder Pepper Grafted pepper Bush pepper HYV of Ginger Pheromone trap Bio control Agents Azolla Coconut climber Banana Vegetables Poultry Apiary Ginger Turmeric	HYVs	5	1ha	Progressing in second year	-	-	-	30000	70000	40000	2.3	22000	52000	32000	2.36

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

5.B.5. Farm implements and machinery: Nil

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

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

Sl.No.	Activity	No. of activities organised	Number of participants	Remarks
1	Field days	9	201	
2	Farmers Training	22	553	
3	Media coverage	2	1000s	
4	Training for extension functionaries	2	15	
5	Method demonstration	8	95	
6.	Popular article	2	-	
7.	Radio talk	2	100s	

Integrated Pest Management	2	23	43	66	1	5	6	24	48	72
Integrated Disease Management	1	26	24	50	4	2	6	30	26	56
Bio-control of pests and diseases	3	33	57	90	2	4	6	35	61	96
Fisheries										
Breeding and culture of ornamental fishes	1	7	0	7	0	0	0	7	0	7
Others (pl.specify) Fish feed preparation and management	1	6	1	7	0	0	0	6	1	7
Water quality management in fish culture	1	8	0	8	0	0	0	8	0	8
Production of Inputs at site										
Mushroom production	3	24	30	54	-	-	-	24	30	54
Apiculture	1	25	0	25	0	0	0	25	0	25
TOTAL	67	704	831	1535	139	130	269	843	961	1804

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										
Cropping Systems	2	37	124	161	12	7	19	49	131	180
Crop Diversification	1	28	19	47	3	2	5	31	21	52
Integrated Farming	1	38	-	38	-	-	-	38	-	38
Nursery management	1	25	18	43	2	1	3	27	19	46
Integrated Crop Management	2	76	43	119	4	2	6	80	45	125
Horticulture										
a) Vegetable Crops										
Production of low value and high volume crop	1	6	7	13	2	1	3	8	8	16
Protective cultivation	1	18	-	18	-	-	-	18	-	18
b) Fruits										
Cultivation of Fruit	1	7	7	14	2	1	3	9	8	17
c) Spices										
Production and Management technology	1	92	2	94	6	2	8	98	4	102
Livestock Production and Management										
Dairy Management	7	128	68	196	40	40	80	168	108	276
Poultry Management	1	28	14	42	6	6	12	34	20	54
Goatary Management	2	47	16	63	12	10	22	59	26	85
IFS	1	32	16	48	12	4	16	44	20	64
Animal Nutrition Management	3	97	59	156	30	18	48	127	77	204
Animal Disease Management	8	244	125	369	96	73	169	340	198	538
Feed and Fodder technology	4	97	65	162	31	26	57	128	91	219
Fertility management	3	65	31	96	23	19	42	88	50	138
Home Science/Women empowerment										
Value addition	4	17	76	93	2	5	7	19	81	100
Plant Protection										
Integrated Pest Management	3	116	15	131	3	5	8	119	20	139
Integrated Disease Management	3	90	34	124	6	7	13	96	41	137

Bio-control of pests and diseases	2	50	29	79	2	2	4	52	31	83
Fisheries										
Integrated fish farming	1	15	8	23	1	0	1	16	8	24
Shrimp farming	1	26	4	30	2	0	2	28	4	32
TOTAL	54	1379	780	2159	297	231	528	1676	1011	2687

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

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Nursery Management of Horticulture crops	4	61	78	139	6	9	15	67	87	154
Integrated farming	4	42	65	107	13	9	22	55	74	129
Planting material production	1	15	6	21	-	-	-	15	6	21
Vermi-culture	2	10	37	47	-	-	-	10	37	47
Mushroom Production	2	62	51	113	4	4	8	66	55	121
Bee-keeping	3	87	43	130	5	3	8	92	46	138
Tailoring and Stitching	1	-	14	14	-	3	3	-	17	17
Rural Crafts	2	8	24	32	-	10	10	8	34	42
Dairying	1	19	2	21	23	12	35	42	14	56
Goat rearing	7	31	16	47	2	2	4	33	18	51
Poultry production	2	4	8	12	16	-	16	20	8	28
Ornamental fisheries	5	74	53	127	9	9	18	83	62	145
Composite fish culture	2	31	19	50	3	2	5	34	21	55
Cultivation of summer vegetables	1	2	10	12	2	3	5	4	13	17
Cultivation of orchids	1	3	6	9	-	4	4	3	10	13
Rock gardening	1	3	9	12	-	11	11	3	20	23
Prospects of floriculture	1	1	73	74	-	11	11	1	84	85
IPDM	3	40	16	56	6	1	7	46	17	63
Production of bio control agents and biopesticides	2	15	34	49	4	6	10	19	40	59
TOTAL	45	508	564	1072	93	99	192	601	663	1264

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
Integrated farming	2	34	29	63	16	15	31	50	44	94
Mushroom Production	2	62	38	100	10	4	14	72	42	114
Value addition	2	5	45	50	-	-	-	5	45	50
Dairying	2	45	26	71	15	13	28	60	39	99
Ornamental fisheries	2	50	13	63	4	0	4	54	13	67
Composite fish culture	2	66	12	78	3	0	3	69	12	81
Fry and fingerling rearing	1	6	6	12	1	0	1	7	6	13
Any other (pl.specify) Integrated fish farming	3	71	29	100	1	0	1	72	29	101

IPDM of crops	2	19	5	24	2	2	4	21	7	28
TOTAL	18	358	203	561	52	34	86	410	237	647

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

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

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Productivity enhancement in field crops	1	18	16	34	2	3	5	20	19	39
Recent trends in the production technology of vegetables	1	15	10	25	3	3	6	18	13	31
Advances in the nursery production technology of tree spices	1	23	5	28	-	2	2	23	7	30
New production technologies in spices	3	56	102	158	9	7	16	65	109	174
Integrated Pest and Disease Management	1	3	11	14	0	1	1	3	12	15
Preparation and use of biopesticides and botanicals	2	29	19	48	4	5	9	33	24	57
Total	9	144	163	307	18	21	39	162	184	346

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	2	40	53	93	2	5	7	42	58	100	
2	Post harvest technology and value addition											
2.a.	Gardeners training	1	5	14	19	2	3	5	7	17	24	
3	Livestock production and management											
3.a.	Animal Nutrition Management	2	50	23	73	21	18	39	71	41	112	
3.b.	Animal Disease Management	3	80	28	108	42	24	66	122	52	174	
3.c.	Others											
	IPDM in spices	2	57	43	100	8	6	14	65	49	114	
	IPDM in coconut	2	35	0	35	5	0	5	40	0	40	
	Beekeeping as an income generating enterprise and for increased productivity of crops	2	59	41	100	3	2	5	62	43	105	
4.	Home Science											
4.a.	Mechanized palm climbing	2	15	14	29	6	5	11	21	19	40	
5	Agricultural Extension											
5.a.	Others											
	Awareness programme on PPV&FR	1	42	51	93	5	2	7	47	53	100	
	Total	17	383	267	650	94	65	159	477	332	809	

Details of sponsoring agencies involved

1. State Horticulture Mission, Kerala
2. National Horticulture Mission for District level training on Scientific production and processing of spices through Directorate of Arecanut and Spices, Calicut. Rs.1.5lakh was sanctioned.
3. PPV&FR Authority, New Delhi had sanctioned Rs.80000 for awareness programme on Protection of Plant Varieties and Farmers Right Act.
4. ATMA- Agriculture Department
5. Coconut Development Board, Cochin

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

		es	Ma le	Fema le	Tot al	Ma le	Fema le	Tot al	Ma le	Fema le	Tot al
1	Crop production and management										
1.a.	Others										
	Bush pepper production technique	2	13	18	31	1	2	3	14	20	34
2.	Income generation activities										
2.a.	Rural Crafts	3	12	36	48		15	15	12	51	63
2.b.	Tailoring, stitching, embroidery, dying etc.	1	-	14	14	-	3	3	-	17	17
2.c.	Others										
	Beekeeping as an income generating enterprise and for increased productivity of crops	2	59	41	100	3	2	5	62	43	105
	Grand Total	8	84	109	193	4	22	26	88	131	219

