

ANNUAL REPORT 2015-16

(FOR THE PERIOD APRIL 2015 TO MARCH 2016)

ICAR - KRISHI VIGYAN KENDRA (IDUKKI)

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		
ICAR - Krishi Vigyan Kendra, Bapooji Sevak Samaj, Pethotty P.O., Santhanpara, Idukki (Dt.), Pin-685619, Kerala.	04868 – 247541, 247715.	Nil	kvksanathanpara@gmail.com	www.kvkidukki.org

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

Address	Telephone		E mail	Web Address
	Office	Fax		
Bapooji Sevak Samaj, Kakkattu, Meenadam P.O., Pampady, Kottayam (Dt.), Pin-686 516, Kerala.	0481-2506271 +91 9446826019	04868-247048	bkvkchairperson@gmail.com	www.kvkidukki.org

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

Name	Telephone / Contact		
	Residence	Mobile	Email
Dr. Binu John Sam , Programme Coordinator i/c.	Nil	+91 9061628822	binujohnsambkvk@gmail.com

1.4. Year of sanction: 1994.**1.5. Staff Position (as on 31st March 2016)**

Sl. No.	Sanctioned post	Name of the incumbent	Designation	M/F	Discipline	Highest Qualification (for PC, SMS and Prog. Asst.)	Pay Scale	Basic pay	Date of joining KVK	Permanent /Temporary	Category (SC/ST/OBC/Others)
1	Programme Coordinator	Vacant	Programme Coordinator	-	-	-	-	-	-	-	-
2	SMS	Dr. S. Jayababu	Subject Matter Specialist	M	Animal Science	B.V.Sc. & AH	15600-39100	21000	19-06-1995	Permanent	Others
3	SMS	Manju Jincy Varghese	Subject Matter Specialist	F	Soil Science	M.Sc. Agriculture (Soil Science)	15600-39100	21000	10-01-2011	Permanent	Others
4	SMS	Dr. Benjamin Mathew	Subject Matter Specialist	M	Agri. Extension	Ph.D. Horticulture	15600-39100	21000	17-01-2011	Permanent	Others
5	SMS	Dr. Binu John Sam	Subject Matter Specialist	M	Horticulture	Ph.D. Horticulture	15600-39100	21000	17-01-2011	Permanent	Others
6	SMS	Sudhakar Soundarajan	Subject Matter Specialist	M	Plant Protection	M.Sc. Agricultural Entomology, MBA	15600-39100	21000	27-01-2011	Permanent	OBC
7	SMS	Vacant	Subject Matter Specialist	-	Agronomy	-	-	-	-	-	-
8	Programme Assistant (Lab Tech.) / T-4	Jayisy Joseph	Programme Assistant	F	Home Science	M. Sc. Home Science (Extension for Rural Development)	9300-34800	13500	20-06-1995	Permanent	Others
9	Programme Assistant (Computer) / T-4	Biju Narayanan	Programme Assistant	M	Computer Application	M.C.A., PGDCA	9300-34800	13500	01-10-2007	Permanent	OBC
10	Programme Assistant/ Farm Manager	Rachel Skariakutty	Programme Assistant	F	Rural Craft	M.A. Sociology (P.G. Diploma in Rural Development)	9300-34800	13500	05-06-1995	Permanent	Others
11	Assistant	Shaji. K. Kakkattu	Assistant	M	-	-	9300-34800	13500	05-06-1995	Permanent	Others
12	Jr. Stenographer	Daisy Daniel	Jr. Stenographer	F	-	-	5200-20200	7100	05-06-1995	Permanent	Others
13	Driver	P. Nandagopal	Driver	M	-	-	5200-20200	7200	05-06-1995	Permanent	OBC

14	Auxiliary Staff	K.T. Mathew	Peon/ Messenger	M	-	-	5200-20200	7000	05-06-1995	Permanent	Others
15	Supporting Staff-1	K.O. Jose	Skilled Supporting Staff-1	M	-	-	5200-20200	7000	05-06-1995	Permanent	Others
16	Supporting Staff-2	P. Sabu	Skilled Supporting Staff-2	M	-	-	5200-20200	7000	05-06-1995	Permanent	Others

1.6. Total land with KVK (in ha) : 27.60 ha.

S. No.	Item	Area (ha)
1	Under Buildings	0.074 ha
2.	Under Demonstration Units	0.5 ha
3.	Under Crops	0.5 ha
4.	Orchard/Agro-forestry	0.5 ha
5.	Others	26.026 ha

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.)	Starting Date	Plinth area (Sq.m)	Status of construction
1.	Administrative Building	ICAR	2002	740	47,85,208.10	-	-	-
2.	Farmers' Hostel	NA	-	-	-	-	-	Master Plan & Estimate submitted. Sanction pending.
3.	Staff Quarters	NA	-	-	-	-	-	-
4.	Demonstration Units							
	1. Duck cum fish culture unit.	RF	2009	50	7,000.00	-	-	-
	2. Mushroom unit	Grama Panchayath, Santhanpara	2002	10	85,000.00	-	-	-
	3. Spawn production unit	SHM	2009	10	3,00,000.00	-	-	-
	4. Mist Chamber	SHM	2009	96	2,72,832.00	-	-	-
	5. Rain Shelter	SHM	2009	50	1,04,091.00	-	-	-
5	Fencing	NA	-	-	-	-	-	Urgent requirement as the area is constantly facing intrusion of wild animals and other intruders
6	Rain Water harvesting system	NA	-	-	-	-	-	-
7	Threshing floor	NA	-	-	-	-	-	-
8	Farm godown	NA	-	-	-	-	-	-
9	Vehicle garage							Urgently required

B) Vehicles

Type of vehicle	Year of purchase	Cost (Rs.)	Total kms. Run	Present status
Mahindra Bolero SLE	May - 2012	5,78,380.36	75040	Good condition.
Honda Aviator	March - 2009	50,000.00	11716	Running condition, needs servicing
Motor Bike (Suzuki Shogun)	January - 1995	37,972.78	8864	Not in use.

C) Equipments & AV aids

Name of the equipment	Year of purchase	Cost (Rs.)	Present status
A.V. aids (Specify)			
Television	1995	20,894.00	Not working
GE OHP	1996	7,100.00	Good, but not in use
ZETT Slide Projector	1996	11,556.00	Not working
Sharp Video Player	1996	10,000.00	Not working
Pentax SLR Camera	1996	13,599.15	Not working
Ahuja Amplifier SSA 160 636956	2003	7,010.00	Good Condition
Ahuja Speaker, SRX50DX	2003	1,825.00	Good Condition
Ahuja Mike SHM 1000XLR	2003	2,295.00	Not in use
Ahuja Mike ASMT 80 XLR	2003	1,470.00	Good Condition
Ahuja mike Stand DGV	2003	510.00	Good Condition
Ahuja Mike stand DGT	2003	295.00	Good Condition
Ahuja portable teaching wireless WA 320 AWL 321	2003	9,700.00	Good Condition
Honda generator Model EBK 2000 AC	2003	32,490.00	Good Condition
LPG Generator 5000 CLS	2011	100000.00	Good Condition
LCD Projector (EPSON_EBW8)	2010	55186.00	Good Condition
Liberty Show Juno 5 x 7 (MW) Screen	2010	5885.00	Good Condition
Kodak Knoma Camera	1995	1550.00	Obsolete
Tripod Screen 52x70 inch	1996	2029.50	In Working condition
Soil Science Lab Equipments (Specify)			
KEMI HOT PLATE with Energy Regulator	2006	5,400.00	Bad
Electronic Balance	2006	1,00,000.00	Under use but needs repair
Physical Balance	2006	8,991.00	Good
Spectrophotometer	2006	1,17,499.00	Under use but needs repair
Electronic Automatic KEL PLUS model KES 12L (Nitrogen Analyzer)	2006	97,043.00	Under use but needs repair
Conductivity Meter (PH Meter Utech 510)	2006	21,935.00	Under use but needs repair
HOT AIR OVEN	2006	13,725.00	Good
Water bath WDB2 350 x 400 100mm Size 12	2006	41,895.00	Good
Flame Photometer	2006	45,000.00	Under use but needs repair
Conductivity Meter	2006	13,500.00	Not working and requires new
LG 280 Litre Fridge Model – GI 296 TM V-Guard Stabilizer	2006	250.00	Good
Mixer grinder 750 Watts	2006	4,500.00	Bad and requires new
Online UPS System with Battery	2006	36,916.00	Needs repair
Fume Cupboard KEMI	2006	2,68,192.00	Good
Bio-control Lab Equipments			
Laminar Flow Chamber	2000	50,000.00	Under use but needs repair
Refrigerator	2000	10,760.00	Under use but needs repair
Chemical Balance	2000	1,800.00	Bad and required new
Auto Clave	2000	19,000.00	Bad and required new
Step up Stabilizer	2008	4,595.00	Good
Other Equipments			
FACIT Typewriter (Malayalam)	1995	9,735.00	Obsolete.
FACIT Typewriter (English)	1995	9429.00	Obsolete.
Stencil Duplicator	1995	13,700.00	Obsolete.
Ortem sewing machine	1995	2,300.00	Obsolete.
Computer with Printer	2003	49,750.00	Obsolete, needs to be replaced by a laptop & printer
Photostat Machine	2003	80,000.00	Bad and outdated machine, urgently requires a new machine
Brush Cutter	2009	23,726.00	Good, needs servicing

Fax Machine	2009	15,000.00	Needs servicing
Laptop Computer (DELL Studio 14 N)	2010	37,150.00	Good
Inkjet Printer (Epson TX 111 AIO)	2010	1,779.00	Good

1.8. Details SAC meeting conducted in 2015-16

Sl. No.	Date	Number of Participants	No. of absentees	Salient Recommendations	Action taken
1.	18/01/2016	17	7	<ul style="list-style-type: none"> Soil fertility management through awareness programme. PoP for organic agriculture to be prepared. To establish agro-meteorological service centre at KVK. OFT should be first tested at KVK campus for validation. Soil health cards should be prepared and distributed. A compendium on OFT & FLD over the years need to be prepared. 	<ul style="list-style-type: none"> All these recommendations shall be prioritized and taken up during the next Financial Year based on availability of funds.

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	Cardamom and Pepper based farming system in the High Ranges of the District
2	Paddy belts in specific locations
3	Homestead based farming
4	Tea plantation
5	Vegetables (Bitter gourd & Cowpea)
6	Cool season vegetables in Devikulam Block
7	Banana cropping
8	Rubber as mono-crop
9	Dairy cattle & Poultry production Management

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

S. No	Agro-climatic Zone	Characteristics
1.	Zone-XIII	High Ranges
2.	Zone-VII	Malayoram
3.	High altitude zone-Vattavada & Kanthalloor	Climate suitable for cool season vegetables and temperate fruits

S. No	Agro ecological situation	Characteristics
1.	Agro Ecological Zone-1	Major part is mono-cropped with rubber, other areas-homestead farming is practiced with tapioca, banana and vegetables, altitude up to 500M above mean sea level, humid tropics spread over the zone. South West and North East monsoon are active and moderately distributed. South West monsoon with June maximum (South of 11° N latitude)
2.	Agro Ecological Zone-2	Major cropping pattern-Pepper, Cardamom, Coffee, Areca nut, Cocoa and Rubber intercropped, altitude 500M above mean sea level, humid tropics spread over the zone. Steep slopes
3.	Agro Ecological Zone-3	High altitude zone-Vattavada & Kanthalloor. Cool season vegetables occupy major area. Potato, temperate fruits are grown in a small scale. Zone includes the only wheat-growing tract of Kerala. North-East monsoon is prominent.

2.3 Soil type/s

S. No.	Soil type	Characteristics	Area in ha
1.	Manakkattu series	Clayey very deep, developed from gneissic parent material	NA
2.	Cheenikuzhy series	Fine loamy texture	NA
3.	Thommankuthu series	Clayey texture	NA
4.	Venmani series	Clayey texture	NA
5.	Marayoor series	Clay loam to clayey texture	NA
6.	Pampadumpara series	Clayey texture	NA

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

S. No	Crop	Area (ha)	Production (Metric tons)	Productivity (kg /ha)
1	Cardamom	32723	7232	250
2	Pepper	87274	30919	354
3	Banana	2665	23265	8730
4	Rice	1819	4744	2608
5	Coconut	17012	80 million nuts	5209 (Numbers/ha)
6	Tapioca	6223	240290	37883
7	Coffee	12915	8150	616
8	Tea	24648	44192	1514

Source of Data: - Economics and Statistics Department, Kerala State.

2.5. Weather data

Month	Rainfall (mm)	Temperature ° C		Relative Humidity (%)
		Maximum	Minimum	
April 2015	178.6	29.0	17.9	97.1
May 2015	24.9	28.3	19.2	96.9
June 2015	203.3	25.0	18.1	98.9
July 2015	182.2	24.7	17.8	99.0
August 2015	290.0	23.6	17.4	99.4
September 2015	148.40	25.4	17.7	98.2
October 2015	327.9	26.1	17.7	97.3
November 2015	150.8	26.6	16.6	94.8
December 2015	12.7	24.5	16.3	94.8
January 2016	5.6	23.6	13.8	95.3
February 2016	4.10	26.6	15.3	93.7
March 2016	11.2	27.6	16.5	85.6

Source of Data: - Indian Cardamom Research Institute, Myladumpara, Idukki.

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

Category	Population	Production	Productivity
Cattle			
<i>Crossbred</i>	160081	434638 ton (Milk) & 12090.87 MT (meat)	-
<i>Indigenous</i>		1309 ton (milk)	-
Buffalo	7627	4181 ton (milk) & 8385.62 MT (meat)	-
Sheep			
<i>Crossbred</i>	35		-
<i>Indigenous</i>			
Goats	127974	8898 ton (Milk) & 1092.10 MT (meat)	-
Pigs			
<i>Crossbred</i>	13631	5136.5 MT (Meat)	-
<i>Indigenous</i>			
Rabbits	29628	-	-
Poultry			
Hens	631501	7.64 crores (Egg)	-
<i>Desi</i>		238 crores (Egg)	-
<i>Improved</i>		6.25 crores (Egg) & 11019.8 MT (Meat)	-
Ducks		1.10 crores (Egg)	-
Turkey and others		-	-

Category	Area	Production	Productivity
Fish	-	-	-
<i>Marine</i>	-	-	-
<i>Inland</i>	-	-	-
Prawn	-	-	-
Scampi	-	-	-
Shrimp	-	-	-

Source of Data: - District Animal Husbandry Office, Thodupuzha, Idukki.