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	10	130	58	188	9	10	19	47	25	72
Kisan Mela	1	1212	728	1940	78	34	112	37	28	65
Kisan Ghosthi	4	100	38	138	5	5	10	54	33	87
Exhibition	11	-	-	-	-	-	-	-	-	-
Film Show	20	214	105	319	15	14	29	3	3	6
Method Demonstrations	49	370	241	611	19	19	38	39	20	59
Farmers Seminar	13	573	344	917	60	55	115	235	115	350
Workshop	2	212	55	267	6	6	12	82	16	98
Group meetings	5	39	48	87	11	9	20	11	5	16
Lectures delivered as resource persons	12	322	117	439	37	26	63	7	9	16
Newspaper coverage	7	-	-	-	-	-	-	-	-	-
Radio talks	4	-	-	-	-	-	-	-	-	-
TV talks	1	-	-	-	-	-	-	-	-	-
Popular articles	2	-	-	-	-	-	-	-	-	-
Extension Literature	191	-	-	-	-	-	-	-	-	-
Advisory Services	985	305	62	361	6	3	9	7	10	17
Scientific visit to farmers field	213	67	16	83	9	3	12	6	4	10
Farmers visit to KVK	2142	299	186	485	5	8	13	6	4	10
Diagnostic visits	53	45	6	51	2	1	3	6	6	12
Exposure visits	6	78	52	130	9	4	13	6	3	9
Ex-trainees Sammelan	2	28	16	44	2	3	5	0	0	0
Soil health Camp	1	15	8	23	-	-	-	1	-	1
Soil test campaigns	4	29	22	51	1	-	1	1	1	2
Self Help Group Conveners meetings	4	30	51	81	3	9	12	3	7	10
Any Other (Specify)		-	-	-	-	-	-	-	-	-
Helpline	2035	-	-	-	-	-	-	-	-	-
Other state farmers visit to KVK	18	-	-	-	-	-	-	-	-	-
Milk day celebration	1	39	31	70	191	14	205	5	4	9
Vaccination	49900 birds									
Artificial insemination	179 animals									
Dairy club student programme	1	19	2	21	23	12	35	2	4	6
Ksheerolsavam	4	430	368	798	98	128	226	8	4	12
Karshika Mela	1	48	32	80	24	13	37	9	8	17
Total		4604	2586	7190	613	376	989	575	308	883

PART IX – PRODUCTION OF SEED, PLANT AND LIVESTOCK MATERIALS

9.A. Production of seeds by the KVKs: Nil

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	Cabbage seedlings	-	-	7400	18500	756
“	Cauliflower seedlings	-	-	6514	16285	654
“	Onion seedlings	-	-	3192	7980	276
Fruits	Mango grafts	Bennet Alphonso, Kalepady, Sindhu, Benganappally, Suvarnarekha	-	104	6240	32
“	Rambutan seedlings	Elite lines	-	14	280	6
“	Chamba	-	-	57	855	14
“	Nelli seedlings	-	-	3	60	2
“	Mangosteen seedlings	-	-	75	9000	23
Ornamental plants	Ornamental palms	-	-	126	1890	59
“	Misc, ornamental trees	-	-	21	315	41
“	Budha bamboo cuttings	-	-	2000	4000	1
“	Anthurium	Tropical, Can	-	39	975	12
“	Misc. ornamental palms	-	-	45	450	18
“	Croton	-	-	7	140	2
Medicinal and Aromatic						
Plantation	Arecanut seedlings	Mohitnagar, South Kanara local	-	6827	102405	418
“	Cocoa	-	-	82	1640	17
“	Coconut seedlings	-	-	715	53625	72
“	Dwarf arecanut	-	-	4	2000	4
Spices	Bush pepper plants	Sreekara, Karimunda	-	1516	68220	612
“	Bush pepper in pots	Sreekara	-	44	15400	18
“	<i>Piper coloubrinum</i>	-	-	379	3032	32
“	Clove seedlings	-	-	2941	58820	412
“	Garcinia seedlings	Elite lines	-	7	140	41
Forest Species	Neem seedlings	-	-	24	360	87
“	Asokam seedlings	-	-	13	130	7
“	Mahagony seedlings	-	-	75	750	32
Total	-	-	-	32224	372722	3648

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	Vermicompost	2500 kg	25000	64
Bio Agents	<i>Trichoderma</i>	577 kg	43275	458
	<i>Pseudomonas</i>	576 kg	34560	412
Pheromone traps	MET	94 Nos.	9400	94
	Cuelure	128 Nos.	16000	78
Total		3653kg, 222nos	128235	1106

9.D. Production of livestock materials

Particulars of Live stock	Name of the breed	Number	Value (Rs.)	Number of farmers to whom provided
Poultry				
Broilers	Vencob	3559 kg	320359	890
Layers	Gramasree	8958	1078819	844
Ducks	Cherra	9	1113	9
Others				
FYM		862 cft	15375	14
Goat kids	Malabari	14	51580	14
Goat breeding	-	19	1425	19
Fisheries				
Ornamental fishes	Guppy, platy, molly, sword tail, fighter, gourami, gold fish and carps	1263	11,115	68
	Aquatic plants	30	300	22
	Live feed (micro worms)	34	1700	34
	Fresh Fish	17.5 Kg	1750	84
Total		3576.5 kg, 10327nos, 862cft	1483536	1998

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.)
Year of start: 2007
KVK Newsletter; Volume 6, Issues 1 and 2 (January-June 2013, June –December 2013),
Periodicity-Half yearly, 50 copies distributed.

(B) Literature developed/published

Item	Title	Authors name	Number
Research papers			
Technical reports	Project Report on mapping of Farm Innovations in Kerala-Kozhikode district	K.M.Prakash, P.S.Manoj and A.Deepthi	10
News letters	KVK Newsletter; Volume 6, Issues 1 and 2.(January-June 2013, June –December 2013)		50

Popular articles	Kitchens are also suitable for mushroom growing	K.M.Prakash	1
	Soil testing: Purpose and procedure.	Nazia Sherief and K.M.Prakash	1
Extension literature	<i>Sasya samrakshanathinu oru kaippusthakam</i>	Aiswariya.K.K., P.S.Manoj	500
Others (Pl. specify)	Training Manual on Scientific production and processing of spices	K.Kandiannan and K.M.Prakash	200
	Report for innovative farmer award of IARI	K.M.Prakash and C.K.Jayakumar	4
TOTAL			766

10.B. Details of Electronic Media Produced

S. No.	Type of media (CD / VCD / DVD/ Audio-Cassette)	Title of the programme	Number
1.	DVD	Bush pepper to pep up homes	10
2.	DVD	Farm innovations in Kozhikode	3

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

1. Broiler goat rearing ensured livelihood security for the rural women

Pursuing timely endeavours and farmer friendly technologies through research, and answering to the very need of the farming community, Krishi Vigyan Kendra, Kozhikode has come up with a unique idea. 'Broiler Goat Rearing', fine-tuned by the KVK is a boon to the farming community especially in the areas where green fodder is in scarce.

In this new technology, goat kids reared in sheds attain a better body weight and fetch remunerative income for farmers. This method benefits landless labourers and small farmers. Broiler rearing method is unique in itself. It is done by exploiting the high reproductive efficiency of female goats through proper planning and breeding, thus maintaining the quality of the offspring. At the same time to counter the scarcity of green fodder, a scientific and low cost feeding procedure is evolved.



As far as broiler goat rearing is concerned, there is no specific breed for this purpose. The kids (both male as well as female kids) of any local breeds can be selected and reared through this method. Under this method, 15 to 30 days old kids with a higher birth weight are selected before they start eating green leaves. These kids, once identified, are kept away from their mothers and are housed separately in sheds made of bamboo or wooden poles. Proper ventilation, sunlight and cleanliness are ensured at all the times.

Initially, the kids are given small quantities of concentrated feed. And the quantity is increased gradually depending upon the intake. Additional supplements such as liver tonic mixed with fish oil are also given twice a week. Pure water is a must and should be provided in the shed round the clock. Young kids are also provided with mother's milk for one month (twice or thrice a day) for their proper growth. The goat feed will be available in the market or farmers can also prepare their own feed mix by using locally available ingredients like de-oiled ground nut cake, horse gram, wheat or maize, rice or wheat bran, etc.

Kids bred under broiler technology gain about 25-33 kilograms in 120-140 days, whereas in traditional system of green feeding, the goats acquire only a maximum weight of 10 kilos, that too in 6 months. The expenditure towards feeding a kid under this method comes to about Rs. 1200. A net income of Rs. 5050 to 7050 (at Rs. 250 per kg on live weight basis) can be easily realized.

2. EMPOWERING WOMEN: WOMEN IN KERALA EXPLORING NEW AVENUES IN COCONUT PLUCKING

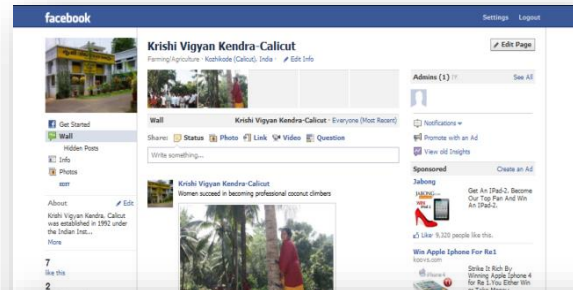
Now this has become a flagship programme of the Kendra. The success of this technology is not confined to Kerala alone. Farmers from other states like Karnataka, Tamil Nadu, Andhra Pradesh and Gujarat are visiting these Self Help Groups to witness their success formula.

Video modules/technology capsule on broiler goat technology was developed and published in KVK website as well as YouTube website. As an outcome this video was viewed by more than 99,000 visitors across the world within two years. Visitors from more than 160 countries viewed this video and a farmer group from Tanzania has approached our KVK for undergoing a training programme.

KVK, Kozhikode has initiated a step towards empowering women through training in coconut climbing. KVK conducted an ‘all women’ training programme on coconut climbing for a group of 20 women (20-35 years). The training was organized as part of the ‘Friends of Coconut Tree’ programme being implemented by the Coconut Development Board to train unemployed youth in the art of climbing coconut trees and caring for them. KVK, Peruvannamuzhi is the first to conduct a training programme exclusively for women as part of the Friends of Coconut Tree programme of the Board.

The programme covered introduction to coconut palm, climate, soil requirements and varieties,

sessions on climbing machine-main parts, working and trial, nutrient management, recycling of palm waste, intercropping and mixed cropping, etc. Besides, practical lessons on climbing coconut trees, sessions were also held on harvesting, tender and mature nut identification, Identification of pests and disease of



coconut and their management, crown cleaning aspects, seed nut procurement, safe handling of seed nuts and tender nuts, coconut nursery and its management etc.

Geography	Views ↓	Monetizable views	Estimated minutes watched
1. India	1,248	0	2,828
2. United Arab Emirates	879	0	2,556
3. Saudi Arabia	849	0	1,903
4. United States	216	0	449
5. Qatar	177	0	468
6. United Kingdom	163	0	310
7. Canada	85	0	117
8. Kuwait	62	0	300
9. Bahrain	61	0	158
10. Turkey	57	0	56
11. Singapore	50	0	103
12. Philippines	49	0	80
13. Italy	45	0	93
14. Greece	38	0	48
15. Brazil	38	0	48
16. Thailand	38	0	48
17. Sri Lanka	36	0	97
18. Malaysia	35	0	106
19. Romania	33	0	43
20. Australia	33	0	63

Physical exercise towards the beginning of each day’s training was another highlight of the programme. According to

the trainees, coconut climbing is an easy task and they felt no physical exhaustion while using the machine. During the last session of the training, a ‘Coconut Olympics’ was also conducted in which the trainees were able to climb the palms within 48- 50 seconds, a feat equivalent to their male counterparts.

‘The training gave them a sense of confidence that they can do anything if they have the will. Moreover, they can earn a good amount by spending three to four hours a day,’ According to Aneela Mathew from Peruvannamuzhi. The practicing woman climber trained at KVK opined that



inspired by their success, many women have approached them for training in coconut climbing using machines. She added that by using the machine she can climb 25 to 30 trees a day and manage to earn around 400 rupees within three hours'. Reeja VG, another women trainee who had taken up this as a livelihood.

It's an ironical fact that Kerala, the land of coconut, is suffering from shortage of coconut pluckers for the past few years. As a solution for this, the Krishi Vigyan Kendra of IISR has conducted a series of training programmes in coconut climbing using machines in collaboration with Coconut Development Board. Many women has now taken up it as a profession and contributing a good share to their family income,' KVK has established a 'Coconut Climbers' Bank' in which the people trained from KVK can register their names. Anyone who needs the services of a coconut climber can contact the bank and avail the services of registered coconut climbers in their own at a reasonable rate. Thus, this scheme will be beneficial to both the customer and climber.

3. Brackish water aquaculture

Mr. Manoj, aged 45 years, depends solely on agriculture activities for his family income. He has inherited a brackish water pond of two ha. The pond is situated very near (250 m) to Korapuzha a brackish water river. The Arabian Sea is only seven km away from the pond. The Korapuzha fully charges his pond with brackish water from October to May, each year the salinity of the pond reaches up to 20 ppt during the period. He has got about 15 years of experience in shrimp farming in his pond. He could harvest good crops only during initial two years. The crops gradually failed due to wide spread occurrence of white spot disease among the shrimps and occasional floods in the nearby river. As the situations were beyond the control, he decided to abandon his pond. He contacted KVK at this juncture and the scientist at KVK, advised him to undertake pearl spot culture, seed production and breeding of giant freshwater prawn in his pond which were readily accepted by the farmer. An innovative PVC fish cage culture unit (known as NAF Fish cage unit) was designed by the farmers with the technical assistance from KVK. This cage is being used for demonstrating fish culture in large water bodies. More than 50 such units have been started in the district. He also designed an innovative fish trap for using in prawn filtration field. Mr, Manoj received the Indian Agricultural Research Institute's innovative farmers' award for year 2012. The farmer earns more than one lakh rupees annually by culturing fishes.



4. Mushroom cultivation for economic security

Since 2003, KVK has conducted several trainings for popularizing mushroom cultivation as a self-employment enterprise among the farming community of the district. As a result of the transfer of technology programmes of the KVK, many farmers and Self Help Groups (SHGs) have undertaken mushroom cultivation and started earning additional income. The enterprise needs less labour and farmers can successfully take up such enterprise during their leisure time. Mr. George Thomas has become a model in the district taking up mushroom growing for additional income generation.

Success story: Mr. George Panackavayal

Mr. George Thomas, Panackavayal, Kalangali, Athiodi Post, Koorachund, Kozhikode District, Kerala, aged 61years, is a progressive farmer. He has got 4.5 acres of land cultivated mainly with 150 coconuts, 300 areca nuts, 83 nutmeg and 300 black pepper vines. His average annual income from the enterprises is shown below:



Table 44. Annual income from different crops

Sl. No.	Crop	Gross annual income (Rs.)
1	Coconut	24000
2	Cocoa	4500
3	Areca nut	25000
4	Black pepper- young vines	57000
5	Nutmeg	10000
6	Vegetables	8000
7	Nursery	10000
Total		138500

He was in search of additional profitable agricultural enterprises and visited the KVK in 2006. After initial discussion with the KVK scientists, he decided to take up mushroom cultivation. He has undergone foundation training for two days on mushroom culture at the KVK and started a small unit in the same year. Initially he used the spawn of *Pleurotus sajor caju*, produced by a mushroom laboratory, promoted by the KVK in a co-operative sector. Understanding his enthusiasm and determination, the KVK nominated him for a National Workshop on Mushrooms at Trivandrum, Kerala. After the workshop, he sought the help of the KVK for expanding his unit. The KVK prepared a project on mushrooms for him and extended all the technical help right from the construction of the shed to the production of mushrooms. He has availed a loan of Rs 1.00 lakh from the local co-operative bank towards construction of the shed for the unit. He has spent the whole amount for the construction of the unit, which can hold 600 beds of 1 kg size at a time. The KVK later introduced the spawn of Co-2 variety of the oyster mushroom, released by the Tamil Nadu Agricultural University, Coimbatore. Mr. George presently grows Co-2, which gives more yield.