2.7 District profile has been **Updated** for 2015-16 Yes / No: 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	Devikulam	Adimali	Adimali	2 Years	Black Pepper, Cardamom, Banana, Vegetables	Pest outbreak	Integrated Pest Management
2	Udumbanchola	Chinnakanal	Chinnakanal	2 Years	Cardamom	Indiscriminate use of chemical fertilizers	Integrated Nutrient Management
3	Udumbanchola	Santhanpara	Santhanpara	5 Years	Cardamom, Black Pepper, Banana	Indiscriminate use of PP Chemicals	Integrated Pest Management
4	Udumbanchola	Rajakkad	Rajakkad	5 Years	Cardamom, Black Pepper, Banana, Vegetables.	Indiscriminate use of chemical inputs	Integrated Crop Management
5	Udumbanchola	Nedumkandam	Nedumkandam	2 Years	Cardamom, Black Pepper, Banana	Indiscriminate use of chemical inputs	Integrated Crop Management
6	Udumbanchola	Santhanpara	Santhanpara	5 Years	Cardamom, Black Pepper, Banana, Vegetables.	Indiscriminate use of chemical inputs	Integrated Crop Management
7	Udumbanchola	Senapathy	Senapathy	3 Years	Cardamom, Black Pepper, Banana, Vegetables, Mushroom.	Indiscriminate use of chemical inputs	Integrated Crop Management

2.9 Priority thrust areas:

S. No.	Thrust area
1.	Integrated Nutrient Management in major crops
2.	IPDM in major Plantation and Vegetable crops
3.	Integrated sustainable farming system models
4.	Organic agriculture
5.	Scientific management of livestock and poultry
6.	Scientific Disease Management in dairy cattle
7.	Fodder production and management
8.	Value addition of farm produce

PART III - TECHNICAL ACHIEVEMENTS**3.A. Details of target and achievements of mandatory activities**

OFT				FLD			
1				2			
Number of OFTs		Number of farmers		Number of FLDs		Number of farmers	
Targets	Achievement	Targets	Achievement	Targets	Achievement	Targets	Achievement
7	7	34	34	12	12	108	108

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
150	131	3750	5572	510	619	2250	2120

Seed Production (Qtl.)				Planting materials (Nos.)			
5				6			
Target		Achievement		Target		Achievement	
				15000		27268	

Livestock, poultry strains and fingerlings (No.)				Bio-products			
7				8			
Target		Achievement		Target		Achievement	
				Trichoderma-1000 L		1110 L	
				Pseudomonas-2100 L		2753 L	
				Metarhizium-200 L		232 L	
				Pheromone trap-1200 Nos.		1478 Nos.	
				Beauveria-450 L		466 L	
				Liquid soap-30 L		30 L	
				Detergent powder-5 kg		4.5 kg	
				Bath soap-2 kg		3 kg	

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	Crop improvement	Tapioca	Soil acidity leads to Zn and mg Deficiency resulting in low yield	Management practices for secondary and micronutrient disorders in tapioca	-	0	0	0	FAS-10 FV- 3	-	-	-	-	-	-	-
2	Crop improvement	Carrot	Non-availability of high yielding varieties.	Assessment of suitable carrot varieties for Idukki district	-	0	0	0	FAS-5 Field visit-3	-	-	-	-	-	-	-
3	Crop improvement	cardamom	Unscientific nutrient management	-	INM in cardamom	5	0	0	FAS-5 FV- 2 DV-5 Method demo-2	-	-	-	-	-	-	-
4	Varietal evaluation	Broccoli	-	Assessment of suitable varieties of broccoli for high ranges	-	3	2	0	5	-	1500	-	Pseudomonas-Trichoderma	-	-	-

5	ICM	Black pepper	Existing varieties are highly susceptible to quick wilt	Assessment of suitable black pepper foot rot (quick wilt) resistant variety for Idukki district	-	5	1	3	1	-	-	-	Azospirillum	12.5 kg
													Phospho bacteria	12.5 kg
													VAM	25 kg
													Trichoderma	50L
													Pseudomonas	50L
6	IPM	Cardamom	Snails and slugs damaged capsules leading to considerable economic loss	Management of snails & slugs in cardamom plantation	-	4	2	1	2	-	-	-	Vinegar	10 litre
													Coffee powder	5 kg
													Yeast	5 kg
													Honey	5 kg
7	IPM	Cardamom	Heavy infestation of root grub leading to heavy usage of PPC	Management of cardamom root grub with (EPN)	-	5	3	1	1	-	-	-	EPN	24000 cadavers
8	IPDM	Bitter gourd	Indiscriminate use of pesticides leads to pesticide residual effect	Integrated Pest and Disease Management (IPDM) in Bitter gourd	-	2	1	1	1	-	-	-	Trichoderma	50 L
													IIHR-Neem soap	15L
													Cuelure trap	56 nos.
9	Integrated Crop Management	Cowpea	-	Demonstration of IIHR vegetable special in cowpea var. Arka Mangala	-	4	5	0	10	0.02	-	-	Neem oil, Pseudomonas	-
10	Integrated Crop Management	Black pepper	-	Demonstration of IISR Nutrient mix in Black Pepper	-	3	2	0	9	-	-	-	-	-
11	Self-employment and Income generation of rural youth & women.	Nursery Management	-	Demonstration of Arka Microbial consortium enriched cocopeat for portray vegetable nursery	-	2	5	1	0	-	-	-	-	-
12	Crop Production	Mushroom	Large demand & inadequate supply	Preparation of cropping calendar with two types of mushrooms for year round production in Idukki district	-	2	1	1	5	-	200	-	-	-
13	Crop Production	Banana	Lodging of banana plants nearing maturity	Assessment of different props and support for mitigating wind damage in banana (Nendran)	-	1	0	0	-	-	-	-	-	-
14	Integrated Pest Management	Black Pepper	Dearth of quality planting materials	Column Method for production of quality planting materials in Black Pepper	-	2	1	0	5	-	15	-	-	-

15	Integrated Pest Management	Vegetables	Wastage of spent mushroom beds	-	Utilization of Spent Mushroom Compost (SMC) as a medium for vegetable production in grow bags	2	2	0	6	0.03	-	-	-	-
16	Year round production of vegetables	Vegetables	Non availability of year round quality vegetables	-	Popularisation of organic kitchen garden in homesteads for nutritional security	4	0	0	36	30 packet/ demo	-	-	-	-
17	Fodder production	Mixed fodder	Shortage of fodder	-	Popularization of fodder cafeteria in rural households of Idukki district	4	0	0	Field visit-2	Sorghum-7kg Hedge Lucerne-2kg Agathi-3kg Maize-25kg Stylo-1kg	-	-	-	-
18	Disease management	Jersey and HF	Ecto-endo parasitic infestation	-	Demonstration of Inj. Ivermectin for control of ecto-endo parasitic infestation in dairy cattle	2	0	0	Field visit-3	-	-	-	-	-
19	Disease management	Hybrid & indigenous	Occurrence of Ranikhet disease	-	Prophylactic management of New castle disease in poultry using oral pellet vaccine	2	0	0	Field visit-3	-	-	-	-	-

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	Management practices for secondary and micronutrient disorders in tapioca	KAU & TNAU	Tapioca	5	0	1	FAS- 5 Field visits - 3
2	Assessment of suitable carrot varieties for Idukki district	IARI	Carrot	5	0	1	FAS-5 Field visits-3
3	INM in cardamom	ICRI	Cardamom	0	10	1	FAS-5 Field visits - 2 Diagnostic Visits-5 Method demo-2
4	Assessment of suitable varieties of broccoli for high ranges	IARI	Broccoli	5	0	5	FAS-5 Field visits -10 Diagnostic Visits -3
5	Assessment of suitable black pepper foot rot (quick wilt) resistant variety for Idukki district	IISR & farmers developed variety	Black pepper	1	0	5	Field visits – 10 Demonstrations – 3
6	Management of snails & slugs in cardamom plantation	ITK & ATMA	Cardamom	1	0	4	Field visits – 12 Demonstrations – 4
7	Management of cardamom root grub with (EPN)	ICRI	Cardamom	0	1	5	Field visits – 10 Demonstrations – 10
8	Integrated Pest and Disease Management (IPDM) in Bitter gourd	IIHR	Bitter gourd	0	1	2	Field visits – 16 Demonstrations – 10
9	Demonstration of IIHR vegetable special in cowpea var. Arka Mangala	IIHR	Cowpea	0	10	9	FAS-15 Field visits -8 Diagnostic Visits -3
10	Demonstration of IISR Nutrient mix in Black Pepper	IISR	Black Pepper	0	10	5	FAS-5 Field visits -5

11	Demonstration of Arka Microbial consortium enriched cocopeat for portray vegetable nursery	IHR	Nursery Management	0	5	7	FAS-8 Field visits -3
12	Preparation of cropping calendar with two types of mushrooms for year round production in Idukki district	KAU	Mushroom	4	0	2	FAS- 8 Field visits – 2
13	Assessment of different props and support for mitigating wind damage in banana (Nendran)	KAU	Banana	5	0	0	FAS- 5 Field visits – 2
14	Column Method for production of quality planting materials in Black Pepper	IISR	Black Pepper	0	3	3	FAS- 5 Field visits - 3
15	Utilization of Spent Mushroom Compost (SMC) as a medium for vegetable production in grow bags	KAU & TNAU	Mushroom, Vegetables	0	5	4	FAS- 8 Field visits - 3
16	Popularisation of organic kitchen garden in homesteads for nutritional security	KAU	Vegetables	0	1	4	Field visits – 6 FAS – 30
17	Popularization of fodder cafeteria in rural households of Idukki district	KAU	Cross bred	0	1	4	-
18	Demonstration of Inj. Ivermectin for control of ecto-endo parasitic infestation in dairy cattle	KAU & Tanuvas	Cross bred	0	1	2	-
19	Prophylactic management of New castle disease in poultry using oral pellet vaccine	Tanuvas	Hybrid & indigenous	0	1	2	-

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	F
9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1	1	4	0	0	0	0	0	10	5	0	0	0	0	0	0	0
2	0	5	0	0	0	0	0	5	5	0	0	0	0	0	0	0
3	0	0	0	0	10	0	0	20	10	0	0	0	0	0	0	0
4	5	0	0	0	0	0	0	20	22	0	0	0	0	0	0	0
5	5	0	0	0	0	0	0	10	3	0	0	0	0	0	0	0
6	3	2	0	0	0	0	0	10	2	0	0	0	0	0	0	0
7	0	0	0	0	10	0	0	15	10	0	0	0	0	0	0	0
8	0	0	0	0	3	7	0	15	10	0	0	0	0	0	0	0
9	0	0	0	0	10	0	0	60	23	0	0	0	0	0	0	0
10	0	0	0	0	10	0	0	26	13	0	0	0	0	0	0	0
11	0	0	0	0	5	0	0	31	19	0	0	0	0	0	0	0
12	5	0	0	0	0	0	0	23	4	0	0	0	0	0	0	0
13	5	0	0	0	0	0	0	26	6	0	0	0	0	0	0	0
14	0	0	0	0	3	0	0	32	8	0	0	0	0	0	0	0
15	0	0	0	0	5	5	0	46	11	0	0	0	0	0	0	0
16	0	0	0	0	0	5	0	3	60	0	0	0	0	0	0	0
17	0	0	0	0	4	6	0	63	67	0	0	0	0	0	0	0
18	0	0	0	0	5	5	0	18	79	0	0	0	0	0	0	0
19	0	0	0	0	7	13	0	68	98	0	0	0	0	0	0	0

PART IV - On Farm Trial**4.A1. Abstract on the number of technologies assessed in respect of crops**

Thematic areas	Cereals	Oilseeds	Pulses	Commercial Crops	Vegetables	Fruits	Flower	Plantation crops	Tuber Crops	TOTAL
Integrated Nutrient Management										
Varietal Evaluation	-	-	-	1	1	-	-	-	-	2
Integrated Pest Management	-	-	-	1	-	-	-	-	-	1
Integrated Crop Management										
Integrated Disease Management										
Small Scale Income Generation Enterprises										
Weed Management										
Resource Conservation Technology										

Farm Machineries										
Integrated Farming System										
Seed / Plant production										
Value addition										
Drudgery Reduction										
Storage Technique										
Mushroom cultivation	-	-	-	-	-	-	-	-	-	-
Total	-	-	-	2	1	-	-	-	-	3

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)
Integrated Nutrient Management	Tapioca	Management practices for secondary and micronutrient disorders in tapioca	5	5	0.18
Crop improvement	Carrot	Assessing the suitable carrot varieties for Idukki district.	5	5	0.06
Integrated Nutrient Management					
Varietal Evaluation	Broccoli	Palam Samrdhi & F1 green magic	5	5	0.012
	Black pepper	Assessment of suitable black pepper foot rot (quick wilt) resistant variety for Idukki district	5	5	0.04
Integrated Pest Management	Cardamom	Management of snails & slugs in cardamom plantation	5	5	0.05
Integrated Crop Management	Banana	Assessment of different props and support for mitigating wind damage in banana (Nendran)	5	5	1
Integrated Disease Management					
Small Scale Income Generation Enterprises					
Weed Management					
Resource Conservation Technology					
Farm Machineries					
Integrated Farming System					
Seed / Plant production					
Value addition					
Drudgery Reduction					
Storage Technique					
Mushroom cultivation	Mushroom	Preparation of cropping calendar with two types of mushrooms for year round production in Idukki district	4	4	4 units
Total					

4. B.2. Technologies Refined under various Crops: Nil.**4. B.3. Technologies assessed under Livestock and other enterprises: Nil.****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
Tapioca	Irrigated	Soil acidity leads to zinc and Boron deficiency resulting in low yield	Management practices for secondary & micronutrient disorders for Tapioca in acid soils	5	Management practices for secondary and micronutrient disorders in tapioca	1) Weight of tubers/clump (Kg) 2) Yield (t/ha) 3) BCR	-	Foliar spray was found effective for managing secondary and micronutrient disorders	-	-	-
Carrot	irrigated	Non-availability of high yielding varieties	Assessment of suitable carrot varieties in Idukki district.		Assessing Pusa Rudhira and Pusa Nayanjyothi	1)Average weight of tubers 2) Yield t/ha	-	Pusa Rudhira variety was found better in yield and weight of tubers	-	-	-
Broccoli	Limited Irrigation	Low popularity of exotic vegetables	Assessment of suitable varieties of broccoli for high ranges	5	Palam Samrdhi & F1 green magic	1) Days to harvesting the head 2) Weight of head (g) 3) Yield (tonnes/acre)	T1: 67.8 T2: 66.4 T1: 230 T2: 303.2 T1: 2.88 T2: 3.79	Crop shown best result in rain shelter and polyhouse	Varieties assessed is not suitable for open condition.	-	-
Black pepper	Perennial	High susceptibility to foot rot disease of cultivated varieties	Assessment of suitable Black Pepper Foot rot (Quick wilt) resistant variety for Idukki District	5	1. Farmers practice (Chengannoor) 2. IISR –Thevam 3. Ashwati 4. Suvama	% reduction in quick wilt incidence & Yield	Comparative Foot rot incidence evaluation in Black Pepper	Ongoing	IISR-Thevam is showing least percentage of quick wilt disease incidence compared to farmer developed varieties and check	-	-
Cardamom	Perennial	Snails & slugs damage on the flowers and young berries of cardamom plants, leading to considerable economic loss	Management of snails & slugs in cardamom plantation	5	Spray of Vinegar @ 10ml / litre Spray of Coffee powder @ 10g / litre Yeast & Honey Mixture @ (100g:100ml) / litre (as trap)	Reduction in snail & slug population at different days (30,40 & 60) after treatment	-	Foliar spray of vinegar @ 10 ml/L of water effectively managed snails and slugs in cardamom field	-	-	-
Mushroom	homestead	Large demand & inadequate supply	Preparation of cropping calendar with two types of mushrooms for year round production in Idukki district	4	Assessing the suitability of oyster and milky mushrooms in different calendar months	1) Yield of mushrooms per bed 2) BCR	0.84	Ongoing	Oyster Mushroom yielding good in the months from October till March, Milky Mushroom beds have been prepared in March. Shall be over by September 2016	-	-
Banana	Irrigated	Lodging of banana plants nearing maturity	Assessment of different props and support for mitigating wind damage in banana (Nendran)	5	Stabilizing banana plants using props and supports and by using collar rings	Extent of wind damage	-	Ongoing	-	-	-

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 (FP - No measures)	-	20	t/ha	28,000	1.25
Technology option 2 (Foliar spray of 0.5% MgSO ₄ + 0.5% ZnSO ₄ at 60 th and 90 th DAP)	KAU	30	t/ha	40,000	1.33
Technology option 3 (Soil application of MgSO ₄ @ 20 kg/ha + ZnSO ₄ @12.5 kg/ha within 2 months of planting)	TNAU	22	t/ha	35,000	1.30
Technology option 1 (FP – Local)	-	29	t/ha	1,00,000	1.5
Technology option 2 (Pusa Nayanjyothi)	IARI	32.5	t/ha	1,44,400	1.8
Technology option 3 (Pusa Rudhira)	IARI	35	t/ha	1,98,750	2.2
Technology option 1 Farmers Practice (FP)	Nil	-	-	-	-
Technology option 2 (Palam samrdhi)	IARI	2.88	t/acre	-	-
Technology option 3 (F1 Green magic)	Sakata (Pvt. company)	3.79	t/acre	-	-
Technology option 1 (FP - Chengannoor variety Black pepper)	Local	-	-	-	Ongoing
Technology option 2 (IISR Thevam variety Black pepper)	IISR	-	-	-	-
Technology option 3 (Ashwati variety Black pepper)	Farmers developed variety from Wyanad	-	-	-	-
Technology option 4 (Suvarna variety Black pepper)	Farmers developed variety from Wyanad	-	-	-	-
Technology option 1 (FP - Use of chemicals as directed by pesticide retail shops)	-	212	Kg/ha	127200	1.10
Technology option 2 (Spray of Vinegar @ 10ml / litre)	OFT-ATMA & ITK	519	Kg/ha	311400	1.49
Technology option 3 (Spray of Coffee powder @ 10g / litre)	OFT-ATMA & ITK	503	Kg/ha	301800	1.31
Technology option 4 (Yeast & Honey Mixture @ (100g:100ml) / litre (as trap))	OFT-ATMA & ITK	266	Kg/ha	159600	1.20
Technology option 1 (Oyster Mushroom)	KAU	0.84	Kg/bed	ongoing	-
Technology option 2 (Milky Mushroom)	KAU	Ongoing	-	-	-
Technology option 1 (Single propping)	Farmers practice	Ongoing	-	-	-
Technology option 2 (Single propping coupled with tying with nylon ropes)	OFT conducted by KVK Idukki	-	-	-	-
Technology option 3 (Collar ring method)	KAU	-	-	-	-

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

- 1)
 - 1 Title of Technology Assessed: **Management practices for secondary and micronutrient disorders in tapioca**
 - 2 Problem Definition: Soil acidity leads to Zn and mg Deficiency resulting in low yield.
 - 3 Details of technologies selected for assessment:
Tech-1: No measures taken (Farmers practice)
Tech-2: Foliar spray of 0.5% MgSO₄ + 0.5% ZnSO₄ at 60th and 90th DAP
Tech-3: Soil application of MgSO₄@ 20 kg/ha + ZnSO₄ @12.5 kg/ha within 2 months of planting
 - 4 Source of technology: KAU & TNAU.
 - 5 Production system and thematic area: Nil.
 - 6 Performance of the Technology with performance indicators: Nil.
 7. Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques: Nil.
 - 8 Final recommendation for micro level situation: Foliar spray was found effective.
 - 9 Constraints identified and feedback for research: Nil.
 - 10 Process of farmers participation and their reaction: Nil.
- 2)
 - 1 Title of Technology Assessed: **Assessment of suitable carrot varieties in idukki district.**
 - 2 Problem Definition: Non –availability of high yielding varieties.
 - 3 Details of technologies selected for assessment: Use of hybrid varieties.
 - 4 Source of technology: IARI.
 - 5 Production system and thematic area: Crop improvement.
 - 6 Performance of the Technology with performance indicators: Nil.
 7. Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques: Nil.
 - 8 Final recommendation for micro level situation: Pusa Rudhira was found effective in growth and yield
 - 9 Constraints identified and feedback for research: Being a Red carrot variety -Pusa Rudhira farmers find it difficult for marketing in Idukki as less acceptance by people for red variety.
 - 10 Process of farmers participation and their reaction: More in demand for cultivating Pusa Rudhira as they find it good in taste for cooking as well as eating raw.
- 3)
 - 1 Title of Technology Assessed: **Assessment of suitable varieties of broccoli for high ranges**
 - 2 Problem Definition: Less popularity of exotic vegetables.
 - 3 Details of technologies selected for assessment: Palam samridhi & F1 green magic.
 - 4 Source of technology: IARI & Sakata Pvt. Company.
 - 5 Production system and thematic area: Limited irrigation & Crop Diversification.
 - 6 Performance of the Technology with performance indicators: F1 green magic shown comparative best result.
 - 7 Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques: Nil.
 - 8 Final recommendation for micro level situation: Crop shown best result in rain shelter and polyhouse.
 - 9 Constraints identified and feedback for research: Limited availability of quality seeds.
 - 10 Process of farmer's participation and their reaction: Varieties assessed is not suitable for open condition.

4)

- 1 Title of Technology Assessed: **Assessment of suitable Black Pepper Foot rot (Quick wilt) resistant variety for Idukki District**
- 2 Problem Definition: High susceptibility to foot rot disease of cultivated varieties.
- 3 Details of technologies selected for assessment: IISR-Thevam, Ashwathi and Suvarna variety Black Pepper.
- 4 Source of technology: IISR & Farmer developed variety.
- 5 Production system and thematic area: Pepper based cropping systems and Crop Improvement.
- 6 Performance of the Technology with performance indicators: Ongoing.
7. Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques: Ongoing.
- 8 Final recommendation for micro level situation: Ongoing.
- 9 Constraints identified and feedback for research: Ongoing.
- 10 Process of farmers participation and their reaction: Ongoing.

5)

- 1 Title of Technology Assessed: **Management of snails & slugs in cardamom plantation**
- 2 Problem Definition: Snails & slugs damage on the flowers and young berries of cardamom plants, leading to considerable economic loss
- 3 Details of technologies selected for assessment: Spray of Vinegar @ 10ml / litre , Spray of Coffee powder @ 10g / litre and Yeast & Honey Mixture @ (100g:100ml) / litre (as trap).
- 4 Source of technology: OFT-ATMA & ITK.
- 5 Production system and thematic area: Cardamom based system and IPM.
- 6 Performance of the Technology with performance indicators: Foliar spray of vinegar @ 10 ml/L of water effectively managed snails and slugs in cardamom field.
7. Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques: Nil.
- 8 Final recommendation for micro level situation: Nil.
- 9 Constraints identified and feedback for research: Foliar spray of vinegar @10ml /L of water at 30,40 and 60 days effectively managed snails and slugs in cardamom plantation.
- 10 Process of farmers participation and their reaction: Eco-friendly management of snails and slugs.

6)

- 1 Title of Technology Assessed: **Preparation of cropping calendar with two types of mushrooms for year round production in Idukki district.**
- 2 Problem Definition: Large demand & inadequate supply.
- 3 Details of technologies selected for assessment:
Tech-1: Oyster Mushroom
Tech-2 – Milky Mushroom
- 4 Source of technology: KAU.
- 5 Production system and thematic area: Nil.
- 6 Performance of the Technology with performance indicators: Nil
7. Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques: Nil.
- 8 Final recommendation for micro level situation: Foliar spray was found effective.

- 9 Constraints identified and feedback for research: Nil.
10 Process of farmers participation and their reaction: Nil.

7)

- 1 Title of Technology Assessed: **Assessment of different props and support for mitigating wind damage in banana (Nendran).**
2 Problem Definition: Lodging of banana plants nearing maturity.
3 Details of technologies selected for assessment:
Tech-1: Single propping
Tech-2: Single propping coupled with tying with nylon ropes
Tech-3: Collar ring method
4 Source of technology: KAU & OFT conducted by KVK Idukki.
5 Production system and thematic area: Nil.
6 Performance of the Technology with performance indicators: Nil.
7. Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques: Nil.
8 Final recommendation for micro level situation: Foliar spray was found effective.
9 Constraints identified and feedback for research: Nil.
10 Process of farmers participation and their reaction: Nil.

4. D1. Results of Technologies Refined: Nil.

4. D.2. Details of each On Farm Trial for refinement: Nil.

PART V - FRONTLINE DEMONSTRATIONS

5. A. Summary of FLDs implemented during 2015-16

Sl. No.	Category	Farming Situation	Season and Year	Crop	Variety/breed	Hybrid	Thematic area	Technology Demonstrated	Area (ha)		No. of farmers/ demonstration			Reasons for shortfall in achievement
									Proposed	Actual	SC/ST	Others	Total	
1	Oilseeds													
2	Pulses													
3	Cereals													
4	Millets													
5	Vegetables	Homestead	Aug-Nov & Jan-Mar	Vegetables	Local	-	Year round production on organic vegetables	Popularization of organic kitchen garden in homestead for nutritional security	0.08	0.08	0	0	0	-
		Mono cropping	-	Bitter gourd	Preethi & Priyanka	-	IPDM	IPDM in bitter gourd	2	2	-	10	10	-
		Irrigated	Rabi-2015	Cowpea	Arka mangala	-	ICM	IIHR vegetable special	1	1	0	10	10	-
		Irrigated	Rabi-2015	Vegetables	-	-	Nursery management	Arka microbial consortium	-	-	0	5	5	-
		Homestead	Year round	Mushroom	Different vegetables		Productivity improvement of major crops.	Utilization of Spent Mushroom Compost (SMC) as a medium for vegetable production in growbags	5 units	5 units	0	5	5	-
6	Flowers													

7	Ornamental													
8	Fruit													
9	Spices and condiments													
9.a.		Irrigated	Perennial crop	Cardamom	Njallani	-	Nutrient management	Soil test based fertilizer recommendation along with organic manures	1	1	0	10	10	-
9.b.		Cardamom base cropping system	Perennial	Cardamom	Njallani	-	IPM	Management of cardamom root grub with (EPN)	2	2	-	10	10	
9.c.		Rainfed	Perennial	Black pepper	Karimunda	-	ICM	IISR Nutrient mix BP	2	2	-	10	10	-
		Irrigated	Perennial crop	Black pepper	Karimunda	-	Crop improvement	Column Method for production of quality planting materials in Black Pepper	0.2	0.2	0	3	3	ongoing
10	Commercial crops													
11	Medicinal and aromatic													
12	Fodder													
13	Plantation													
14	Fibre													
15	Dairy	Homestead	Throughout the year	Dairy Cattle	Jersey and HF	Cross bred	Disease management	Demonstration of Inj Ivermectin for control of Ecto-Endo Parasitic Infestation in dairy cattle	10	10	0	10	10	-
		Mixed Farming	Throughout the year	Dairy Cattle	Jersey and HF	Cross bred	Nutrition Management	Popularisation of fodder Cafeteria in rural households of Idukki District	10	10	0	10	10	-
16	Poultry	Mixed Farming	Throughout the year	Poultry	Chicken	Hybrid and indigenous breed	Scientific Disease management	Prophylactic management of Newcastle Disease in poultry using oral pellet vaccine	20	20		20	0	-
17	Rabbitry													
18	Piggery													
19	Sheep and goat													
20	Duckery													
21	Common carps													
22	Mussels													
23	Ornamental fishes													
24	Oyster mushroom													
25	Button mushroom													
26	Vermicompost													
27	Sericulture													
28	Apiculture													
29	Implements													
30	Others (specify)	Irrigated	Rabi	Vegetables	Tomato, Chillies, Cowpea	-	Nursery Management	Arka Microbial consortium	-	-	-	5	5	-