The mushroom is sold in the local market at Rs.150 per kg realizing an income of more than Rs.600 per day. The farmer agrees that mushroom growing is highly profitable compared to other crops as he has realized a net income of Rs.20000/- in 2010 and Rs. 30000/- in 2011 through the sale of mushrooms.

Value addition

He has attended a one-day training on value addition and marketing of mushrooms at the KVK in 2007. He started value addition in his products by converting a portion of the fresh mushrooms into pickles. He sells the pickle at Rs.40/- per 100g. The KVK is also assisting the farmers by organizing all the mushroom growers in the district under an umbrella for expanding the market for the value added products. A group of ten farmers already started marketing their mushroom products under the brand name 'Ayur mushrooms'.

Address of the farmer : Mr. George Thomas,
Panackavayal House,
Kalangali, Athiodi Post,
Koorachund, Kozhikode District,
Kerala, Phone: 0496-2660498

5. Kera bouquet – an innovate bouquet from coconut inflorescence

Kera bouquet is a recent invention from Kozhikode KVK. It is a beautiful dry flower arrangement made from coconut



inflorescence and these wonderful bouquets are made from the parts of coconut palm. The idea of this dry flower arrangement was developed in the skill development assignment of training on “Friends of coconut – mechanized coconut palm climbing”.



After the training two youngsters Binu and Kannadas established a production unit of Kera bouquet at Muthukad. Through 2-3 refinements several designs were developed from the standard bouquet. The major attraction of this invention is that all the types of flower arrangement can be made from coconut inflorescence such as casual, bridal, Japanese, Western, mass, line etc. Now they receive orders for ceremonial functions such as bridal and casual dry bouquet. The unit is now getting orders from other districts and states. They are getting an additional income of Rs. 2500-3000 since they make bouquet on leisure time.

6. ‘Climbing the heights’

KVK has succeeded in providing ways to find job opportunities for the unemployed rural youth in Kozhikode district. This is achieved through a mechanized palm climbing training. To prove the success of the training, two coconut climbers units are established in Ulliyeri and Panthirikkara. The Units are working under the leadership of **Jojo** and **Jayaraj**. They had attended mechanized palm climbing training in 2011. After the training they were confident enough to establish the unit. The criteria for joining this unit are that they must be trained climbers from KVK and they should continue this as a job. The unit receives the orders from coconut farmers from up to 10 Km. The unit completes 700-800 palms per day. Sometimes the units have to reach long distance. In such cases they hire vehicles, the expenses is issued through the wages. **Jojo** has taken the contract for coconut climbing in IISR-Experimental farm having 600 palms. Working through the unit they get a maximum of Rs.10000 – 13000 as monthly income.

Ramesh is a 35 year old rural youth, who likes experimenting with modern technologies and adventures. He is educated only up to SSLC. He once attended a 6 months training programme of SHM on Gardeners training. While attending a gardeners training programme, he got an opportunity to attend a one day training programme on use of coconut climbing machine. After the training he bought one machine from a nearest shop. At first he used it in his own land. Initially his co-workers, friends and relatives did not show any interest. But when they came to know that this job ensures more income, they were also interested in this. Now they are compelling him to train them also. Another interesting fact is that the traditional coconut climbers are now suggesting Ramesh’s name. Ramesh see this as an inspiration. He has now become the busiest coconut climber in that locality. Usually Ramesh climbs 40-50 trees per day. He gets Rs.15/- tree. It will take totally 10 minutes, for fixing the machine on the tree

and for climbing. He can go everywhere up to 5 km for coconut climbing since he has an auto rickshaw. The machine is always kept inside his vehicle.

7. Success story of bush pepper production by KVK trained youth

Mr. Fine Jose, a post graduate, interested to take up any farming activity that can realize modest income approached KVK to know about the activities of KVK. With little farming background, he decided to utilize the ancestral share inherited from his father for agricultural nursery. He was caught by the potential of bush pepper as he had lot of pepper plants in his own field planted by his father. After attending two training programmes at KVK and understanding the practical aspects at KVK nursery, he started bush pepper production on a pilot scale in a small shed. Later on he modified his small sheds into large low cost incubation units and started commercial production of bush pepper. He is now producing about 25000 bush pepper plants /year and marketing in different districts.

Mrs. Jancy Thomas, a house wife with matriculation came to attend Gardeners training at KVK for six months in 2013. After completing the course, she streamlined her action plan to focus on bush pepper production. She was strongly supported by her husband Thomas who is a traditionally hardworking farmer. The blending of innovative technology of bush pepper production learned by her with the skill of traditional knowledge with pepper made them to start a nursery unit of bush pepper. Now she is producing 200 bush pepper plants per month on an average realizing an additional income of Rs.500/month. She has linked her production to KVK for marketing.

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

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

S. No.	Crop / Enterprise	ITK Practiced	Purpose of ITK
1.	Tapioca	Lining the base of tapioca mound with a plastic mulch four months after interculture and spreading thin layer of soil above.	To scare away monkeys from damaging tubers

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

- Identification of courses for farmers/farm women- Based on feedback during kisan goshti, interaction at ATMA workshops and based on field survey.
- Rural Youth - Based on request received from groups, NGOs, SHGs etc
- In-service personnel - Based on Departmental priorities and demand

10.G. Field activities

- i. Number of villages adopted :6
- ii. No. of farm families selected: 70
- iii. No. of survey/PRA conducted: 6

10.H. Activities of Soil and Water Testing Laboratory

Status of establishment of Lab :

1. Year of establishment : 2004
2. List of equipments purchased with amount :

Sl. No	Name of the Equipment	Qty.	Cost
1	Electronic physical balance	1	6160
2	Chemical balance	1	42162
3	PH meter	1	14388
4	Oven	1	15476
5	Water distillation still	1	41340
6	Digestion and distillation system	1	130802
7	Hot plate	1	4120
8	Spectrophotometer	1	55230
9	Shaker	1	48038
10	Conductivity meter	1	14960
11	Flame photometer	1	37026
12	Refrigerator	1	16890
13	Grinder	1	1950
14	Double distillation unit	1	63250
15	Electronic balance	1	6800
Total		15	498592

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	2551	45	12	*
Water Samples	26	26	7	100
Total	2577	71	19	

*The chemicals were supplied free from IISR hence no fee collected

Details of samples analyzed during the 2013-14 :

Details	No. of Samples analyzed	No. of Farmers benefited	No. of Villages	Amount realized (Rs.)
Soil Samples	50	50	6	-
Water Samples	1	1	1	100
Total	51	51	7	100

10.I. Technology Week celebration during 2013-14

Period of observing Technology Week: from 21.1.2014 to 24.1.2014

Total number of farmers visited : 428

Total number of agencies involved : 11

Number of demonstrations visited by the farmers within KVK campus : 15

Other Details

Types of Activities	No. of Activities	Number of Farmers	Related crop/livestock technology
Gosthies	3	200	Production technology of coconut
Lectures organized	17	400	Production technology of spices
Exhibition	6	450	Production technology of crops and allied fields
Film show	2	150	Production technology of spices and livestock
Fair	2	300	
Farm Visit	4	400	Production technology of spices and livestock
Diagnostic Practical's	4	300	Identification of pests and diseases of vegetables
Supply of Literature (No.)	8	450	Production technology of crops and allied fields
Supply of Seed (q)			
Supply of Planting materials (No.)	875	-	-
Pepper saplings	960	-	-
Clove seedlings	326	-	-

Types of Activities	No. of Activities	Number of Farmers	Related crop/livestock technology
Bio Product supply (Kg)	47	30	Spices, coconut, banana, vegetables
Total number of farmers visited the technology week	1235		
Total		2680	

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

PART XI. IMPACT

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

Name of specific technology/skill transferred	No. of participants	% of adoption	Change in income (Rs.)	
			Before (Rs./Unit)	After (Rs./Unit)
Apiculture	282	31	5000	7500
Bush pepper production	28	14.5	2200/month	5000/month

11.B. Cases of large scale adoption

Name of specific technology/skill transferred	No. of participants	% of adoption	Remarks	Up scaling
			Low investment freshwater ornamental fish culture technology	362

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

1. "Two birds by one shot" - Training rural youth for climbing coconut palms using machines

This training programme named as 'Friends of coconut' is aimed at providing employment opportunities for the unemployed youth as well as to address the issue of severe dearth of coconut climbers in the State. The programme was conducted in collaboration with Coconut Development Board, Cochin. The main focus of the programme is to introduce a new technique for climbing coconut trees

with the help of a machine. The other aspects covered during the training programme were seed nut selection, nursery management, identification of disease and pest and their management.

The programme consisted of eight training schedules each schedule consisting of 20 unemployed rural youth aged between 18 and 40. Each schedule consisted of six days. There were 12 batches comprising 234 trainees out of this 52 were women.

The post training analysis of “Friends of Coconut reveals” the success of the training. On the basis of the data collected, 49% of male and 10% female trainees have selected coconut climbing as their profession. They could climb 60 to 80 palms per day with the help of machine. The labour charge is varying with different locality ie.Rs.10 to 50/palm. Hence they are able to get a maximum income of Rs.9500 per month.

A coconut climbers’ bank was also formed with 65 trainees. Nineteen trainees also purchased two wheelers with CDB support for conveyance to various coconut plots for their work.

2. Empowering youth - Training of Gardeners’ financed by State Horticulture Mission

The Kendra was sanctioned an amount of Rs.13.25 lakhs by the State Horticulture Mission to conduct ‘Training of Gardeners’ programme for skill development of unemployed youth in Kozhikode district during the financial year 2008-09. The programme was implemented for six months in two batches of 25 trainees each for effective supervision and transfer of garden skills.

During the year 2012-13, an amount of Rs.7.25 lakhs was also sanctioned for the conduct of the same programme for a total of 50 participants. The programme was completed on 28.11.2013.

Epilogue

Out of the 49 trainees, Mr. C. Rashid is highly enterprising and has ventured out to establish home gardens in atleast eight homes. He has already joined a local nursery and is expanding his activities. In KVK, six trainees are engaged in contract production of grafts and seedlings of fruits, bush pepper, lawn grass, ornamental plants etc. to improve their skill and proficiency and at the same time earning income in the process, while benefiting the KVK in terms of good revenue and supply of planting materials to the public.

Three trainees are engaged in garden maintenance work as a part time job and are earning reasonable income. One pro-tray nursery was also just completed under the scheme and planting material production is expected to begin soon. Five mushroom production units sanctioned under the project are in the process of establishment.

PART XII - LINKAGES

12.A. Functional linkage with different organizations

KVK is maintaining functional linkages with All India Radio, the State Dept. of Agriculture, Dept. of Animal Husbandry, Dept. of Fisheries, Matsyafed, Agri-Horti Society, Calicut, Gramin Banks around KVK Voluntary organizations etc. to organise various training programmes and other extension activities like animal health camps, seminars and exhibitions.

Linkage with other organizations for information, technology etc.

Sl. No	Name of Organization	Nature of linkage
a.	Spices Board, Cochin	Market information on spices
b.	Tropical Botanical Garden and Research Institute, Palode	Supply of rare species of medicinal plants
c.	Directorate of Arecanut and Spices Development, Calicut	Information and technology aspects of arecanut, funding for training on spices
d.	Centre for Water Resources Development and Management, Calicut	Technology of watershed management, drip irrigation
e.	Coconut Development Board, Cochin	Technology of value addition in coconut products and information on coconut pest management, funding on training on mechanized coconut climbing
f.	Rubber Board, Kottayam	Technology on cultivation aspects of rubber and disease management
g.	M.S. Swaminathan Research Foundation, Chennai	Information on medicinal plants, organic farming and training faculty
h.	Central Plantation Crops Research Institute	Technology on coconut, arecanut and other plantation crops
i.	All India Radio, Calicut	Participating in Farm radio programs, wide publicity to KVK training programmes
j.	IDC Thamarassery (NGO)	Training, meetings, project review

Linkage with NGOs

The local NGOs such as Central for Overall Development, Thamarassery, Nehru Yuva Kendra, Calicut; Integrated Development Centre, Thamarassery etc. are actively involved in the activities of KVK. The details are given below:

Sl.No	Organization	Nature of linkage
a.	Local and Lead banks	Funding of kisan melas organised by KVK and extending loan to KVK beneficiaries
b.	Calicut Agri-horti Society, Calicut	Arrangement of exhibitions
c.	Nehru Yuvak Kendra, Calicut	Sponsoring trainees
d.	Youth clubs	Sponsoring trainees, organising animal camps
e.	IDC Thamarassery	Project formulation, training and monitoring: Project on establishment of micro ornamental fish culture unit for JLG clusters funded by NABARD

Linkages with line Departments

Sl.No	Organisation	Nature of linkage
a.	State Department of Agriculture	KVK conducts training programmes and seminars for department officials and inspects pepper nurseries of Department Farms. Department assists KVK in the selection of beneficiaries under FLD and OFT programmes, and in the implementation of various development schemes of KVK
b.	State Department of Animal Husbandry	Conducting training programme, animal health camps and campaign against disease outbreaks in animals, resource persons for KVK training programmes, supply of piglets and chicks of improved breeds
c.	Department of Fisheries	Conduct of training programmes, selection of KVK

		beneficiaries for fishery related activities, supply of fingerlings
d.	Kerala Livestock Development Board, Trivandrum	Supply of frozen semen for artificial insemination programme of the Kendra, supply of fodder seeds/ sets
e.	Farmers Training Centre, Calicut	Resource personnel from KVK for the training programmes
f.	Kerala Forest Department	Supply of planting materials of forest plants
g.	Kerala State Poultry Development Corporation, Trivandrum	Supply of improved breeds of poultry
h.	Farm Information Bureau	Organising farmers' seminars, kisan melas etc.
i.	State Horticulture Mission, Kerala	Funding for training of Gardeners
j.	Kerala State Planning Board	Funding for documentation of farm innovation
k.	Agriculture Department	Conducting joint diagnostic field visits , Conducting training programmes
l.	State Horticulture Mission	Conducting training programmes
m.	ATMA	Participation in Monthly Technology Advisory (MTA) meetings, Conducting joint diagnostic field visits
n.	Fisheries Department, Kannur and Malappuram	Trainings

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.)
Farm innovation documentation	Documentation and workshop	April 2013	Kerala State Planning Board	1.5 lakhs
Establishment of hatchery unit	Production of day old layer chicks	January 2014	NABARD	7 lakhs

12.C. Details of linkage with ATMA

a) Is ATMA implemented in your district Yes

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

KVK actively associated with ATMA programme during the preparation SREP of the district.