5. A. 1. Soil fertility status of FLDs plots during 2015-16

Sl. No.	Category	Farming Situation	Season and Year	Crop	Variety/breed	Hybrid	Thematic area	Technology Demonstrated	Season and year	Status of soil			Previous crop grown
										N	P	K	
1	Oilseeds												
2	Pulses												
3	Cereals												
4	Millets												
5	Vegetables	Homestead farming	Aug-Nov 2015 & Jan-Mar 2016	Vegetables	Local	-	Year round production on organic vegetables	Popularization of organic kitchen garden in homestead for nutritional security	Aug-Nov 2015 & Jan-Mar 2016	H	H	M	Vegetables
		Mono	-	Bitter gourd	Preethi and Priyanka	-	IPDM	IPDM in bitter gourd	-	H	H	L	Cowpea
		Homestead farming	Year round	Vegetables	Local	-	Productivity improvement of major crops.	Utilization of Spent Mushroom Compost (SMC) as a medium for vegetable production in growbags	Year round	H	H	M	-
6	Flowers												
7	Ornamental												
8	Fruit												
9	Spices and condiments	Irrigated	Perrinaial	Cardamom	Njallani	-	Crop improvement	Soil test based fertilizer recommendation	-	H	H	M	-
		Cardamom base cropping system	Perennial	Cardamom	Njallani	-	IPM	Management of cardamom root grub with (EPN)		H	H	L	Perennial
		Rainfed	Perennial	Black pepper	Karimunda	-	ICM	IISR Nutrient mix BP	-	L	H	M	Black Pepper
		Irrigated	Perennial	Black Pepper	Karimunda		Crop improvement	Column Method for production of quality planting materials in Black Pepper		H	H	M	-
10	Commercial crops												
	Medicinal and aromatic												
	Fodder												
	Plantation												
	Fibre												
	Others (pl.specify)												

5. B. Results of Frontline Demonstrations**5. B.1. Crops**

Crop	Name of the technology demonstrated	Variety	Hybrid	Farming situation	No. of Demo.	Area (ha)	Yield (q/ha)			% Increase	*Economics of demonstration (Rs./ha)				*Economics of check (Rs./ha)				
							Demo				Check	Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR
							H	L	A										
Oilseeds																			
Pulses																			
Cereals																			
Millets																			
Vegetables	Popularization of organic kitchen garden in homestead for nutritional security	Local	-	Homestead farming	5	0.08	1.41	1.4	1.402	0.346	25	9700	16800	7100	1.73	2200	2830	630	1.28
	IPDM in bitter gourd	Preethi and Priyanka	-	Mono cropping	10	2 ha	1.6	1.1	1.3	1	20	164700	213840	49140	1.32	115000	150000	35000	1
Flowers																			
Ornamental																			

Fruit																			
Spices and condiments	Soil test based fertilizer recommendation along with organic manure	Njallani	-	Irrigated	10	1	9.8	10.0	9.9	8.0	25.0	250000	653600	403600	2.6	218000	414200	196200	1.90
	Management of cardamom root grub with (EPN)	Njallani	-	Perennial	10	2 ha	1.9	1.2	1.4	1.2	24	306700	424445	117745	1.4	294000	389000	95000	1.2
	IISR Nutrient Mix in black pepper	Karimunda	-	Rainfed	10	2	17.22	14.15	12.44	15.44	0	0	0	0	1.12	0	0	0	1.13
Commercial																			
Fibre crops like cotton																			
Medicinal and aromatic																			
Fodder																			
Plantation																			
Fibre																			
Others (Mushroom)	Utilization of Spent Mushroom Compost (SMC) as a medium for vegetable production	Local	-	Homstead farming	5	0.08	0.98	0.79	0.84	Not practiced	Not practiced	1690.66	3435.5	1744.84	2.03	Not practiced	0	0	0
Others (pl.specify)	Arka Microbial consortium	Vegetables	-	Irrigated	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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

** BCR= GROSS RETURN/GROSS COST

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

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

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

5. B.2. Livestock and related enterprises

Type of livestock	Name of the technology demonstrated	Breed	No. of Demo	No. of Units	Yield (q/ha)			% Increase	*Economics of demonstration Rs./unit				*Economics of check (Rs./unit)				
					Demo				Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR	
					H	L	A										
Dairy	Popularization of Fodder Cafeteria in rural households of Idukki district.	Cross bred Cows	10	10	13	18	14	13	15	13610	30420	16810	2.23	14600	23940	9340	1.63
	Demonstration of Inj Ivermectin for control of Ecto-Endo Parasitic Infestation in dairy cattle	Jersey and HF	10	10	12	18	14	13	20	14520	27720	13200	1.90	13520	22500	8980	1.66
	Prophylactic management of Newcastle Disease in poultry using oral pellet vaccine	Hybrid and indigenous breed	20	20	23	19	20	18	10	750	1280	530	1.70	782	1152	370	1.47
Poultry																	
Rabbitry																	
Pigerry																	
Sheep and goat																	
Duckery																	
Others (pl.specify)																	

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

** BCR= GROSS RETURN/GROSS COST

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

Data on other parameters in relation to technology demonstrated		
Parameter with unit	Demo	Check if any

5. B.3. Fisheries: Nil.

5. B.4. Other enterprises: Nil.

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

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

Sl. No.	Activity	No. of activities organised	Number of participants	Remarks
1	Field days	10	120	-
2	Farmers Training	14	419	-
3	Media coverage	12	-	-
4	Training for extension functionaries	6	81	-
5	Others (Field visit)	36	69	-
6	Others (Demonstration)	9	20	-
7	Others (Fest, Carnival)	-	-	-
8	Others (FAS)	43	43	-
9	Others (Soil test campaign)	6	80	-
10	Others (Please specify)	-	-	-

PART VI – DEMONSTRATIONS ON CROP HYBRIDS: Nil.

PART VII. TRAINING

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

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Crop Production										
Weed Management										
Resource Conservation Technologies										
Cropping Systems										
Crop Diversification										
Integrated Farming										
Micro Irrigation/Irrigation										
Seed production										
Nursery management										
Integrated Crop Management										
Soil and Water Conservation										
Integrated Nutrient Management	1	7	4	11	0	0	0	0	0	0
Production of organic inputs										
Others (pl.specify)										
Others (Organic farming in vegetable)										
Others (IPDM in Banana)										
Others (IPDM in vegetable)										

Horticulture										
a) Vegetable Crops										
Production of low value and high volume crop										
Off-season vegetables										
Nursery raising										
Exotic vegetables										
Export potential vegetables										
Grading and standardization										
Protective cultivation										
Others (Specify)										
Others (ICM in Vegetable crops)	1	15	0	15	0	0	0	15	0	15
b) Fruits										
Training and Pruning										
Layout and Management of Orchards										
Cultivation of Fruit										
Management of young plants/orchards										
Rejuvenation of old orchards										
Export potential fruits										
Micro irrigation systems of orchards										
Plant propagation techniques										
Others (pl.specify)										
c) Ornamental Plants										
Nursery Management	1	15	3	18	0	0	0	15	3	18
Management of potted plants										
Export potential of ornamental plants										
Propagation techniques of Ornamental Plants										
Others (pl.specify)										
d) Plantation crops										
Production and Management technology										
Processing and value addition										
Others (pl.specify)										
e) Tuber crops										
Production and Management technology										
Processing and value addition										
Others (pl.specify)										
f) Spices										
Production and Management technology										
Processing and value addition										
Others (pl.specify)										
g) Medicinal and Aromatic Plants										
Nursery management										
Production and management technology										

Post harvest technology and value addition										
Others (pl.specify)										
Soil Health and Fertility Management										
Soil fertility management										
Integrated water management										
Integrated nutrient management										
Production and use of organic inputs										
Management of Problematic soils										
Micro nutrient deficiency in crops	1	11	4	15	0	0	0	0	0	0
Nutrient use efficiency										
Balanced use of fertilizers										
Soil and water testing										
Others (pl.specify)										
Livestock Production and Management										
Dairy Management										
Poultry Management										
Piggery Management										
Rabbit Management										
Animal Nutrition Management										
Animal Disease Management										
Feed and Fodder technology										
Production of quality animal products										
Others (pl.specify)										
Home Science/Women empowerment										
Household food security by kitchen gardening and nutrition gardening										
Design and development of low/minimum cost diet										
Designing and development for high nutrient efficiency diet										
Minimization of nutrient loss in processing										
Processing and cooking										
Gender mainstreaming through SHGs										
Storage loss minimization techniques										
Value addition										
Women empowerment										
Location specific drudgery production										
Rural Crafts	3	0	18	18	0	15	15	0	33	33
Women and child care										
Others (pl.specify)										
Others (Processing and Packaging of Mushroom)										
Agril. Engineering										
Farm machinery and its maintenance										
Installation and maintenance of micro irrigation systems										

Use of Plastics in farming practices										
Production of small tools and implements										
Repair and maintenance of farm machinery and implements										
Small scale processing and value addition										
Post Harvest Technology										
Others (pl.specify)										
Plant Protection										
Integrated Pest Management	2	25	19	44	0	0	0	25	19	44
Integrated Disease Management										
Bio-control of pests and diseases										
Production of bio control agents and bio pesticides	2	70	30	100	6	4	10	76	36	112
Others (pl.specify)										
Fisheries										
Integrated fish farming										
Carp breeding and hatchery management										
Carp fry and fingerling rearing										
Composite fish culture										
Hatchery management and culture of freshwater prawn										
Breeding and culture of ornamental fishes										
Portable plastic carp hatchery										
Pen culture of fish and prawn										
Shrimp farming										
Edible oyster farming										
Pearl culture										
Fish processing and value addition										
Others (pl.specify)										
Production of Inputs at site										
Seed Production										
Planting material production										
Bio-agents production										
Bio-pesticides production										
Bio-fertilizer production										
Vermi-compost production										
Organic manures production										
Production of fry and fingerlings										
Production of Bee-colonies and wax sheets										
Small tools and implements										
Production of livestock feed and fodder										
Production of Fish feed										
Mushroom production	2	6	19	25	0	0	0	6	19	25
Apiculture										
Others (pl.specify)										

Capacity Building and Group Dynamics										
Leadership development										
Group dynamics										
Formation and Management of SHGs										
Mobilization of social capital										
Entrepreneurial development of farmers/youths										
Others (pl.specify)										
Agro-forestry										
Production technologies										
Nursery management										
Integrated Farming Systems										
Others (Pl. specify)										
TOTAL	13	149	97	246	06	19	25	137	110	247

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

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Crop Production										
Weed Management										
Resource Conservation Technologies										
Cropping Systems										
Crop Diversification										
Integrated Farming										
Micro Irrigation/Irrigation										
Seed production										
Nursery management										
Integrated Crop Management (Spices)	4	243	19	262	0	0	0	243	19	262
Soil and Water Conservation										
Integrated Nutrient Management										
Production of organic inputs										
Others (pl.specify)										
Horticulture										
a) Vegetable Crops										
Production of low value and high volume crop										
Off-season vegetables										
Nursery raising	4	243	19	262	0	0	0	243	19	262
Exotic vegetables										
Export potential vegetables										
Grading and standardization										
Protective cultivation										
Others (Specify)										
Others (ICM in vegetables)	4	74	38	112	0	0	0	74	38	112

Others (Organic farming-Vegetables)	6	205	114	319	0	0	0	205	114	319
Others (Mushroom cultivation)	1	16	5	21	0	0	0	16	5	21
Others (Mushroom cultivation)	1	0	30	30	0	24	24	0	54	54
b) Fruits										
Training and Pruning										
Layout and Management of Orchards										
Cultivation of Fruit										
Management of young plants/orchards										
Rejuvenation of old orchards										
Export potential fruits										
Micro irrigation systems of orchards										
Plant propagation techniques										
Others (pl.specify)										
c) Ornamental Plants										
Nursery Management										
Management of potted plants										
Export potential of ornamental plants										
Propagation techniques of Ornamental Plants										
Others (pl.specify)										
d) Plantation crops										
Production and Management technology										
Processing and value addition										
Others (pl.specify)										
e) Tuber crops										
Production and Management technology										
Processing and value addition										
Others (pl.specify)										
Others (Crop diversification)	1	46	27	73	0	0	0	46	27	73
f) Spices										
Production and Management technology										
Processing and value addition										
Others (pl.specify)										
g) Medicinal and Aromatic Plants										
Nursery management										
Production and management technology										
Post harvest technology and value addition										
Others (pl.specify)										
Soil Health and Fertility Management										
Soil fertility management	2	140	101	241	0	0	0	140	101	241
Integrated water management										
Integrated nutrient management	2	49	23	72	0	0	0	49	23	72
Production and use of organic inputs										

Management of Problematic soils										
Micro nutrient deficiency in crops	1	12	3	15	0	0	0	12	3	15
Nutrient use efficiency										
Balanced use of fertilizers	2	94	16	110	0	0	0	94	16	110
Soil and water testing										
Others (pl.specify)										
Others (Soil Conservation)										
Livestock Production and Management										
Dairy Management	1	31	20	51	0	0	0	31	20	51
Poultry Management										
Piggery Management										
Rabbit Management										
Animal Nutrition Management	1	11	7	18	0	0	0	11	7	18
Animal Disease Management										
Feed and Fodder technology	2	21	40	61	0	0	0	21	40	61
Production of quality animal products										
Others (pl.specify)										
Home Science/Women empowerment										
Household food security by kitchen gardening and nutrition gardening										
Design and development of low/minimum cost diet										
Designing and development for high nutrient efficiency diet										
Minimization of nutrient loss in processing										
Processing and cooking										
Gender mainstreaming through SHGs										
Storage loss minimization techniques										
Value addition										
Women empowerment										
Location specific drudgery production										
Rural Crafts	2	0	24	24	0	10	10	0	34	34
Women and child care										
Others (pl.specify)										
Others (Processing & popularization of Jack fruit)										
Agril. Engineering										
Farm machinery and its maintenance										
Installation and maintenance of micro irrigation systems										
Use of Plastics in farming practices										
Production of small tools and implements										
Repair and maintenance of farm machinery and implements										
Small scale processing and value addition										
Post Harvest Technology										
Others (pl.specify)										