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	Monthly Technology Advisory (MTA) Meetings	9		9 MTA Meetings were conducted during the period and technological advices for farmers for the respective months were delivered
02	Training programmes	3 within the district	3	-	-
				-	-
03	Extension Programmes			-	-
	Technology Week	Organized in association with ATMA at KVK	1	-	-
	Joint diagnostic visit		14	-	-

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
1	Farmers training on Scientific Production and Processing of Spices.	Funding	1.5 lakhs	1.5 lakhs	Nil

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

12.F. Details of linkage with RKVY : Nil

12. G Kisan Mobile Advisory Services

Month	No. of SMS sent (voice and text)	No. of farmers to which SMS was sent	No. of feedback / query on SMS sent
April 2013	3	701	31
May	5	701	28
June	4	724	56
July	5	728	22
August	5	731	41
September	5	731	22
October	3	738	47
November	5	738	34
December	5	738	12
January 2014	4	743	27
February	3	743	11
March 2014	1	743	9
Total for the year 2013-14	48	743 registered farmers	340

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	2013	43.8m ²	Gramasree, Vancob	-	10958	0.84	1078819	-
2	Dairy	2010	39.32m ²	Local breeds	-	Nil	1.83	Nil	-
3	Vermicompost	2008	9.00 m ²	-	-	2500 kg	0.11	25000	-
4	Nursery	1996	500m ²	-	-	32224	0.50	372722	-
5	Goatary	2009	64m ²	Malabari	-	14	2.78	51580	-
6	Ornamental fish	2011	50m ²	Guppy, platy etc.	-	1263	0.20	11115	-

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	

Coconut	1976	-	0.3	WCT	Coconut	1217 Nos.	2100	6694	Base crop in homestead
Arecanut	1996	-	0.3	Mohit Nagar	Ripe nuts	250 kg	1500	4500	10 th year of establishment. Due to Mahali disease yield was poor.
Spices	1994-2003	-	0.1	Nutmeg Viswasree	Scions for training.	-	-	-	Scion bank under top working or rejuvenation
Sapota	2002	-	1	Cricket ball	-	-	1900	-	7 th year of establishment.
Guava	2002	-	0.2	Allahabad Safeda	-	-	1300	-	Scion bank
Medicinal plants unit	2001	-	0.2	Different medicinal plants	-	-	1000	-	Used for conservation of germplasm
Black pepper	2001	-	0.2	Diff. HYV	-	-	2000	10000	Used for Bush pepper production

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	<i>Trichoderma</i>	577	11540	43275	-
2	<i>Pseudomonas</i>	576	9216	34560	-
3	Methyl euginol trap	94	5640	9400	-
4	Cuelure trap	128	10880	16000	-

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	Broiler	Vencob	Intensive	3559	2.5 lakhs	320359	-
2	Poultry	Gramasree	Intensive	8958	350000	778460	-
3	Goat kids	Malabari	Semi Intensive	14	-	51580	-
4	Ornamental fishes	Guppy, platy, molly, sword tail, fighter, gourami, gold fish and carps	Fish fingerlings and brooders	1263	5000	11115	-
5	Aquatic plants	-	-	30	-	300	-
6	Live feed (micro worms)	-	-	34	-	1700	-
7	Fresh Fish	-	-	17.5 Kg	-	1750	-

13.E. Utilization of hostel facilities

Accommodation available (No. of beds)

Months	No. of trainees stayed	Trainee days (days stayed)	Reason for short fall (if any)
April 2013	10	9	-
May	66	4	-
June	-	-	-
July	7	4	-
August	8	2	-
September	1	1	-
October	4	4	-
November	8	2	-
December	8	2	-
January 2014	9	3	--
February	19	6	-
March	28	7	-

13.F. Database management

S. No	Database target	Database created
1	District data base	Book on inventory of agriculture of Kozhikode district published

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 Demonstrations	No. of plant materials produced	Visit by farmers (No.)	Visit by officials (No.)		
10.00 lakhs	9.62 lakhs		1	4 (Cage culture of fishes)	50000	358	25	200	1ha

PART XIV - FINANCIAL PERFORMANCE

14.A. Details of KVK Bank accounts

Bank account	Name of the bank	Location	Branch code	Account Name	Account Number	MICR Number	IFSC Number
With Host Institute	State Bank of India	Calicut	000861	ICAR Unit, IISR, Kozhikode	30302810771	673002001	SBIN0000861
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	78.25	78.27	78.25
2	Traveling allowances	2.00	2.00	1.99
3	Contingencies			
A	Stationery, telephone, postage and other expenditure on office running, publication of Newsletter and library maintenance (Purchase of News Paper & Magazines)	4.21	4.21	4.21
B	POL, repair of vehicles, tractor and equipments	2.15	2.15	2.15

C	Meals/refreshment for trainees (ceiling upto Rs.40/day/trainee be maintained)	0.74	0.74	0.74
D	Training material (posters, charts, demonstration material including chemicals etc. required for conducting the training)	0.45	0.40	0.41
E	Frontline demonstration except oilseeds and pulses (minimum of 30 demonstration in a year)	3.00	2.93	2.91
F	On farm testing (on need based, location specific and newly generated information in the major production systems of the area)	1.10	1.10	0.96
G	Training of extension functionaries	0	0	0
H	Maintenance of buildings	0.40	0.40	0.39
I	Extension activities	0.42	0.42	0.42
J	Farmers field school	0.30	0.30	0.30
K	Library	0.02	0.02	0.01
TOTAL (A)		93.05	92.94	92.76
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)		93.05	92.94	92.76

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

Year	Opening balance as on 1 st April	Income during the year	Expenditure during the year	Net balance in hand as on 1 st April of each year
April 2011 to March 2012	1.50	12.02	13.05	0.47
April 2012 to March 2013	0.47	20.79	13.15	8.11
April 2013 to March 2014	8.11	17.85	18.10	6.01

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
P.S.Manoj	SMS (Horticulture)	Decision support system in irrigated agriculture	Centre for Water Resource Development and Management, Kozhikode	11-13 December 2013
P.S.Manoj	SMS (Horticulture)	Creativity for competitive advantage	Indian institute of Management, Kozhikode	25 – 27 February 2014
K.M.Prakash	Subject Matter specialist(Agron)	Workshop on Information in digital Era	IISR, Calicut	12 th august 2013
K.M.Prakash	Subject Matter specialist(Agron)	National Workshop on Soil Fertility Evaluation	Kerala State Planning Board, Trivandrum	8-9 October 2013
KM..Prakash	Subject Matter specialist(Agron)	8 th KVK National Workshop	UAS, Bangalore	23-25 October 2013
K.M.Prakash	Subject Matter specialist(Agron)	Entrepreneurship development in mushroom spawn production	IIHR, Bangalore	16-18 January 2014

Dr. S Shanmugavel	SMS (Vety)	Workshop on Sensitization of FMD	IVRC Bangalore	1.2.14
Dr. S Shanmugavel	SMS (Vety)	Creativity for competitive advantage	IIM, Kozhikode	27.02.14
Dr. B. Pradeep	SMS-Fisheries	National training on "Recent advances in aquaculture for popularization through KVKs	Central Marine Fisheries Research Institute (CMFRI) Cochin	15.7.13 to 20.7.13
Mr Jayakumar C K	Programme Assistant(Computer)	Training on advances of information technology in agriculture	NAARM, Hyderabad	4/12/13 to 14/12/13

16. Please include any other important and relevant information which has not been reflected above

1. Three farmers/ farmer groups associated with KVK received national level awards in the field of organic vegetable farming, mixed farming and promotion of HYVs of spices
2. KVK runs a mobile sales unit to supply various technological inputs to farmers in remote areas of the district.

Spices and condiments	Varietal evaluation	Demonstration of foot rot tolerant pepper IISR	-	5	0.4	Progressing in second year	-	-	-	-	-	-	-	-	-	-	-	-
Spices and condiments	-	Bush pepper	-	20	100	Progressing in second year	-	-	-	-	-	-	-	-	-	-	-	-
Spices and condiments	Integrated Disease Management	Integrated Disease Management of Phytophthora foot rot of black pepper (continuing..)	-	10	0.22	17.50	2.18	87.54	Percentage casualty of vines: 8.79%	Percentage casualty of vines: 46%	2,76,500	6,82,500	4,06,000	2.46	71,500	85,020	13,520	1.19

Livestock

Category	Thematic area	Name of the technology demonstrated	No. of KV Ks	No. of Farmer	No. of units	Major parameters		% change in major parameter	Other parameter		*Economics of demonstration (Rs.)				*Economics of check (Rs.)			
						Demonstration	Check		Demonstration	Check	Gross Cost	Gross Return	Net Return	** B C R	Gross Cost	Gross Return	Net Return	** B C R
Dairy	Feeding management	Formulation of homemade ration for livestock and fishery	KV K, Calicut	2	2	Feed production performance	190 kg	555.5	-	-	12500	17500	5000	1:4	2250	3150	900	1:4

Poultry	Laying performance	Demonstration of gramasree layer chicks	KV K, Calicut	25	25	Egg production 192	Egg production 98	135.15	Age at sexual maturity 169 days, Egg size 48 ams	186 days, 43 ams	1250	5160	3910	3:7	77	2940	2157	
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Fisheries

Category	Thematic area	Name of the technology demonstrated	No. of KV Ks	No. of Farmer	No. of units	Major parameters		% change in major parameter	Other parameter		*Economics of demonstration (Rs.)				*Economics of check (Rs.)			
						Demonstration	Check		Demonstration	Check	Gross Cost	Gross Return	Net Return	** B C R	Gross Cost	Gross Return	Net Return	** B C R
Common carps	Fresh water aquaculture	Popularization of grass carp for controlling submerged aquatic weeds	1	12	12	Yield and % weed control			20 to 60% weed reduction in ponds		300	800	500	2.6				
Ornamental fishes	Ornamental fish culture	Popularization of bucket biofilter for maintaining water quality of ornamental fish culture tanks	1	3	3	Survival, water quality	Survival, water quality	16%			728	1671	943	2.9	326	603	277	1.85

Other enterprises

Category	Name of the technology demonstrated	No. of KV Ks	No. of Farmer	No. of units	Major parameters		% change in major parameter	Other parameter		*Economics of demonstration (Rs.) or Rs./unit				*Economics of check (Rs.) or Rs./unit			
					Demonstration	Check		Demonstration	Check	Gross Cost	Gross Return	Net Return	**BCR	Gross Cost	Gross Return	Net Return	**BCR
Others	Value added products of spices including coconut inflorescence with branding and marketing	1	5	5	Cost effectiveness of the processed spice product	Cost effectiveness of the processed spice product				256/kg	560/kg	304/kg	2.187	386/kg	560.00/kg	174.00/kg	1.45
IFS	Fresh water fish culture Fodder Pepper Grafted pepper Bush pepper HYV of Ginger Pheromone trap Bio control Agents Azolla Coconut climber Banana Vegetables Poultry Apiary Ginger Turmeric	HY Vs	5	1ha	Progressing in second year	-	-	-	-	30000	70000	40000	2.3	22000	52000	32000	2.36

Women empowerment: Nil

Farm implements and machinery: Nil

Other enterprises

Demonstration details on crop hybrids: Nil

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										
Crop Production	3	22	41	63	3	2	5	25	43	68
Weed Management	1	5	16	21	1	-	1	6	16	22
Cropping Systems	1	25	15	40	-	-	-	25	15	40
Integrated Farming	1	11	8	19	1	2	3	12	10	22
Nursery management	1	41	19	60	2	-	2	43	19	62
Integrated Nutrient Management	2	21	16	37	1	-	1	22	16	38
Horticulture										
a) Vegetable Crops										
Production of low value and high volume crop	2	4	50	54	4	7	11	8	57	65
Nursery raising	1	2	1	3	3	2	5	5	3	8
Protective cultivation	1	53	8	61	-	6	6	53	14	67
b) Spices										
Production and Management technology	3	72	79	151	19	7	26	91	86	177
Livestock Production and Management										
Dairy Management	4	37	66	103	7	19	26	44	85	129
Poultry Management	3	37	23	60	18	2	20	55	25	80
Piggery Management										
Rabbit Management	1	19	12	31	23	12	35	42	24	66
Animal Nutrition Management	1	5	45	50	1	15	16	6	60	66
Animal Disease Management										
Feed and Fodder technology	2	17	16	33	4	3	7	21	19	40
Production of quality animal products										
Goatary	10	95	16	111	6	2	8	101	18	119
IFS	3	29	25	54	27	16	43	56	41	97
Home Science/Women empowerment										
Value addition	7	30	153	183	6	4	10	36	157	193
Women empowerment										
Location specific drudgery production	2	15	14	29	6	5	11	21	19	40
Rural Crafts	5	12	53	65	-	15	15	12	68	80
Plant Protection										
Integrated Pest Management	2	23	43	66	1	5	6	24	48	72
Integrated Disease Management	1	26	24	50	4	2	6	30	26	56
Bio-control of pests and diseases	3	33	57	90	2	4	6	35	61	96
Fisheries										
Breeding and culture of ornamental fishes	1	7	0	7	0	0	0	7	0	7
Fish feed preparation and management	1	6	1	7	0	0	0	6	1	7
Water quality management in fish culture	1	8	0	8	0	0	0	8	0	8

Production of Inputs at site										
Mushroom production	3	24	30	54	-	-	-	24	30	54
Apiculture	1	25	0	25	0	0	0	25	0	25
TOTAL	67	704	831	1535	139	130	269	843	961	1804

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										
Cropping Systems	2	37	124	161	12	7	19	49	131	180
Crop Diversification	1	28	19	47	3	2	5	31	21	52
Integrated Farming	1	38	-	38	-	-	-	38	-	38
Nursery management	1	25	18	43	2	1	3	27	19	46
Integrated Crop Management	2	76	43	119	4	2	6	80	45	125
Horticulture										
a) Vegetable Crops										
Production of low value and high volume crop	1	6	7	13	2	1	3	8	8	16
Protective cultivation	1	18	-	18	-	-	-	18	-	18
b) Fruits										
Cultivation of Fruit	1	7	7	14	2	1	3	9	8	17
c) Spices										
Production and Management technology	1	92	2	94	6	2	8	98	4	102
Livestock Production and Management										
Dairy Management	7	128	68	196	40	40	80	168	108	276
Poultry Management	1	28	14	42	6	6	12	34	20	54
Goatary Management	2	47	16	63	12	10	22	59	26	85
IFS	1	32	16	48	12	4	16	44	20	64
Animal Nutrition Management	3	97	59	156	30	18	48	127	77	204
Animal Disease Management	8	244	125	369	96	73	169	340	198	538
Feed and Fodder technology	4	97	65	162	31	26	57	128	91	219
Fertility management	3	65	31	96	23	19	42	88	50	138
Home Science/Women empowerment										
Value addition	4	17	76	93	2	5	7	19	81	100
Plant Protection										
Integrated Pest Management	3	116	15	131	3	5	8	119	20	139
Integrated Disease Management	3	90	34	124	6	7	13	96	41	137
Bio-control of pests and diseases	2	50	29	79	2	2	4	52	31	83
Fisheries										
Integrated fish farming	1	15	8	23	1	0	1	16	8	24
Shrimp farming	1	26	4	30	2	0	2	28	4	32
TOTAL	54	1379	780	2159	297	231	528	1676	1011	2687

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

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Nursery Management of Horticulture crops	4	61	78	139	6	9	15	67	87	154
Integrated farming	4	42	65	107	13	9	22	55	74	129
Planting material production	1	15	6	21	-	-	-	15	6	21
Vermi-culture	2	10	37	47	-	-	-	10	37	47
Mushroom Production	2	62	51	113	4	4	8	66	55	121
Bee-keeping	3	87	43	130	5	3	8	92	46	138
Tailoring and Stitching	1	-	14	14	-	3	3	-	17	17
Rural Crafts	2	8	24	32	-	10	10	8	34	42
Dairying	1	19	2	21	23	12	35	42	14	56
Goat rearing	7	31	16	47	2	2	4	33	18	51
Poultry production	2	4	8	12	16	-	16	20	8	28
Ornamental fisheries	5	74	53	127	9	9	18	83	62	145
Composite fish culture	2	31	19	50	3	2	5	34	21	55
Cultivation of summer vegetables	1	2	10	12	2	3	5	4	13	17
Cultivation of orchids	1	3	6	9	-	4	4	3	10	13
Rock gardening	1	3	9	12	-	11	11	3	20	23
Prospects of floriculture	1	1	73	74	-	11	11	1	84	85
IPDM	3	40	16	56	6	1	7	46	17	63
Production of bio control agents and biopesticides	2	15	34	49	4	6	10	19	40	59
TOTAL	45	508	564	1072	93	99	192	601	663	1264