Plant Protection										
Integrated Pest Management	15	609	143	752	49	47	96	658	190	848
Integrated Disease Management	3	115	11	126	50	5	55	165	16	181
Bio-control of pests and diseases	15	498	120	618	30	29	59	528	149	677
Production of bio control agents and bio pesticides	4	102	30	132	74	30	104	176	60	236
Others (pl.specify)										
Fisheries										
Integrated fish farming										
Carp breeding and hatchery management										
Carp fry and fingerling rearing										
Composite fish culture										
Hatchery management and culture of freshwater prawn										
Breeding and culture of ornamental fishes										
Portable plastic carp hatchery										
Pen culture of fish and prawn										
Shrimp farming										
Edible oyster farming										
Pearl culture										
Fish processing and value addition										
Others (pl.specify)										
Production of Inputs at site										
Seed Production										
Planting material production										
Bio-agents production										
Bio-pesticides production										
Bio-fertilizer production										
Vermi-compost production										
Organic manures production										
Production of fry and fingerlings										
Production of Bee-colonies and wax sheets										
Small tools and implements										
Production of livestock feed and fodder										
Production of Fish feed										
Mushroom production										
Apiculture										
Others (pl.specify)										
Capacity Building and Group Dynamics										
Leadership development										
Group dynamics										
Formation and Management of SHGs										
Mobilization of social capital										

Entrepreneurial development of farmers/youths										
Others (pl.specify)										
Agro-forestry										
Production technologies										
Nursery management										
Integrated Farming Systems										
Others (Pl. specify)										
TOTAL	71	2509	790	3299	203	145	348	2712	935	3647

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

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Nursery Management of Horticulture crops										
Training and pruning of orchards										
Protected cultivation of vegetable crops										
Commercial fruit production										
Integrated farming										
Seed production										
Production of organic inputs										
Planting material production										
Vermi-culture										
Mushroom Production										
Bee-keeping										
Sericulture										
Repair and maintenance of farm machinery and implements										
Value addition										
Small scale processing										
Post Harvest Technology										
Tailoring and Stitching										
Rural Crafts	3	8	52	60	5	10	15	0	75	75
Production of quality animal products										
Dairying	1	25	19	44	0	0	0	25	19	44
Sheep and goat rearing										
Quail farming										
Piggery										
Rabbit farming										
Poultry production										
Ornamental fisheries										
Composite fish culture										
Freshwater prawn culture										
Shrimp farming										
Pearl culture										

Cold water fisheries										
Fish harvest and processing technology										
Fry and fingerling rearing										
Any other (pl.specify)										
Any other (ICM Vegetables)	2	35	56	91	0	0	0	35	56	91
TOTAL	6	68	127	195	5	10	15	60	150	210

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

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Nursery Management of Horticulture crops										
Training and pruning of orchards										
Protected cultivation of vegetable crops										
Commercial fruit production										
Integrated farming										
Seed production										
Production of organic inputs										
Planting material production										
Vermi-culture										
Mushroom Production	1	6	16	22	0	0	0	6	16	22
Bee-keeping										
Sericulture										
Repair and maintenance of farm machinery and implements										
Value addition										
Small scale processing										
Post Harvest Technology										
Tailoring and Stitching										
Rural Crafts	1	0	25	25	0	15	15	0	40	40
Production of quality animal products										
Dairying										
Sheep and goat rearing										
Quail farming										
Piggery										
Rabbit farming										
Poultry production										
Ornamental fisheries										
Composite fish culture										
Freshwater prawn culture										
Shrimp farming										
Pearl culture										
Cold water fisheries										
Fish harvest and processing technology										

Fry and fingerling rearing										
Any other (pl.specify)										
Any other (ICM Vegetables)	2	35	56	91	0	0	0	35	56	91
Any other (Organic farming)	1	33	36	69	0	0	0	33	36	69
TOTAL	5	74	133	207	0	15	15	74	148	222

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

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Productivity enhancement in field crops										
Integrated Pest Management										
Integrated Nutrient management	1	10	04	14	0	0	0	10	04	14
Rejuvenation of old orchards										
Protected cultivation technology										
Production and use of organic inputs										
Care and maintenance of farm machinery and implements										
Gender mainstreaming through SHGs										
Formation and Management of SHGs										
Women and Child care										
Low cost and nutrient efficient diet designing										
Group Dynamics and farmers organization	1	2	11	13	0	0	0	2	11	13
Information networking among farmers										
Capacity building for ICT application										
Management in farm animals										
Livestock feed and fodder production										
Household food security										
Any other (pl.specify)										
Total	2	12	15	27	0	0	0	12	15	27

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

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Productivity enhancement in field crops										
Integrated Pest Management										
Integrated Nutrient management	4	80	86	166	0	0	0	80	86	166
Rejuvenation of old orchards										
Protected cultivation technology										
Production and use of organic inputs										
Care and maintenance of farm machinery and implements										
Gender mainstreaming through SHGs										
Formation and Management of SHGs										
Women and Child care										
Low cost and nutrient efficient diet designing										

Group Dynamics and farmers organization										
Information networking among farmers										
Capacity building for ICT application										
Management in farm animals										
Livestock feed and fodder production										
Household food security										
Any other (pl. specify)										
Total	4	80	86	166	0	0	0	80	86	166

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										
1.b.	Commercial production of vegetables										
1.c.	Integrated Pest and Disease Management										
2	Production and value addition										
2.a.	Fruit Plants										
2.b.	Ornamental plants										
2.c.	Spices crops										
3.	Soil health and fertility management										
4	Production of Inputs at site										
5	Methods of protective cultivation										
6	Others (Banana cultivation)										
7	Post harvest technology and value addition										
7.a.	Processing and value addition	9	90	153	243	0	6	6	90	159	249
7.b.	Others (pl.specify)										
8	Farm machinery										
8.a.	Farm machinery, tools and implements										
8.b.	Others (pl.specify)										
9.	Livestock and fisheries										
10	Livestock production and management										
10.a.	Animal Nutrition Management	1	13	50	63	0	0	0	13	50	63
10.b.	Animal Disease Management										
10.c.	Fisheries Nutrition										
10.d.	Fisheries Management										
10.e.	Others (Poultry)	2	18	79	97	0	0	0	18	79	97
10.f.	Others (Livestock production and management)	1	30	29	59	0	0	0	30	29	59
11.	Home Science										
11.a.	Household nutritional security										
11.b.	Economic empowerment of women										
11.c.	Drudgery reduction of women										
11.d.	Others (pl.specify)										
12	Agricultural Extension										
12.a.	Capacity Building and Group Dynamics										
12.b.	Others (pl.specify)										
	Total	13	151	311	462	0	6	6	151	317	468

Details of sponsoring agencies involved

1. State Horticulture Mission
2. Dept. of Agriculture
3. ATMA
4. District Industries Centre (DIC), Idukki
5. Kudumbasree, Idukki
6. Coffee Board
7. NSS College, Rajakumary
8. GVHSS, Rajakumary
9. MBVHSS, Senapathy
10. NHRDF

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

S. No.	Area of training	No. of Courses	No. of Participants								
			General			SC/ST			Grand Total		
			Male	Female	Total	Male	Female	Total	Male	Female	Total
1	Crop production and management										
1.a.	Commercial floriculture										
1.b.	Commercial fruit production										
1.c.	Commercial vegetable production										
1.d.	Integrated crop management										
1.e.	Organic farming										
1.f.	Others (specify)										
2	Post harvest technology and value addition										
2.a.	Value addition	1	10	20	30	0	2	2	10	22	32
2.b.	Others (pl.specify)										
3.	Livestock and fisheries										
3.a.	Dairy farming										
3.b.	Composite fish culture										
3.c.	Sheep and goat rearing										
3.d.	Piggery										
3.e.	Poultry farming										
3.f.	Others (pl.specify)										
4.	Income generation activities										
4.a.	Vermi-composting										
4.b.	Production of bio-agents, bio-pesticides, bio-fertilizers etc.										
4.c.	Repair and maintenance of farm machinery and implements										
4.d.	Rural Crafts	12	0	183	183	0	55	55	0	238	238
4.e.	Seed production										
4.f.	Sericulture										
4.g.	Mushroom cultivation										
4.h.	Nursery, grafting etc.										
4.i.	Tailoring, stitching, embroidery, dying etc.										
4.j.	Agril. para-workers, para-vet training										
4.k.	Others (pl.specify)										
5	Agricultural Extension										
5.a.	Capacity building and group dynamics										
5.b.	Others (pl.specify)										
	Grand Total	13	10	203	213	0	57	57	10	260	270

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	19	36	29	65	0	0	0	0	0	0
Kisan Mela	0	0	0	0	0	0	0	0	0	0
Kisan Ghosthi	0	0	0	0	0	0	0	0	0	0
Exhibition	2	1100	900	2000	0	0	0	0	0	0
Film Show	0	0	0	0	0	0	0	0	0	0
Method Demonstrations	18	125	210	335	0	0	0	0	0	0
Farmers Seminar	0	0	0	0	0	0	0	0	0	0
Workshop	7	125	108	233	0	0	0	23	32	55
Group meetings	0	0	0	0	0	0	0	0	0	0
Lectures delivered as resource persons	0	0	0	0	0	0	0	0	0	0
Newspaper coverage	14	-	-	-	-	-	-	-	-	-
Radio talks	5	-	-	-	-	-	-	-	-	-
TV talks	6	-	-	-	-	-	-	-	-	-
Popular articles	2	-	-	-	-	-	-	-	-	-
Extension Literature	2	-	-	-	-	-	-	-	-	-
Advisory Services	243	145	207	352	0	0	0	5	3	8
Scientific visit to farmers field	63	46	27	73	10	5	15	0	0	0
Farmers visit to KVK	269	1003	335	1338	0	0	0	2	3	5
Diagnostic visits	38	34	19	53	8	12	20	0	0	0
Exposure visits	2	13	17	30	0	0	0	0	0	0

Ex-trainees Sammelan	1	3	23	26	0	0	0	0	0	0
Soil health Camp	0	0	0	0	0	0	0	0	0	0
Animal Health Camp	0	0	0	0	0	0	0	0	0	0
Agri mobile clinic	0	0	0	0	0	0	0	0	0	0
Soil test campaigns	6	35	30	65	0	0	0	10	5	15
Farm Science Club Conveners meet	0	0	0	0	0	0	0	0	0	0
Self Help Group Conveners meetings	9	22	54	76	13	15	28	26	18	44
Mahila Mandals Conveners meetings	0	0	0	0	0	0	0	0	0	0
Celebration of important days (World Soil day)	1	30	20	50	0	0	0	0	0	0
Celebration of important days (World food day)	1	11	22	33	0	0	0	0	0	0
Celebration of important days (National milk day)	1	25	19	44	0	0	0	0	0	0
Any Other (Technology week celebration)	5	549	180	729	0	0	0	30	16	46
Any Other (Jai Kissan Jai Vigyan)	4	30	10	40	-	-	-	-	-	-
Any Other (Plant Health clinic)	8	25	35	60	0	0	0	10	25	35
Total	726	3357	2245	5602	31	32	63	106	102	208

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
Commercial						
Vegetable seedlings						
Fruits						
Ornamental plants						
Medicinal and Aromatic						
Plantation						
Spices	Black pepper	Karimunda	-	7110	71100	92
		Kottandan	-	220	2630	20
		Panniyoor 1	-	197	1970	20
		Panniyoor 2	-	6	72	1
		Panniyoor 4	-	10	120	1
		Panniyoor 5	-	129	1548	3
		Panniyoor 6	-	6	72	1
		Panniyoor 7	-	93	1116	7
		Chengannor	-	393	3930	22
		Thevam	-	83	996	6
		Shakthi	-	112	1344	11
		Malabar Excel	-	32	384	6
		Kumbakkal	-	4	48	1
		Thekkan	-	75	2250	20
Tuber						
Fodder crop saplings						
Forest Species						
Others(specify)						
Total				8470	87580	211

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	Nature plus	174	17400.00	111
	Panchakavya	460	46000.00	105
	Jeevamirtham	169	16900.00	97
	Farmers Effective Microorganisms	58	5800.00	24
	Fish Amino Acids	18	2700.00	3
Bio-pesticide	Beauveria	466	46600.00	126
	Metarhizium	232	23200.00	95
	Lecanicillium	92	9200.00	22
	OHN	9	900.00	1
Bio-fungicide	Trichoderma	294	29400.00	181
Bio Agents	Pseudomonas	2064.50	206450.00	709
	Oyster Mushroom Spawn	425	12750.00	21
Others (Pheromone traps)	Cue-lure trap	1311	212835.00	1010
Others (specify)				
Total		5772.5	6,20,935.00	2505

9.D. Production of livestock materials: Nil.

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

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

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

(B) Literature developed/published

Item	Title	Authors name	Number
Research papers	-	-	-
Technical reports	-	-	-
News letters	-	-	-
Technical bulletins	Farm based low cost mass production techniques of bio-pesticides	Mr. Sudhakar Soundarajan (SMS-Plant Protection)	500
	Beauveria bassiana	Mr. Sudhakar Soundarajan	100
	Lecanicillium lecanil	Mr. Sudhakar Soundarajan	100
	Pseudomonas fluorescence	Mr. Sudhakar Soundarajan	100
	Metarhizium anisopliae	Mr. Sudhakar Soundarajan	100
	Entomo Pathogenic Nematode (EPN)	Mr. Sudhakar Soundarajan	100
	Trichoderma harzianum	Mr. Sudhakar Soundarajan	100
	Effective microorganism fermented plant extract (EM-FPE)	Mr. Sudhakar Soundarajan	100
	Bacillus thuringiensis	Mr. Sudhakar Soundarajan	100
	Pheromone trap (Cuelure trap)	Mr. Sudhakar Soundarajan	100
	Fish amino acid (Amino plus)	Mr. Sudhakar Soundarajan	100
	Micro organism enriched mixture solution (MEM)	Mr. Sudhakar Soundarajan	100
	Effective micro organism treated cow urine (EMTCU)	Mr. Sudhakar Soundarajan	100
	Farmers effective micro organism (FEM)	Mr. Sudhakar Soundarajan	100
	Enriched effective micro organism (EEM5)	Mr. Sudhakar Soundarajan	100
	Water soluble calcium (WS)	Mr. Sudhakar Soundarajan	100
	Oriental herbal nutrient (OHN)	Mr. Sudhakar Soundarajan	100
	Lactic acid bacteria (LAB)	Mr. Sudhakar Soundarajan	100
	Plant growth promoting rhizobacteria (PGPR)	Mr. Sudhakar Soundarajan	100

	Bio-nutrigold	Mr. Sudhakar Soundarajan	100
	Bio-herbal nutrient	Mr. Sudhakar Soundarajan	100
	Natural fungi bacterial controller	Mr. Sudhakar Soundarajan	100
	Coconut - Butter milk solution	Mr. Sudhakar Soundarajan	100
	Bio-21 (VARGAM)	Mr. Sudhakar Soundarajan	100
	Bio-boron	Mr. Sudhakar Soundarajan	100
	Aatotom	Mr. Sudhakar Soundarajan	100
	Jeevamritham	Mr. Sudhakar Soundarajan	100
	Beejamritham	Mr. Sudhakar Soundarajan	100
	Egg-lime solution	Mr. Sudhakar Soundarajan	100
	Vermi wash	Mr. Sudhakar Soundarajan	100
	Panchakavya	Mr. Sudhakar Soundarajan	100
	Nature plus	Mr. Sudhakar Soundarajan	100
	Amruthapani	Mr. Sudhakar Soundarajan	100
Popular articles	-	-	-
Extension literature	Importance of micro nutrients in vegetables	Ms. Manju Jincy Varghese (SMS-Soil Science)	1000
Others (Pl. specify)			
TOTAL			700

10.B. Details of Electronic Media Produced: Nil.