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
Integrated farming	2	34	29	63	16	15	31	50	44	94
Mushroom Production	2	62	38	100	10	4	14	72	42	114
Value addition	2	5	45	50	-	-	-	5	45	50
Dairying	2	45	26	71	15	13	28	60	39	99
Ornamental fisheries	2	50	13	63	4	0	4	54	13	67
Composite fish culture	2	66	12	78	3	0	3	69	12	81
Fry and fingerling rearing	1	6	6	12	1	0	1	7	6	13
Any other (pl.specify) Integrated fish farming	3	71	29	100	1	0	1	72	29	101
IPDM of crops	2	19	5	24	2	2	4	21	7	28
TOTAL	18	358	203	561	52	34	86	410	237	647

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

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

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Productivity enhancement in field crops	1	18	16	34	2	3	5	20	19	39
Recent trends in the production technology of vegetables	1	15	10	25	3	3	6	18	13	31
Advances in the nursery production technology of tree spices	1	23	5	28	-	2	2	23	7	30
New production technologies in spices	3	56	102	158	9	7	16	65	109	174
Integrated Pest and Disease Management	1	3	11	14	0	1	1	3	12	15
Preparation and use of biopesticides and botanicals	2	29	19	48	4	5	9	33	24	57
Total	9	144	163	307	18	21	39	162	184	346

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	2	40	53	93	2	5	7	42	58	100
2	Post harvest technology and value addition										
2.a.	Gardeners training	1	5	14	19	2	3	5	7	17	24
3	Livestock production and management										
3.a.	Animal Nutrition Management	2	50	23	73	21	18	39	71	41	112
3.b.	Animal Disease Management	3	80	28	108	42	24	66	122	52	174
3.c.	Others										
	IPDM in spices	2	57	43	100	8	6	14	65	49	114
	IPDM in coconut	2	35	0	35	5	0	5	40	0	40
	Beekeeping as an income generating enterprise and for increased productivity of crops	2	59	41	100	3	2	5	62	43	105
4.	Home Science										
4.a.	Mechanized palm climbing	2	15	14	29	6	5	11	21	19	40
5	Agricultural Extension										
5.a.	Others										
	Awareness programme on PPV&FR	1	42	51	93	5	2	7	47	53	100
	Total	17	383	267	650	94	65	159	477	332	809

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.	Others										
	Bush pepper production technique	2	13	18	31	1	2	3	14	20	34
2.	Income generation activities										
2.a.	Rural Crafts	3	12	36	48		15	15	12	51	63
2.b.	Tailoring, stitching, embroidery, dying etc.	1	-	14	14	-	3	3	-	17	17
2.c.	Others										
	Beekeeping as an income generating enterprise and for increased productivity of crops	2	59	41	100	3	2	5	62	43	105
	Grand Total	8	84	109	193	4	22	26	88	131	219

V. Extension Programmes

Activities	No. of programmes	No. of farmers	No. of Extension Personnel	TOTAL
Field Day	10	217	72	289
Kisan Mela	1	2052	65	2117

Kisan Ghosthi	4	148	87	235
Exhibition	11	-	-	-
Film Show	20	348	6	354
Method Demonstrations	49	649	59	767
Farmers Seminar	13	1032	350	1382
Workshop	2	279	98	377
Group meetings	5	107	16	123
Lectures delivered as resource persons	12	502	16	518
Newspaper coverage	7	-	-	-
Radio talks	4	-	-	-
TV talks	1	-	-	-
Popular articles	2	-	-	-
Extension Literature	191	-	-	-
Advisory Services	985	370	17	387
Scientific visit to farmers field	213	95	10	105
Farmers visit to KVK	2142	498	10	508
Diagnostic visits	53	54	12	66
Exposure visits	6	143	9	152
Ex-trainees Sammelan	2	49	0	49
Soil health Camp	1	23	1	24
Soil test campaigns	4	52	2	54
Self Help Group Conveners meetings	4	93	10	103
Helpline	2035	-	-	-
Other state farmers visit to KVK	18	-	-	-
Milk day celebration	1	275	9	284
Vaccination	49900 birds	-	-	-
Artificial insemination	179 animals	-	-	-
Dairy club student programme	1	56	6	62
Ksheerolsavam	4	1024	12	1036
Karshika Mela	1	117	17	134
Total		8179	883	9062

Details of other extension programmes

Particulars	Number
Electronic Media	2
Extension Literature	1
News Letter	1
News paper coverage	7
Technical Articles	-
Technical Bulletins	-
Technical Reports	1
Radio Talks	4
TV Talks	1
Animal health camps (Number of animals treated)	-
Total	16

PRODUCTION OF SEED/PLANTING MATERIAL

Production of seeds by the KVKs: Nil

Production of planting materials by the KVKs

Crop category	Name of the crop	Name of the variety (If hybrid please specify)	Number	Value (Rs.)	Number of farmers to whom provided
Vegetable seedlings	Cabbage seedlings	-	7400	18500	756
"	Cauliflower seedlings	-	6514	16285	654
"	Onion seedlings	-	3192	7980	276
Fruits	Mango grafts	Bennet Alphonso, Kalepady, Sindhu, Benganappally, Suvamarekha	104	6240	32
"	Rambutan seedlings	Elite lines	14	280	6
"	Chamba	-	57	855	14
"	Nelli seedlings	-	3	60	2
"	Mangosteen seedlings	-	75	9000	23
Ornamental plants	Ornamental palms	-	126	1890	59
"	Misc, ornamental trees	-	21	315	41
"	Budha bamboo cuttings	-	2000	4000	1
"	Anthurium	Tropical, Can	39	975	12
"	Misc. ornamental palms	-	45	450	18
"	Croton	-	7	140	2
Plantation	Arecanut seedlings	Mohitnagar, South Kanara local	6827	102405	418
"	Cocoa	-	82	1640	17
"	Coconut seedlings	-	715	53625	72
"	Dwarf arecanut	-	4	2000	4
Spices	Bush pepper plants	Sreekara, Karimunda	1516	68220	612
"	Bush pepper in pots	Sreekara	44	15400	18
"	Piper coloubrinum	-	379	3032	32
"	Clove seedlings	-	2941	58820	412
"	Garcinia seedlings	Elite lines	7	140	41
Forest Species	Neem seedlings	-	24	360	87
"	Asokam seedlings	-	13	130	7
"	Mahagony seedlings	-	75	750	32
Others(specify)	-	-	-	-	-
Total	-	-	32224	372722	3648

Production of Bio-Products

Bio Products	Name of the bio-product	Quantity Kg	Value (Rs.)	Number of farmers to whom provided
Bio Fertilizers	Vermicompost	2500 kg	25000	64
Bio Agents	<i>Trichoderma</i>	577 kg	43275	458
	<i>Pseudomonas</i>	576 kg	34560	412
Others (specify) Pheromone traps	MET	94 Nos.	9400	94
	Cuelure	128 Nos.	16000	78
Total		3653kg, 222nos	128235	1106

Production of livestock materials

Particulars of Live stock	Name of the breed	Number	Value (Rs.)	Number of farmers to whom provided
Poultry				
Broilers	Vencob	3559 kg	320359	890
Layers	Gramasree	8958	1078819	844
Ducks	Cherra	9	1113	9
Others				
FYM		862 cft	15375	14
Goat kids	Malabari	14	51580	14
Goat breeding	-	19	1425	19
Fisheries				
Ornamental fishes	Guppy, platy, molly, sword tail, fighter, gourami, gold fish and carps	1263	11,115	68
	Aquatic plants	30	300	22
	Live feed (micro worms)	34	1700	34
	Fresh Fish	17.5 Kg	1750	84
Total		3576.5 kg, 10327nos, 862cft	1483536	1998

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	50	50	6	-
Water Samples	1	1	1	100
Plant samples				
Manure samples				
Others (specify)				
Total	51	51	7	100

VIII. SCIENTIFIC ADVISORY COMMITTEE

Number of SACs conducted : 1 (23.08.2013)

IX. NEWSLETTER

Number of issues of newsletter published : 1 (Volume 6, Issue 1 and 2)

X. RESEARCH PAPER PUBLISHED

Number of research paper published : Nil

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

Activities conducted				
No. of Training programmes	No. of Demonstration s	No. of plant materials produced	Visit by farmers (No.)	Visit by officials (No.)
1	1	50000	358	25

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