10.C. Success Stories / Case studies, if any

1. Title of the success stories : Skill development enterprise for Rural youth

Details of success stories :

1. Background

A group of 95 tribal school drop-outs is an example how rural youth can effectively utilize their talents, which would help to lead towards personality development and to reduce poverty. The objective of this group is to mainstream scheduled tribes girl children who have been pushed out. With this objective, the academic orientation is not sufficient and it was realised that vocational and life-skill based training is essential. Following this, in collaboration with KVK Rural craft section, we are engaged in vocational skill development training as well as supportive education for the children in *adivasi* (tribal) colonies. To livelihood and starvation issues in these colonies are severe. Hence, the plan is to train *adivasi* girl children and start a production unit for fabric designing and jewellery making.

2. Intervention process

- To assess their educational needs and to provide essential training.
- To enhance their life-skills by extending life-skill education.
- Skill development vocational training.
- Motivation to start an enterprise.
- Technical guidance for starting the unit.
- Details about availability of raw materials.
- Advisory services.
- Follow-up visit.
- Technical back up in running the unit as when required

3. Intervention Technology

- To create an environment where women can seek knowledge and information and there by empower them to play positive role in their own development and development of society.
- To enhance the self-image and self- confidence of women and thereby enabling them to recognize their contribution to the economy as producers and workers, reinforcing their need for participating in educational programmes.

- To provide women and adolescent girls with the necessary support structures and an informal learning environment to create opportunities for education.

4. Impact Horizontal Spread

This enterprise aimed at empowering 100 rural youth in tribal areas of Idukki district by providing skill development training to make them self-sufficiency and self-reliant. This enterprise will enable women deprived, poverty stricken, working as domestic servants, single parent and widows are being given opportunity to undergo free training and in turn they earn and live on their own. The entire family will be benefited, will support the beneficiary to establish small scale units.

5. Impact Economic Gains

They earn an average Income per month is Rs.15000/-

6. Impact on Employment Generation

This programme will empower women for their families well being and for their sustainable living , every batch of women / youth- girls will in turn benefit by this programme and will take this as their profession and train other women community and develop their standard of living. Self-employment is the main source of income. So they are engaged more in self-employed manufacturing and trade activities compared to others.

2. Title of the success stories : Women Entrepreneurship - A Success

Details of success stories :

1. Background

Mrs. Anitha Ramesh, Thottikkanam & Miss. Prathibha, Pulickal, Pethotty in Idukki district, is a + 2 passed un-employed ladies is an example how women can effectively utilize their talents and leisure time for income generation. They have attended 6 months long vocational training on different topics such as Fabric designing, Jewellery Making, Toys Making, Quilling Art and Home care product preparations in our KVK under Rural Craft discipline. The topics that impressed them was the Fabric designing, Jewellery making and soft toys making. Motivated from the training, they started a designing unit and learn to make jewellery, fabric designing and soft toys making to meet the modern trends of marketing. They have taken bulk orders from fancy stores, textiles and local markets. They have purchased the required raw materials in bulk and has employed a woman to work along with them. They do the main and finishing touches to themselves and the rest of the work is done by the woman working with them. They purchase the raw materials in bulk at a cheaper rate and the work place is their-own house. Therefore, the profit they gains is comparatively higher.

2. Intervention process

- 6 months vocational training.
- Motivation to start an enterprise.
- Technical guidance for starting the unit.
- Details about availability of raw materials given.
- Advisory services.
- Follow- up visits.
- Technical back up in running the unit as when required

3. Intervention Technology

To provide skill development vocational training to make them self- sufficient and self-reliant.

4. Impact Horizontal Spread

This enterprise will provide skill development for the women dwellers in identified area, families will be benefited directly and creating a ray of hope for better source of livelihood and live a sustainable life with self-sufficiency and self-reliance.

5. Impact Economic Gains

They earn an average profit per month is Rs. 25000/-

6. Impact on Employment Generation

Motivated from the above mentioned successful enterprise, around 10 rural women are going to start fabric designing and jewellery making on a commercial basis. In addition to this unit, they are planning to start a small fancy store with loan availing from nearby Co-operative bank for self-sufficiency and self employment. Also they generate employment opportunities for others.

2. Title of the success stories : *NESCO Processing Unit, Thodupuzha*

Details of success stories :

1. Background

A Group consists of 12 members at Neeloor, under leadership of Mr. Baby Mathew showed interest to start the enterprise for economic empowerment.

2. Intervention process

- Off campus training on processing at Thodupuzha on 8th May 2015.
- Technical guidance given for product preparation and purchase of machineries

3. Intervention Technology

Practical classes on value products given for the unit members at Neeloor area. Value added products (Dried Jack, Dried Banana, Nutmeg Jelly, various pickles, Slip-ups) packaging techniques and marketing aspects given to the members.

4. Impact Horizontal Spread

Through the introduction of the units, wastage of Jack and Tapioca could minimize in the area. Popularisation of Dryer was a blessing for the farming community.

5. Impact Economic Gains

Nutmeg rind was wasted in that area and after the processing Practical sessions they could make use of Nutmeg rind for diversified product such as Jelly, Pickle, Extract etc.

6. Impact on Employment Generation

Twelve members employed in the unit and they involved in the preparation and running of the unit .The group informed that they could earned Rs 60000/- through the intervention of ICAR-KVK, Idukki.

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): Nil.

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

- Identification of courses for farmers/farm women
- Rural Youth
- Inservice personnel

10.G. Field activities

- | | | |
|------|-------------------------------|-------|
| i. | Number of villages adopted | : 08 |
| ii. | No. of farm families selected | : 151 |
| iii. | No. of survey/PRA conducted | : 2 |

10.H. Activities of Soil and Water Testing Laboratory

Status of establishment of Lab : Functioning.

1. Year of establishment : 2005-06

2. List of equipments purchased with amount :

Sl. No	Name of the Equipment	Qty.	Cost
1.	LPG Cylinder	1	4600.00
2.	Water bath WDB-2 350'400'100mm 12 holes	1	4815.00
3.	Machinery for Homogenising (khan shaker) Model LKS2 platform size 75cmx43cmx10cm	1	20,880.00
4.	Rotary Shaker	1	16,200.00
5.	Machinery for drying (Hot air oven) with digital temperature control, size 455'455'455'	1	13,725.00
6.	Conductivity meter (PH meter Eutech 510)	1	21,935.00
7.	Genesis 20 visible Spectrophotometer meter	1	1,12,499.00
8.	CITIZEN Physical Balance Model CTL-600	1	8,991.00
9.	Micro processor based conductivity	1	13,500.00
10.	Micro Processor Based Flame Photometer with N, K & Ca FILTERS & Compressor	1	45,000.00
11.	Electronic Automatic KEL PLUS Micro processor Based Twelve Place Micro Block Digestion System	1	97,043.00
12.	Electronic Balance Model: CP 2245 Srl.No.18606016	1	1,00,000.00
13.	Hot plate	1	5,400.00
Total		12	4,64,588.00

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	2096	1281	43	104800.00
Water Samples	18	16	10	900.00
Plant samples	0	0	0	0.00
Manure samples	4	3	1	200.00
Others (soil test campaign)	300	300	3	90000.00
Total	2418	1600	57	1,95,900.00

Details of samples analyzed during the 2015-16:

Details	No. of Samples analyzed	No. of Farmers benefited	No. of Villages	Amount realized (Rs.)
Soil Samples	134	77	40	6700
Water Samples	0	0	0	0
Plant samples	0	0	0	0
Manure samples	0	0	0	0
Others (specify)	15	15	7	750
Total	149	92	47	7450

10.I. Technology Week celebration during 2015-16 Yes/No, If Yes

Period of observing Technology Week : 19/01/2016 to 22/01/2016

Total number of farmers visited : 772

Total number of agencies involved : 11

Number of demonstrations visited by the farmers within KVK campus : 507

Other Details

Types of Activities	No. of Activities	Number of Farmers	Related crop/livestock technology
Gosthies			
Lectures organized			
Exhibition			
Film show			
Fair			
Farm Visit			
Diagnostic Practical's	21	257	
Supply of Literature (No.)	34	772	
Supply of Seed (q)			
Supply of Planting materials (No.)			
Bio Product supply (Kg)			
Bio Fertilizers (q)			
Supply of fingerlings			
Supply of Livestock specimen (No.)			
Total number of farmers visited the technology week	8	772	

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

- A. Introduction of alternate crops/varieties: Nil.
- B. Major area coverage under alternate crops/varieties: Nil.
- C. Farmers-scientists interaction on livestock management: Nil.
- D. Animal health camps organized : Nil.
- E. Seed distribution in drought hit states: Nil.
- F. Large scale adoption of resource conservation technologies: Nil.
- G. Awareness campaign: 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)
Ecodon for rodents & Wild boar bio control	25	90	13500	24000
IIHR BANANA SPECIAL	35	65	5,000	7,500
EPN	200	50	4,500	22,500
Bio-management of Banana Pseudostem weevil	50	80	1,200/ha	3,100

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

11.B. Cases of large scale adoption: Nil.

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

PART XII - LINKAGES

12.A. Functional linkage with different organizations

Name of organization	Nature of linkage
ATMA	Demonstration and Trainings
State Planning Board	Demonstration and Scouting and documentation of farm innovations

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

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

Name of the scheme	Role of KVK	Date/ Month of initiation	Funding agency	Amount (Rs.)
Development of pest surveillance and crop advisory project in Idukki District.	Created awareness and advised to the farmers to keep the pest situation below ETL level.	10/05/2014	Kerala State Planning Board	6,00,000.00
Vegetable Development Programme - Micro nutrient demonstration in vegetables	Creating awareness among farmers regarding soil micro nutrient deficiencies by adopting awareness soil campaigns, soil testing and trainings	17/11/2015	Department of Agriculture	3,16,000.00
Fruit and vegetable processing	Skill development workshop conducted for a period of 20 days. The participants were facilitated for developing their own agri-business centres.	13/11/2015	State Horticulture Mission	3,27,000.00
Evaluation of horticultural nurseries	Horticultural nurseries funded by SHM during the period from 2003 till 2014 were evaluated based on the criteria envisaged	12/01/2016	State Horticulture Mission	70,000.00
Skill development programme for agro-service centre executives	Agro-service centre executives were given hands on experience for different enterprises	10/03/2016	Department of Agriculture	1,97,000.00
Strengthening of bio-production unit	Bio-products were produced in an economic mode and supplied to farmers	23/03/2016	Department of Agriculture	3,58,000.00

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?

We are actively participated in the final formulation of SREP preparation of the Idukki District. We discussed the technologies that can take up in ATMA demonstrations. We also explained the areas which can cover under various trainings programmes.

Coordination activities between KVK and ATMA during 2015-16

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	9	2	-
02	Research projects				
03	Training programmes	Organic Farming	5	0	-
04	Demonstrations				
05	Extension Programmes				
	Kisan Mela	1	3	0	-
	Technology Week	1	5	1	-
	Exposure visit				
	Exhibition				
	Soil health camps				
	Animal Health Campaigns				
	Others (Pl. specify)				
06	Publications				
	Video Films				
	Books				
	Extension Literature				
	Pamphlets				
	Others (Pl. specify)				
07	Other Activities (Pl. specify)				
	Watershed approach				
	Integrated Farm Development				
	Agri-preneurs development				

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

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.	Mist Chamber	2009	96 m ²	Panniyoor-1, 4, 5, 6 & 7 Sreekara Subhakara Panchami IISR Thevam IISR Shakthi Excel Kottanadan Karimunda Chengannoor Thekken Girimunda Arimundi	Pepper vines	6890 rooted cuttings	20670.00	74584.00	Funded by SHM
2.									

13.B. Performance of instructional farm (Crops) including seed production: Nil.**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.	Nature plus	174	5220	12180	-
2.	Panchakavya	460	16100	29900	-
3.	Jeevamirtham	169	4225	21675	-
4.	Farmers Effective Microorganisms	58	2030	3770	-
5.	Fish Amino Acids	18	720	1800	-
6.	Beauveria	466	18640	27960	-
7.	Metarhizium	232	9280	139820	-
8.	Lecanicillium	92	3680	5520	-
9.	OHN	9	150	750	-
10.	Trichoderma	294	13524	15876	-
11.	Pseudomonas	2064.50	82580	123870	-
12.	Cue-lure trap	1311	117990	94845	-
13.	Oyster Mushroom Spawn	425	8168	12750	-

13.D. Performance of instructional farm (livestock and fisheries production): Nil.**13.E. Utilization of hostel facilities: NA.****13.F. Database management**

S. No	Database target	Database created
1.	Farmers database	Database for 2015-16.

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

PART XIV - FINANCIAL PERFORMANCE**14.A. Details of KVK Bank accounts**

Bank account	Name of the bank	Location	Branch code	Account Name	Account Number	MICR Number	IFSC Number
Revolving Fund Account	State Bank of Travancore	Rajakumary	70453	Bapooji Krishi Vigyan Kendra (Rev Fund)	67155078042	685009806	SBTR0000453
Main Grant Account	State Bank of Travancore	Rajakumary	70453	Bapooji Sevak Samaj Krishi Vigyan Kendra	57060836995	685009806	SBTR0000453

14.B. Utilization of KVK funds during the year 2015-16 (Rs. in lakh)

S. No.	Particulars	Sanctioned	Released	Expenditure
A. Recurring Contingencies				
1	Pay & Allowances	89.41	89.41	89.41094
2	Traveling allowances	0.90	0.90	0.77626
3	Contingencies			
A	Stationery, telephone, postage and other expenditure on office running, publication of Newsletter and library maintenance (Purchase of News Paper & Magazines)	1.00	1.00	1.00
B	POL, repair of vehicles, tractor and equipments	1.00	1.00	1.00
C	Meals/refreshment for trainees (ceiling up to Rs.40/day/trainee be maintained)	0.25	0.25	0.25
D	Training material (posters, charts, demonstration material including chemicals etc. required for conducting the training)	0.25	0.25	0.25
E	Frontline demonstration except oilseeds and pulses (minimum of 30 demonstration in a year)	1.59	1.59	1.59
F	On farm testing (on need based, location specific and newly generated information in the major production systems of the area)	0.86	0.86	0.86
G	Training of extension functionaries	0.00	0.00	0.00
H	Maintenance of buildings	0.00	0.00	0.00
I	Farmer's Field School			0.00
J	Integrated Farming System	0.00	0.00	0.00
K	Extension Activities	0.50	0.50	0.50
L	Library	0.00	0.00	0.05
TOTAL (A)		95.81	95.81	95.6872
B. Non-Recurring Contingencies				
1	Works	0.00	0.00	0.00
2	Equipments including SWTL & Furniture	0.00	0.00	0.00
3	Vehicle (Four wheeler/Two wheeler, please specify)	0.00	0.00	0.00
4	Library (Purchase of assets like books & journals)	0.00	0.00	0.00
TOTAL (B)		0.00	0.00	0.00
C. REVOLVING FUND		0.00	0.00	0.00
GRAND TOTAL (A+B+C)		95.81	95.81	95.6872

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 2013 to March 2014	6.87195	13.99190	16.97957	3.88428
April 2014 to March 2015	4.59576	18.60745	21.91030	0.58143
April 2015 to March 2016	3.57322	10.48146	9.89920	1.16369

15. Details of HRD activities attended by KVK staff during 2014-15

Name of the staff	Designation	Title of the training programme	Institute where attended	Dates
Dr. Binu John Sam	Subject Matter Specialist (Horticulture) & Programme Coordinator i/c.	Capacity building programme on protected cultivation	Kerala Agricultural University, Thrissur	29/02/2016 to 01/03/2016
Dr. Benjamin Mathew	Subject Matter Specialist (Agriculture Ext.)	Post harvest technologies of fresh fruits and vegetables for commercial trade	CFTRI, Mysore	27/07/2015 to 31/07/2015
Mr. Sudhakar Soundarajan	Subject Matter Specialist (Plant Protection)	Low cost mass production of techniques of Trichoderma, Pseudomonas, Beauveria, Metarhizium, Verticellium and BM	ICAR-NBAIR, Bengaluru	16/11/2015 to 19/11/2015

16. Please include any other important and relevant information which has not been reflected above (write in detail).**Workshop on Fruit and Vegetable Processing: -**

10 days workshop on Fruit & vegetable processing held at ICAR- Krishi Vigyan Kendra, Santhanpara from 12th -27th October 2015. State Horticultural Mission, Kerala sponsored the workshop and 32 persons participated. Theory and practical sessions were arranged on processing. The Programme enriched with Study Tour to the Food product unit, Sanniyasioda.

SUMMARY FOR 2015-16

I. TECHNOLOGY ASSESSMENT

Summary of technologies assessed under various crops

Thematic areas	Crop	Name of the technology assessed	No. of trials
Integrated Nutrient Management	Tapioca	Management practices for secondary and micronutrient disorders in tapioca	5
	Carrot	Assessment of suitable carrot varieties for Idukki district	5
Varietal Evaluation	Broccoli	Assessment of suitable varieties of broccoli for high ranges	5
	Black pepper	Assessment of suitable black pepper foot rot (quick wilt) resistant variety for Idukki district	5
Integrated Pest Management	Cardamom	Management of snails & slugs in cardamom plantation	5
Integrated Crop Management	Banana	Assessment of different props and support for mitigating wind damage in banana (Nendran)	5
Integrated Disease Management			
Small Scale Income Generation Enterprises			
Weed Management			
Resource Conservation Technology			
Farm Machineries			
Integrated Farming System			
Seed / Plant production			
Value addition			
Drudgery Reduction			
Storage Technique			
Mushroom	Oyster mushroom	Preparation of cropping calendar with two types of mushrooms for year round production in Idukki district	4
Total			34

Summary of technologies assessed under livestock: Nil.

Summary of technologies assessed under various enterprises: Nil.

Summary of technologies assessed under home science: Nil.

II. TECHNOLOGY REFINEMENT: Nil.

Summary of technologies refined under various crops

Summary of technologies assessed under refinement of various livestock: Nil.

Summary of technologies refined under various enterprises: Nil.

Summary of technologies refined under home science: Nil.

III. FRONTLINE DEMONSTRATION

Crops

Crop	Thematic area	Name of the technology demonstrated	No. of KVKs	No. of Farmer	Area (ha)	Yield (q/ha)		% change in yield	Other parameters		*Economics of demonstration (Rs./ha)				*Economics of check (Rs./ha)			
						Demonstration	Check		Demonstration	Check	Gross Cost	Gross Return	Net Return	**	Gross Cost	Gross Return	Net Return	**
Cereals																		
Millets																		
Oilseeds																		
Pulses																		
Vegetables	Year round production of organic vegetables	Popularization of organic kitchen garden in homesteads for nutritional security	1	5	0.08	1.402	0.346	25	0	0	9700	16800	7200	1.73	2200	2830	630	1.28
	IPM	IPDM in Bitter gourd	1	10	2	16	10	20	0	0	164700	213840	49140	1.32	115000	150000	35000	1
	Nursery management (Vegetables)	Demonstration of Arka Microbial Consortium enriched Coco peat for protray vegetable nursery	1	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	ICM	Demonstration of IIHR vegetable special in cowpea var. Arka Mangala	1	10	1	Ongoing												
Flowers																		
Ornamental																		
Fruit																		
Fibres like Cotton																		
Spices and condiments	IPM	Column Method for production of quality planting materials in Black Pepper	1	3	15 poles	Ongoing												
	IPM	Management of cardamom root grub with (EPN)	1	10	2	19	12	24	0	0	306700	424445	117745	1.4	294000	389000	95000	1.2
	INM	Soil test based fertilizer recommendation along with organic manure	1	10	1	9.9	8.0	25	0	0	250000	653600	403600	2.6	218000	414200	196200	1.90
	ICM	IISR Nutrient Mix in black pepper	1	10	2	12.44	15.44	0	0	0	0	0	0	1.12	0	0	0	1.13
Commercial crops																		
Medicinal and aromatic																		
Fodder																		
Plantation																		
Fibre																		
Others (pl. specify)																		
Others (Mushroom)	Productivity improvement of major crops.	Utilization of Spent Mushroom Compost (SMC) as a medium for vegetable production in grow bags	1	5	50 bags	172	144	19.44	Visual stand very good	Good	1384.66	3435.50	2050.84	1.97	0	0	0	0
Others (Specify)																		
Total																		

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

** BCR= GROSS RETURN/GROSS COST

Livestock

Category	Thematic area	Name of the technology demonstrated	No. of KVKs	No. of Farmer	No. of units	Major parameters		% change in major parameter	Other parameter		*Economics of demonstration (Rs.)				*Economics of check (Rs.)			
						Demonstration	Check		Demonstration	Check	Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR
Dairy	Animal nutrition and production management	Popularization of Fodder Cafeteria in rural households of Idukki district.	1	10	10	13	18	14	13	15	13610	30420	16810	2.23	14600	23940	9340	1.63
	Disease management	Demonstration of Inj Ivermectin for control of Ecto-Endo Parasitic Infestation in dairy cattle	1	10	10	12	18	14	13	20	14520	27720	13200	1.90	13520	22500	8980	1.66
Poultry	Scientific Disease management	Prophylactic management of Newcastle Disease in poultry using oral pellet vaccine	1	20	20	23	19	20	18	10	750	1280	530	1.70	782	1152	370	1.47
Rabbitry																		
Pigerry																		
Sheep and goat																		
Duckery																		
Others (pls specify)																		
Total																		

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

** BCR= GROSS RETURN/GROSS COST

Fisheries: Nil.

Other enterprises: Nil.

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														
Weed Management														
Resource Conservation Technologies														
Cropping Systems														
Crop Diversification														
Integrated Farming														
Micro Irrigation/Irrigation														
Seed production														
Nursery management														
Integrated Crop Management														

Soil and Water Conservation										
Integrated Nutrient Management	1	7	4	11	0	0	0	0	0	0
Production of organic inputs										
Others (pl.specify)										
Others (Organic farming in vegetable)										
Others (IPDM in Banana)										
Others (IPDM in vegetable)										
Horticulture										
a) Vegetable Crops										
Production of low value and high volume crop										
Off-season vegetables										
Nursery raising										
Exotic vegetables										
Export potential vegetables										
Grading and standardization										
Protective cultivation										
Others (Specify)										
Others (ICM in Vegetable crops)	1	15	0	15	0	0	0	15	0	15
b) Fruits										
Training and Pruning										
Layout and Management of Orchards										
Cultivation of Fruit										
Management of young plants/orchards										
Rejuvenation of old orchards										
Export potential fruits										
Micro irrigation systems of orchards										
Plant propagation techniques										
Others (pl.specify)										
c) Ornamental Plants										
Nursery Management	1	15	3	18	0	0	0	15	3	18
Management of potted plants										
Export potential of ornamental plants										
Propagation techniques of Ornamental Plants										
Others (pl.specify)										
d) Plantation crops										
Production and Management technology										
Processing and value addition										
Others (pl.specify)										
e) Tuber crops										
Production and Management technology										
Processing and value addition										
Others (pl.specify)										

f) Spices										
Production and Management technology										
Processing and value addition										
Others (pl.specify)										
g) Medicinal and Aromatic Plants										
Nursery management										
Production and management technology										
Post harvest technology and value addition										
Others (pl.specify)										
Soil Health and Fertility Management										
Soil fertility management										
Integrated water management										
Integrated nutrient management										
Production and use of organic inputs										
Management of Problematic soils										
Micro nutrient deficiency in crops	1	11	4	15	0	0	0	0	0	0
Nutrient use efficiency										
Balanced use of fertilizers										
Soil and water testing										
Others (pl.specify)										
Livestock Production and Management										
Dairy Management										
Poultry Management										
Piggery Management										
Rabbit Management										
Animal Nutrition Management										
Animal Disease Management										
Feed and Fodder technology										
Production of quality animal products										
Others (pl.specify)										
Home Science/Women empowerment										
Household food security by kitchen gardening and nutrition gardening										
Design and development of low/minimum cost diet										
Designing and development for high nutrient efficiency diet										
Minimization of nutrient loss in processing										
Processing and cooking										
Gender mainstreaming through SHGs										
Storage loss minimization techniques										
Value addition										
Women empowerment										
Location specific drudgery production										

Rural Crafts	3	0	18	18	0	15	15	0	33	33
Women and child care										
Others (pl.specify)										
Others (Processing and Packaging of Mushroom)										
Agril. Engineering										
Farm machinery and its maintenance										
Installation and maintenance of micro irrigation systems										
Use of Plastics in farming practices										
Production of small tools and implements										
Repair and maintenance of farm machinery and implements										
Small scale processing and value addition										
Post Harvest Technology										
Others (pl.specify)										
Plant Protection										
Integrated Pest Management	2	25	19	44	0	0	0	25	19	44
Integrated Disease Management										
Bio-control of pests and diseases										
Production of bio control agents and bio pesticides	2	70	30	100	6	4	10	76	36	112
Others (pl.specify)										
Fisheries										
Integrated fish farming										
Carp breeding and hatchery management										
Carp fry and fingerling rearing										
Composite fish culture										
Hatchery management and culture of freshwater prawn										
Breeding and culture of ornamental fishes										
Portable plastic carp hatchery										
Pen culture of fish and prawn										
Shrimp farming										
Edible oyster farming										
Pearl culture										
Fish processing and value addition										
Others (pl.specify)										
Production of Inputs at site										
Seed Production										
Planting material production										
Bio-agents production										
Bio-pesticides production										
Bio-fertilizer production										
Vermi-compost production										
Organic manures production										
Production of fry and fingerlings										

Production of Bee-colonies and wax sheets										
Small tools and implements										
Production of livestock feed and fodder										
Production of Fish feed										
Mushroom production	2	6	19	25	0	0	0	6	19	25
Apiculture										
Others (pl.specify)										
Capacity Building and Group Dynamics										
Leadership development										
Group dynamics										
Formation and Management of SHGs										
Mobilization of social capital										
Entrepreneurial development of farmers/youths										
Others (pl.specify)										
Agro-forestry										
Production technologies										
Nursery management										
Integrated Farming Systems										
Others (Pl. specify)										
TOTAL	13	149	97	246	06	19	25	137	110	247

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

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Crop Production										
Weed Management										
Resource Conservation Technologies										
Cropping Systems										
Crop Diversification										
Integrated Farming										
Micro Irrigation/Irrigation										
Seed production										
Nursery management										
Integrated Crop Management (Spices)	4	243	19	262	0	0	0	243	19	262
Soil and Water Conservation										
Integrated Nutrient Management										
Production of organic inputs										
Others (pl.specify)										
Horticulture										
a) Vegetable Crops										
Production of low value and high volume crop										
Off-season vegetables										

Nursery raising	4	243	19	262	0	0	0	243	19	262
Exotic vegetables										
Export potential vegetables										
Grading and standardization										
Protective cultivation										
Others (Specify)										
Others (ICM in vegetables)	4	74	38	112	0	0	0	74	38	112
Others (Organic farming-Vegetables)	6	205	114	319	0	0	0	205	114	319
Others (Mushroom cultivation)	1	16	5	21	0	0	0	16	5	21
Others (Mushroom cultivation)	1	0	30	30	0	24	24	0	54	54
b) Fruits										
Training and Pruning										
Layout and Management of Orchards										
Cultivation of Fruit										
Management of young plants/orchards										
Rejuvenation of old orchards										
Export potential fruits										
Micro irrigation systems of orchards										
Plant propagation techniques										
Others (pl.specify)										
c) Ornamental Plants										
Nursery Management										
Management of potted plants										
Export potential of ornamental plants										
Propagation techniques of Ornamental Plants										
Others (pl.specify)										
d) Plantation crops										
Production and Management technology										
Processing and value addition										
Others (pl.specify)										
e) Tuber crops										
Production and Management technology										
Processing and value addition										
Others (pl.specify)										
Others (Crop diversification)	1	46	27	73	0	0	0	46	27	73
f) Spices										
Production and Management technology										
Processing and value addition										
Others (pl.specify)										
g) Medicinal and Aromatic Plants										
Nursery management										
Production and management technology										

Post harvest technology and value addition										
Others (pl.specify)										
Soil Health and Fertility Management										
Soil fertility management	2	140	101	241	0	0	0	140	101	241
Integrated water management										
Integrated nutrient management	2	49	23	72	0	0	0	49	23	72
Production and use of organic inputs										
Management of Problematic soils										
Micro nutrient deficiency in crops	1	12	3	15	0	0	0	12	3	15
Nutrient use efficiency										
Balanced use of fertilizers	2	94	16	110	0	0	0	94	16	110
Soil and water testing										
Others (pl.specify)										
Others (Soil Conservation)										
Livestock Production and Management										
Dairy Management	1	31	20	51	0	0	0	31	20	51
Poultry Management										
Piggery Management										
Rabbit Management										
Animal Nutrition Management	1	11	7	18	0	0	0	11	7	18
Animal Disease Management										
Feed and Fodder technology	2	21	40	61	0	0	0	21	40	61
Production of quality animal products										
Others (pl.specify)										
Home Science/Women empowerment										
Household food security by kitchen gardening and nutrition gardening										
Design and development of low/minimum cost diet										
Designing and development for high nutrient efficiency diet										
Minimization of nutrient loss in processing										
Processing and cooking										
Gender mainstreaming through SHGs										
Storage loss minimization techniques										
Value addition										
Women empowerment										
Location specific drudgery production										
Rural Crafts	2	0	24	24	0	10	10	0	34	34
Women and child care										
Others (pl.specify)										
Others (Processing & popularization of Jack fruit)										
Agril. Engineering										
Farm machinery and its maintenance										

Installation and maintenance of micro irrigation systems										
Use of Plastics in farming practices										
Production of small tools and implements										
Repair and maintenance of farm machinery and implements										
Small scale processing and value addition										
Post Harvest Technology										
Others (pl.specify)										
Plant Protection										
Integrated Pest Management	15	609	143	752	49	47	96	658	190	848
Integrated Disease Management	3	115	11	126	50	5	55	165	16	181
Bio-control of pests and diseases	15	498	120	618	30	29	59	528	149	677
Production of bio control agents and bio pesticides	4	102	30	132	74	30	104	176	60	236
Others (pl.specify)										
Fisheries										
Integrated fish farming										
Carp breeding and hatchery management										
Carp fry and fingerling rearing										
Composite fish culture										
Hatchery management and culture of freshwater prawn										
Breeding and culture of ornamental fishes										
Portable plastic carp hatchery										
Pen culture of fish and prawn										
Shrimp farming										
Edible oyster farming										
Pearl culture										
Fish processing and value addition										
Others (pl.specify)										
Production of Inputs at site										
Seed Production										
Planting material production										
Bio-agents production										
Bio-pesticides production										
Bio-fertilizer production										
Vermi-compost production										
Organic manures production										
Production of fry and fingerlings										
Production of Bee-colonies and wax sheets										
Small tools and implements										
Production of livestock feed and fodder										
Production of Fish feed										
Mushroom production										

Apiculture										
Others (pl.specify)										
Capacity Building and Group Dynamics										
Leadership development										
Group dynamics										
Formation and Management of SHGs										
Mobilization of social capital										
Entrepreneurial development of farmers/youths										
Others (pl.specify)										
Agro-forestry										
Production technologies										
Nursery management										
Integrated Farming Systems										
Others (Pl. specify)										
TOTAL	71	2509	790	3299	203	145	348	2712	935	3647

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

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Nursery Management of Horticulture crops										
Training and pruning of orchards										
Protected cultivation of vegetable crops										
Commercial fruit production										
Integrated farming										
Seed production										
Production of organic inputs										
Planting material production										
Vermi-culture										
Mushroom Production										
Bee-keeping										
Sericulture										
Repair and maintenance of farm machinery and implements										
Value addition										
Small scale processing										
Post Harvest Technology										
Tailoring and Stitching										
Rural Crafts	3	8	52	60	5	10	15	0	75	75
Production of quality animal products										
Dairying	1	25	19	44	0	0	0	25	19	44
Sheep and goat rearing										
Quail farming										
Piggery										

Rabbit farming										
Poultry production										
Ornamental fisheries										
Composite fish culture										
Freshwater prawn culture										
Shrimp farming										
Pearl culture										
Cold water fisheries										
Fish harvest and processing technology										
Fry and fingerling rearing										
Any other (pl.specify)										
Any other (ICM Vegetables)	2	35	56	91	0	0	0	35	56	91
TOTAL	6	68	127	195	5	10	15	60	150	210

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

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Nursery Management of Horticulture crops										
Training and pruning of orchards										
Protected cultivation of vegetable crops										
Commercial fruit production										
Integrated farming										
Seed production										
Production of organic inputs										
Planting material production										
Vermi-culture										
Mushroom Production	1	6	16	22	0	0	0	6	16	22
Bee-keeping										
Sericulture										
Repair and maintenance of farm machinery and implements										
Value addition										
Small scale processing										
Post Harvest Technology										
Tailoring and Stitching										
Rural Crafts	1	0	25	25	0	15	15	0	40	40
Production of quality animal products										
Dairying										
Sheep and goat rearing										
Quail farming										
Piggery										
Rabbit farming										
Poultry production										

Ornamental fisheries										
Composite fish culture										
Freshwater prawn culture										
Shrimp farming										
Pearl culture										
Cold water fisheries										
Fish harvest and processing technology										
Fry and fingerling rearing										
Any other (pl.specify)										
Any other (ICM Vegetables)	2	35	56	91	0	0	0	35	56	91
Any other (Organic farming)	1	33	36	69	0	0	0	33	36	69
TOTAL	5	74	133	207	0	15	15	74	148	222

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

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Productivity enhancement in field crops										
Integrated Pest Management										
Integrated Nutrient management	1	10	04	14	0	0	0	10	04	14
Rejuvenation of old orchards										
Protected cultivation technology										
Production and use of organic inputs										
Care and maintenance of farm machinery and implements										
Gender mainstreaming through SHGs										
Formation and Management of SHGs										
Women and Child care										
Low cost and nutrient efficient diet designing										
Group Dynamics and farmers organization	1	2	11	13	0	0	0	2	11	13
Information networking among farmers										
Capacity building for ICT application										
Management in farm animals										
Livestock feed and fodder production										
Household food security										
Any other (pl.specify)										
Total	2	12	15	27	0	0	0	12	15	27

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

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Productivity enhancement in field crops										
Integrated Pest Management										
Integrated Nutrient management	4	80	86	166	0	0	0	80	86	166
Rejuvenation of old orchards										
Protected cultivation technology										
Production and use of organic inputs										
Care and maintenance of farm machinery and implements										
Gender mainstreaming through SHGs										
Formation and Management of SHGs										
Women and Child care										
Low cost and nutrient efficient diet designing										
Group Dynamics and farmers organization										
Information networking among farmers										
Capacity building for ICT application										
Management in farm animals										
Livestock feed and fodder production										
Household food security										
Any other (pl. specify)										
Total	4	80	86	166	0	0	0	80	86	166

Sponsored training programmes

S.No.	Area of training	No. of Courses	No. of Participants								
			General			SC/ST			Grand Total		
			Male	Female	Total	Male	Female	Total	Male	Female	Total
1	Crop production and management										
1.a.	Increasing production and productivity of crops										
1.b.	Commercial production of vegetables										
1.c.	Integrated Pest and Disease Management										
2	Production and value addition										
2.a.	Fruit Plants										
2.b.	Ornamental plants										
2.c.	Spices crops										
3.	Soil health and fertility management										
4	Production of Inputs at site										
5	Methods of protective cultivation										
6	Others (Banana cultivation)										
7	Post harvest technology and value addition										
7.a.	Processing and value addition	9	90	153	243	0	6	6	90	159	249
7.b.	Others (pl.specify)										
8	Farm machinery										
8.a.	Farm machinery, tools and implements										
8.b.	Others (pl.specify)										
9.	Livestock and fisheries										
10	Livestock production and management										
10.a.	Animal Nutrition Management	1	13	50	63	0	0	0	13	50	63
10.b.	Animal Disease Management										
10.c.	Fisheries Nutrition										
10.d.	Fisheries Management										
10.e.	Others (Poultry)	2	18	79	97	0	0	0	18	79	97
10.f.	Others (Livestock production and management)	1	30	29	59	0	0	0	30	29	59
11.	Home Science										
11.a.	Household nutritional security										
11.b.	Economic empowerment of women										
11.c.	Drudgery reduction of women										
11.d.	Others (pl.specify)										
12	Agricultural Extension										
12.a.	Capacity Building and Group Dynamics										
12.b.	Others (pl.specify)										
	Total	13	151	311	462	0	6	6	151	317	468

Details of Vocational Training Programmes carried out for rural youth

S. No.	Area of training	No. of Courses	No. of Participants									
			General			SC/ST			Grand Total			
			Male	Female	Total	Male	Female	Total	Male	Female	Total	
1	Crop production and management											
1.a.	Commercial floriculture											
1.b.	Commercial fruit production											
1.c.	Commercial vegetable production											
1.d.	Integrated crop management											
1.e.	Organic farming											
1.f.	Others (specify)											
2	Post harvest technology and value addition											
2.a.	Value addition	1	10	20	30	0	2	2	10	22	32	
2.b.	Others (pl.specify)											
3.	Livestock and fisheries											
3.a.	Dairy farming											
3.b.	Composite fish culture											
3.c.	Sheep and goat rearing											
3.d.	Piggery											
3.e.	Poultry farming											
3.f.	Others (pl.specify)											
4.	Income generation activities											
4.a.	Vermi-composting											
4.b.	Production of bio-agents, bio-pesticides, bio-fertilizers etc.											
4.c.	Repair and maintenance of farm machinery and implements											
4.d.	Rural Crafts	12	0	183	183	0	55	55	0	238	238	
4.e.	Seed production											
4.f.	Sericulture											
4.g.	Mushroom cultivation											
4.h.	Nursery, grafting etc.											
4.i.	Tailoring, stitching, embroidery, dying etc.											
4.j.	Agril. para-workers, para-vet training											
5	Agricultural Extension											
5.a.	Capacity building and group dynamics											
	Grand Total	13	10	203	213	0	57	57	10	260	270	

V. Extension Programmes

Activities	No. of programmes	No. of farmers	No. of Extension Personnel	TOTAL
Advisory Services	243	352	8	360
Diagnostic visits	38	53	0	53
Field Day	19	59	0	59
Group discussions	0	0	0	0
Kisan Ghosthi	0	0	0	0
Film Show	0	0	0	0
Self -help groups	9	104	44	148
Kisan Mela	0	0	0	0
Exhibition	2	2000	0	2000
Scientists' visit to farmers field	63	88	0	88
Plant/animal health camps	0	0	0	0
Farm Science Club	0	0	0	0
Ex-trainees Sammelan	1	26	0	26
Farmers' seminar/workshop	7	233	55	288
Method Demonstrations	18	335	0	335
Celebration of important days (World food day)	1	33	0	33
Celebration of important days (World soil day)	1	50	-	50
Special day celebration (Environment day)	0	-	-	-
Celebration of important days (National milk day)	1	44	0	44
Exposure visits	2	30	0	30
Others (TV Coverage)	6	-	-	-
Others (Soil campaign)	6	35	30	65
Others (pl.specify)				
Total				

Details of other extension programmes

Particulars	Number
Electronic Media	-
Extension Literature	1000
News Letter	-
News paper coverage	10
Technical Articles	-
Technical Bulletins	33
Technical Reports	-
Radio Talks	5
TV Talks	6
Animal health camps	-
Others (pl.specify)	-
Total	

VI. 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	Variety	Hybrid	Number	Value (Rs.)	Number of farmers to whom provided
Commercial						
Vegetable seedlings						
Fruits						
Ornamental plants						
Medicinal and Aromatic						
Plantation						
Spices	Black pepper	Karimunda	-	7110	71100	92
		Kottandan	-	220	2630	20
		Panniyoor 1	-	197	1970	20
		Panniyoor 2	-	6	72	1
		Panniyoor 4	-	10	120	1
		Panniyoor 5	-	129	1548	3
		Panniyoor 6	-	6	72	1
		Panniyoor 7	-	93	1116	7
		Chengannor	-	393	3930	22
		Thevam	-	83	996	6
		Shakthi	-	112	1344	11
		Malabar Excel	-	32	384	6
		Kumbakkal	-	4	48	1
		Thekkan	-	75	2250	20
Tuber						
Fodder crop saplings						
Forest Species						
Others(specify)						
Total				8470	87580	211

Production of Bio-Products

Bio Products	Name of the bio-product	Quantity	Value (Rs.)	No. of Farmers
		Kg		
Bio Fertilizers	Nature plus	174	17400.00	111
	Panchakavya	460	46000.00	105
	Jeevamirtham	169	16900.00	97
	Farmers Effective Microorganisms	58	5800.00	24
	Fish Amino Acids	18	2700.00	3
Bio-pesticide	Beauveria	466	46600.00	126
	Metarhizium	232	23200.00	95
	Lecanicillium	92	9200.00	22
	OHN	9	900.00	1
Bio-fungicide	Trichoderma	294	29400.00	181
Bio Agents	Pseudomonas	2064.50	206450.00	709
	Oyster Mushroom Spawn	425	12750.00	21
Others (Pheromone traps)	Cue-lure trap	1311	212835.00	1010
Others (specify)				
Total		5772.5	6,20,935.00	2505

Production of livestock and related enterprise materials: Nil.

VII. DETAILS OF SOIL, WATER AND PLANT ANALYSIS 2015-16

Samples	No. of Samples	No. of Farmers	No. of Villages	Amount realized (Rs.)
Soil	134	77	40	6700
Water	0	0	0	0
Plant	0	0	0	0
Manure	0	0	0	0
Others (Specify)	15	15	7	750
Total	149	92	47	7,450

VIII. SCIENTIFIC ADVISORY COMMITTEE

Number of SACs conducted: One

IX. NEWSLETTER

Number of issues of newsletter published: Nil.

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.)

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